Unearthing The Environmental Impact Of Human Activity: A Global CO2 Emission Analysis

INTRODUCTION

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.

DESIGN THINKING

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.

The business requirements for analysing the Co2 Emission Globally over time, identifying affecting factors, creating interactive dashboards and reports, identifying areas for improvement, making data-driven decisions, comparing to countries average and creating forecasting models for future performance. The ultimate goal is to gain insights and reduce the emission through data visualization techniques.

A literature survey is a method of researching existing literature and studies related to a specific topic. In the context of analyzing the Global Co2 Emission, a literature survey would involve reviewing studies and articles that have been published on the topic of Emission, as well as studies specific to Co2.The literature survey would include sources such as academic journals, industry reports, and online articles. It would aim to identify different internal and external factors that are responsible and commonly used to determine Co2 Emission, as well as any best practices or strategies that have been identified for reducing emission.The literature survey would also explore any existing research on Co2 Emission specifically, and would aim to identify any challenges or opportunities that the Countries can opt to reduce emission.

Social Impact: Carbon dioxide emissions are the primary driver of global climate change. It's widely recognised that to avoid the worst impacts of climate change, the world needs to urgently reduce emissions.

Business Model/Impact: By conducting an analysis the countries can identify areas for improvement and take steps to reduce factors that are responsible for Co2 Emission for environmental sustainability by improving the efficiency and transitioning to low carbon alternatives.

Dataset

Dataset consists CO2 emissions in metric ton per capita of every country around the world. The data is collected from 1975 to 2020. In this dataset Countries and regions are included. Data is initially pre-processed using excel.

The dataset contains

- *Country- Country for which Co2 is Recorded*
- *Year- Year the data was recorded*
- *Co2 Emission (In Million Metric Tons)*
- *Co2 Growth per Capita*
- *Co2 Per Capita*
- *Cumulative Co2*

- *Several Fossil Fuels rate of Emission*

RESULT

To Understand- Total World Emission, Co2 Emission Over Time, Total Emission By Continents

To Understand- Co2 Emission Per Capita, Co2 Emission By International Factors, Emission Rate Over Years

DASHBOARD

Home   About   Dashboard   Story   Visualizations   Report   Contact

total world emission

top emitting countries

Country

Country

244,060
221,180
83,778
51,854
49,218
42,610
24,728
23,226
20,550
18,878

Co2

300K
250K
200K
150K
100K
50K
0K

United Stat.
China
Russia
Japan
India
Germany
United Kingdom
Canada
Ukraine
Italy

Country
- Afghanistan
- Africa
- Albania
- Algeria
- Andorra
- Angola
- Anguilla
- Antarctica
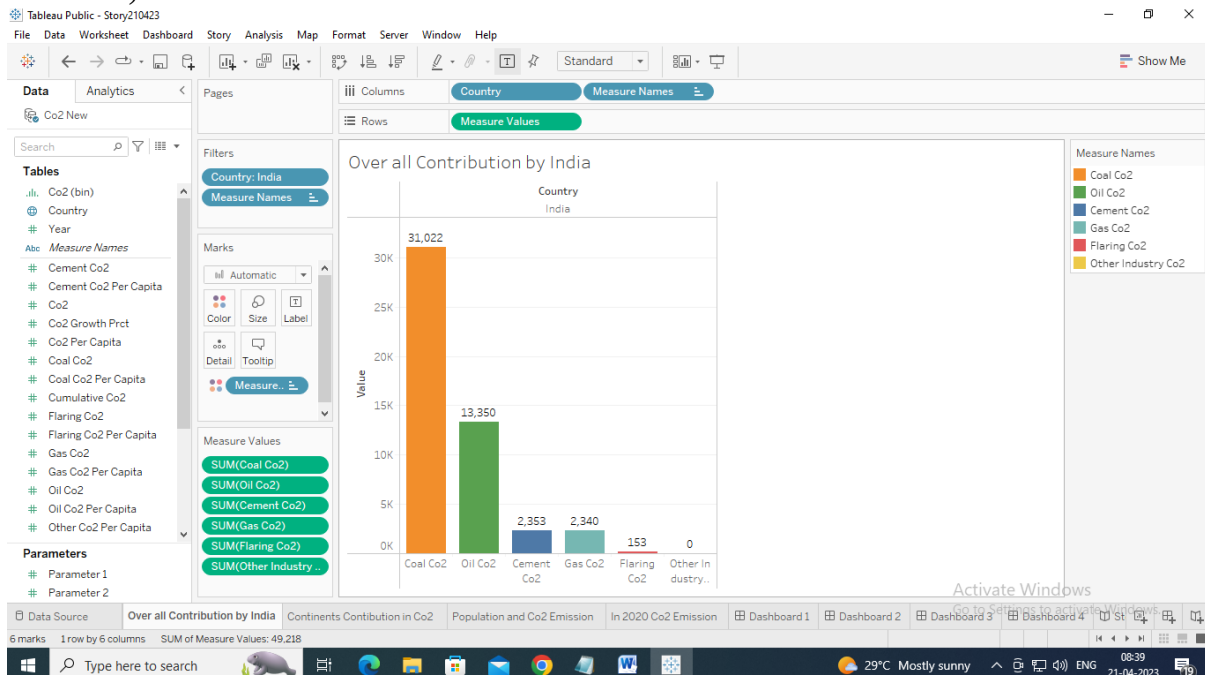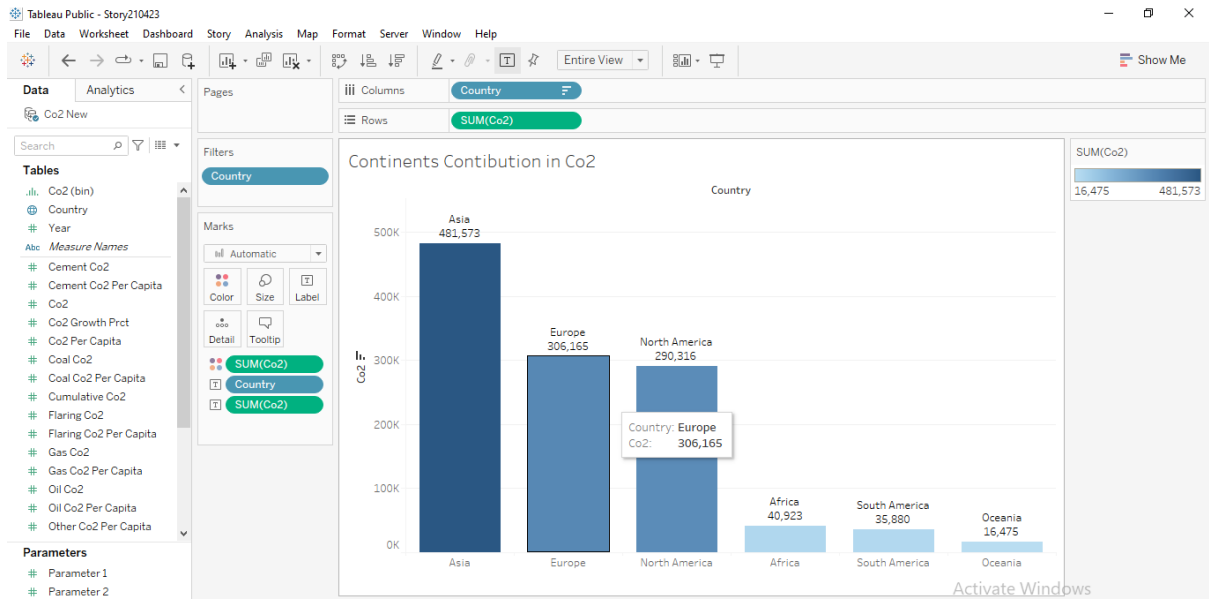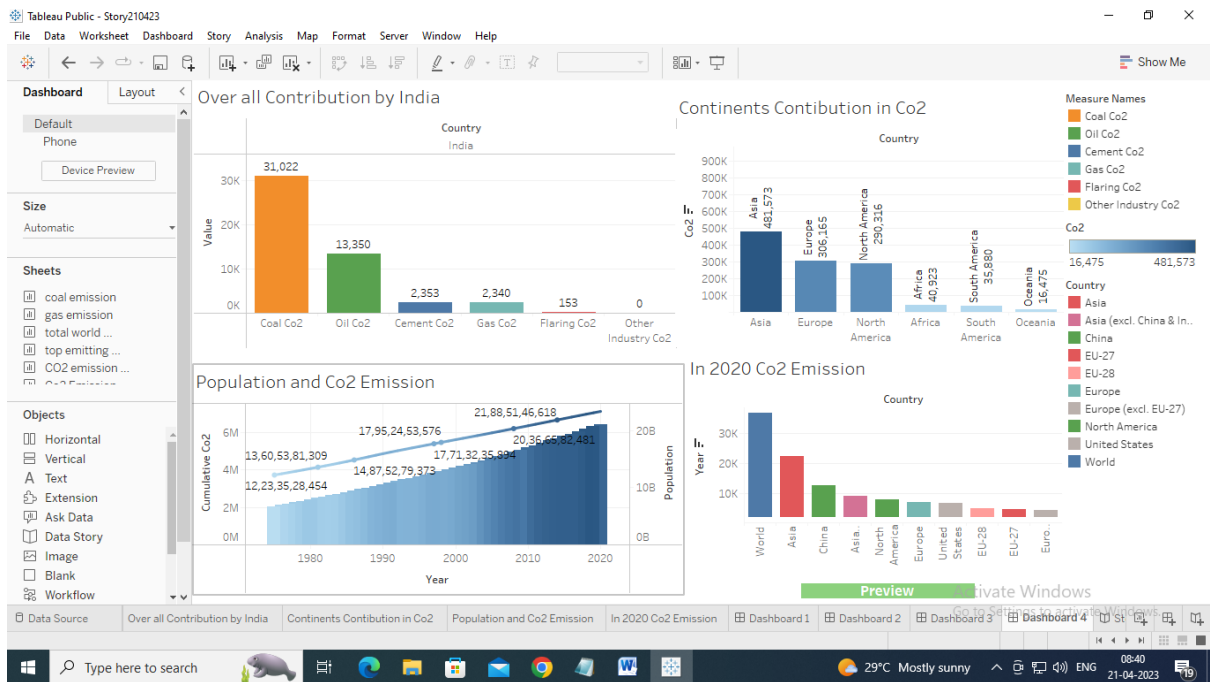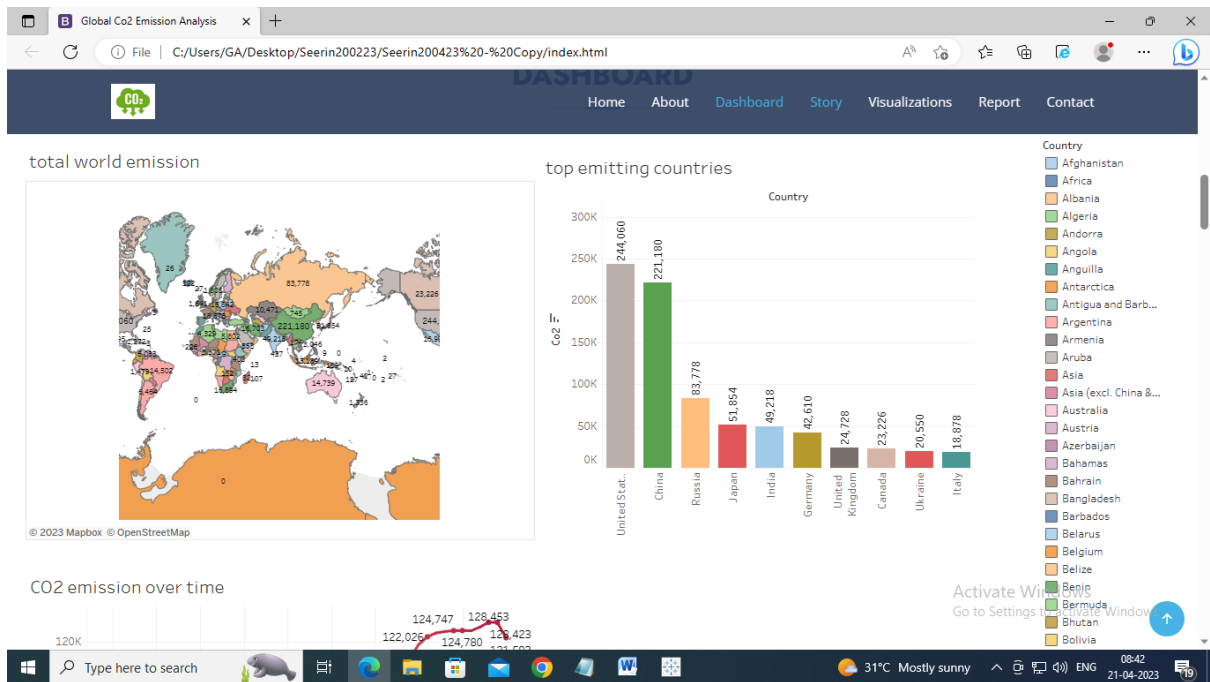- Antigua and Barb...
- Argentina
- Armenia
- Aruba
- Asia
- Asia (excl. China &...
- Australia
- Austria
- Azerbaijan
- Bahamas
- Bahrain
- Bangladesh
- Barbados
- Belarus
- Belgium
- Belize
- Benin
- Bermuda
- Bhutan
- Bolivia

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CO2 emission over time

120K

124,747   128,453
122,026
124,780   128,423

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File   Data   Worksheet   Dashboard   Story   Analysis   Map   Format   Server   Window   Help

Show Me

Dashboard   Layout

Default
Phone

Device Preview

Size
Automatic

Sheets
- coal emission
- gas emission
- total world ...
- top emitting ...
- CO2 emission ...

Objects
- Horizontal
- Vertical
- A Text
- Extension
- Ask Data
- Data Story
- Image
- Blank
- Workflow

Over all Contribution by India

Country
India

31,022

13,350

2,353   2,340
153   0

Coal Co2   Oil Co2   Cement Co2   Gas Co2   Flaring Co2   Other Industry Co2

Value
30K
20K
10K
0K

Continents Contibution in Co2

Country

Asia   Europe   North America   Africa   South America   Oceania
481,573   306,165   290,316   40,923   35,880   16,475

Co2
900K
800K
700K
600K
500K
400K
300K
200K
100K

Asia   Europe   North America   Africa   South America   Oceania

Measure Names
- Coal Co2
- Oil Co2
- Cement Co2
- Gas Co2
- Flaring Co2
- Other Industry Co2

Co2
16,475   481,573

Country
- Asia
- Asia (excl. China & In...
- China
- EU-27
- EU-28
- Europe
- Europe (excl. EU-27)
- North America
- United States
- World

Population and Co2 Emission

21,88,51,46,618
17,95,24,53,576   20,36,65,82,481
13,60,53,81,309   17,71,32,35,894
12,23,35,28,454   14,87,52,79,373

Cumulative Co2
6M
4M
2M
0M

1980   1990   2000   2010   2020
Year

Population
20B
10B
0B

In 2020 Co2 Emission

Country

Year
30K
20K
10K

World   Asia   China   Asi.   North America   Europe   United States   EU-28   EU-27   Euro.

Preview   Activate Windows
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Data Source   Over all Contribution by India   Continents Contibution in Co2   Population and Co2 Emission   In 2020 Co2 Emission   Dashboard 1   Dashboard 2   Dashboard 3   Dashboard 4   St...

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Dashboard link:
https://public.tableau.com/views/Dashboard200423/Dashboard1?:language=en-US&:display_count=n&:origin=viz_share_link

Story link :

https://public.tableau.com/views/Story210423/Story1?:language=en-US&:display_count=n&:origin=viz_share_link

video link :

https://drive.google.com/file/d/1H06w-dJeRuOQPGPTOAAcg3bG6HBdw7VU/view?usp=drivesdk

APPENDIX

Dataset collect from:
https://drive.google.com/file/d/1n764uDPT_ZF7kzGFLtpxkwBBsDBScbWm/view?usp=sharing