

Project Report

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

1 INTRODUCTION

1.1 Overview

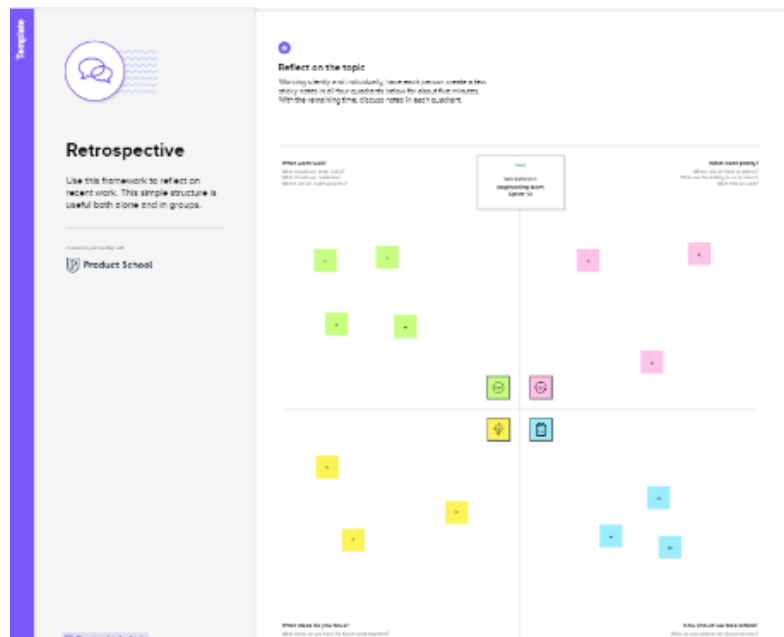
Carbon dioxide (CO₂) is a colourless, odourless and non-poisonous gas formed by combustion of carbon and in the respiration of living organisms and is considered a greenhouse gas. Emissions means the release of greenhouse gases and/or their precursors into the atmosphere over a specified area and period of time. *Carbon dioxide emissions or CO₂emissions* are emissions stemming from the burning of *fossil fuels* and the manufacture of cement; They include carbon dioxide produced during consumption of solid, liquid, and gas fuels as well as gas flaring.

1.2 Purpose

- The carbon in CO₂ can be used to produce fuels that are in use today, including methane, methanol, gasoline and aviation fuels.
- The process involves using the CO₂ in combination with hydrogen, which is highly energy-intensive to produce, and results in a carbon-containing fuel that is easier to handle and use than pure hydrogen.
- Low-carbon hydrogen can be produced from fossil fuels when combined with CCS, or through electrolysis of water using low-carbon electricity.
- CO₂ can be used to produce fuels and chemical intermediates through several conversion routes but require significant energy input.

2 PROBLEM DEFINITION & DECISION MAKING

2.1 Empathy map



2.2 Ideation & Brainstorming Map



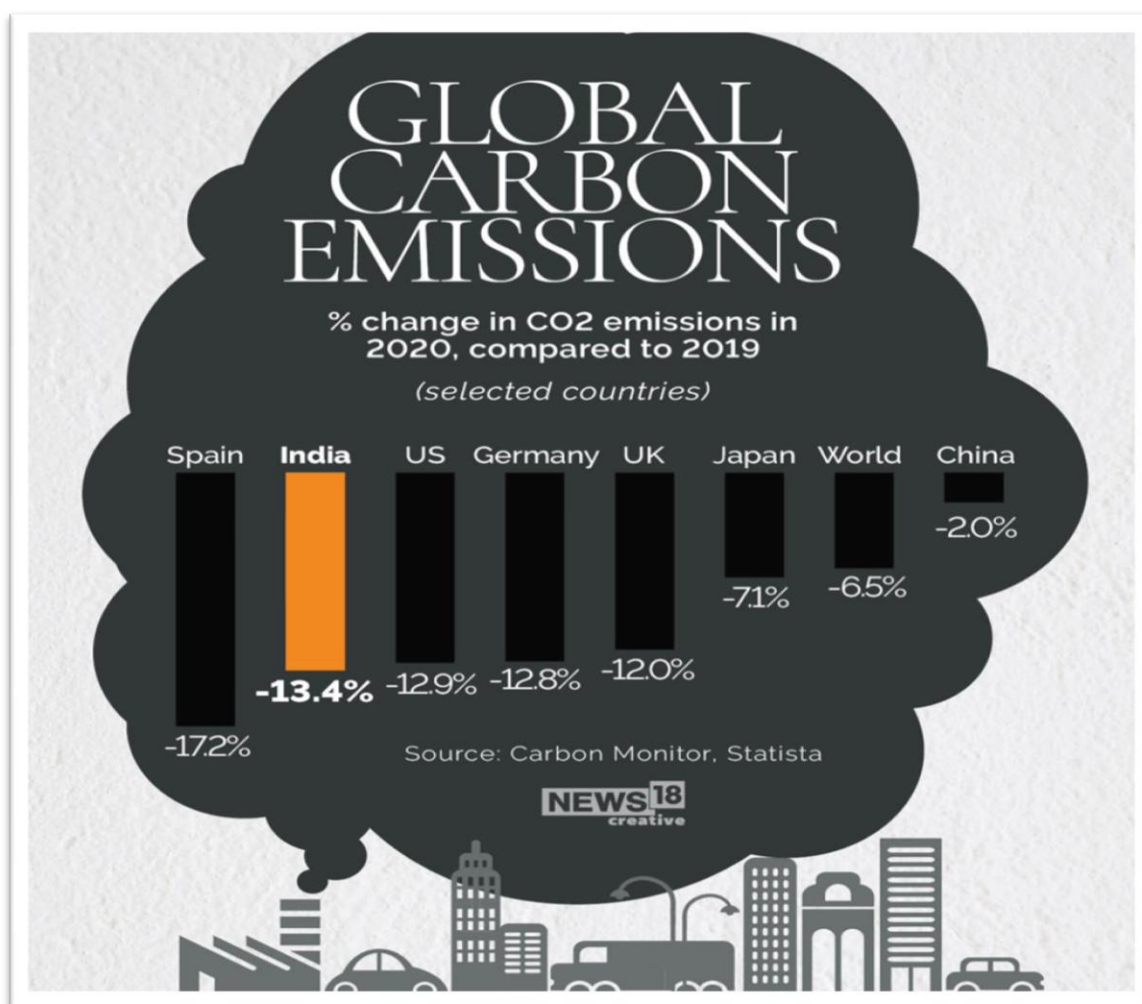
3 RESULT

Social Impact:

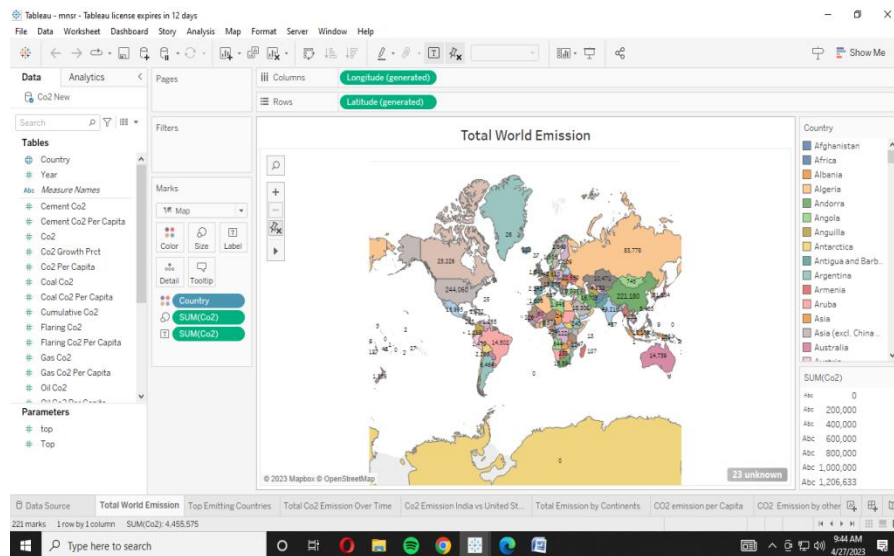
❖ A multi-year study of the social cost of carbon, a critical input for climate policy analysis, finds that every additional ton of carbon dioxide emitted into the atmosphere costs society \$185—far higher than the current federal estimate of \$51 per ton.

Business Model/Impact:

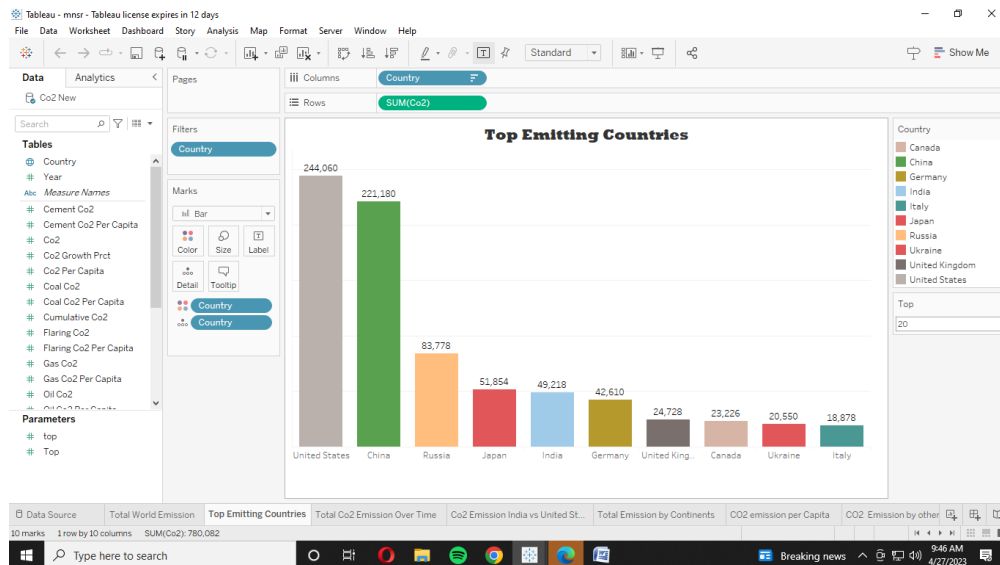
❖ Higher carbon footprint is indicative of greater energy costs. Expenditure on energy bills could be channeled to other areas of the business that require more attention.



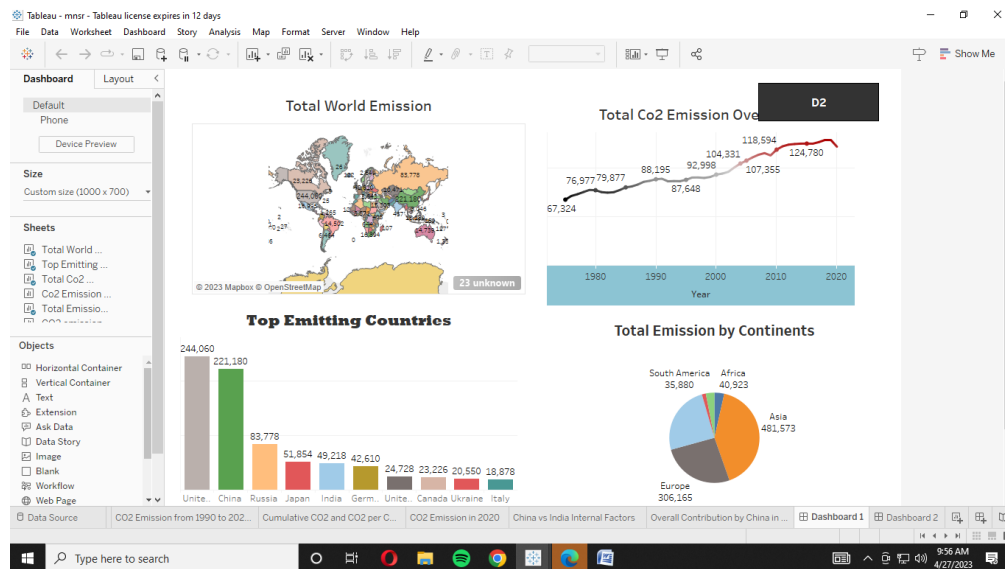
SHEET -1



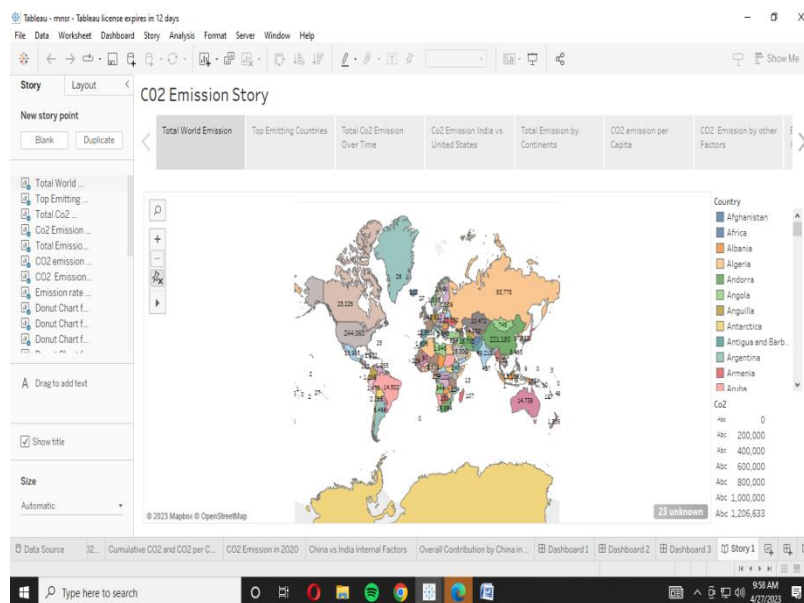
SHEET -2



DASHBOARD



STORY



4 .TEAM DETAILS

TEAM HEAD: A. Mowsuk Hanitha

MEMBERS:

- 1. R. Syed sabeera**
- 2. S. Noorul Nasrin**
- 3. S. Ranjani**

5 . Advantages and Disadvantage

ADVANTAGES

- Clearer Air & Skies – reducing our carbon emissions helps reverse the impact of global warming overall, but more specifically, benefits the overall air quality. Plus, it makes for clearer skies!
- Save Money – the simple reduction of energy shrinks your carbon footprint and operating expenses.
- Healthier Water Supply – Greenhouse gas emissions raise air temperatures, directly impacting the oxygen concentration in rainwater and contributing to lower rainfall levels.
- Overall Health - With healthier air, water, and food, we can significantly reduce many climate-related health issues seen today.

DISADVANTAGES

- Carbon emissions are dangerous in that they threaten the livelihood of our planet, animals, humans, and ultimately, life as we know it.
- The amount of carbon emissions trapped in our atmosphere causes global warming, which causes climate change, symptoms of which include melting of the polar ice caps, the rising of sea levels, the disturbance of animals' natural habitats, extreme weather events, and so many more negative side effects that are dangerous to the planet, to human and animal life, and to our future.
- This change in concentrations causes warming and is affecting various aspects of climate, including surface air and ocean temperatures, precipitation, and sea levels. Human health, agriculture, water resources, forests, wildlife, and coastal areas are all vulnerable to climate.
- CO₂ produced by human activities is the largest contributor to global warming. By 2020, its concentration in the atmosphere had risen to 48% above its pre-industrial level (before 1750). Other greenhouse gases are emitted by human activities in smaller quantities.

6. APPLICATIONS

- ❖ Produce fuels and chemical intermediates.
- ❖ Food and beverage production.
- ❖ The fabrication of metal, cooling.
- ❖ Fire suppression and in greenhouse.

- ❖ CO₂ plays various roles in the humanbody.
- ❖ Regulation of blood pH, respiratory drive.
- ❖ Affinity of hemoglobin for oxygen (O₂).

7.CONCLUSION

Nonetheless the conclusion is that regional climate changes, especially temperature increases, are impacting natural systems across the world and that these temperature increases are most likely to be the result of anthropogenic greenhouse gas emissions.

8.FUTURE SCOPE

Reduce the total projected carbon emissions by one billion metric tons from now (presumably 2022) through 2030. Reduce the carbon intensity of its economy by at least 45 percent by 2030 compared to 2005 levels. Achieve the target of net zero by 2070.

APPENDIX

Source code - Dashboard

<https://public.tableau.com/views/AGo>

Source code – story

https://public.tableau.com/views/Story_16824920560380/Story1?:language=en-US&:display_count=n&:origin=viz_share_link