

# PROJECT REPORT

## Introduction:

### 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 states 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. This will help researchers and environment experts to predict global warming. So countries should set a goal to decrease this amount yearly.

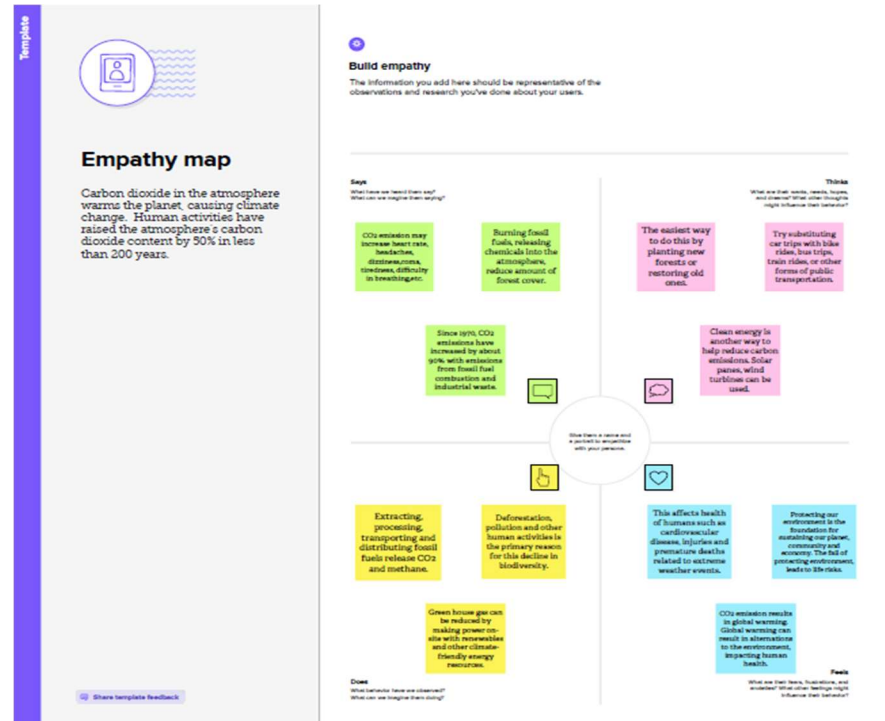
### Purpose:

Understanding the risks associated with Co2 emissions is a necessary step early on this project. Co2 emission cause by various Internal and External factors. Countries are in a competition to release Co2 gases. By this project we can analyse the problematic situation we are living in. We can analyse the countries and continents who emit Co2 gases the most. We can also find what are the other factors which may cause Global Warming. In this project we can find a solution for this problem and how to reduce Co2 emission in various places.

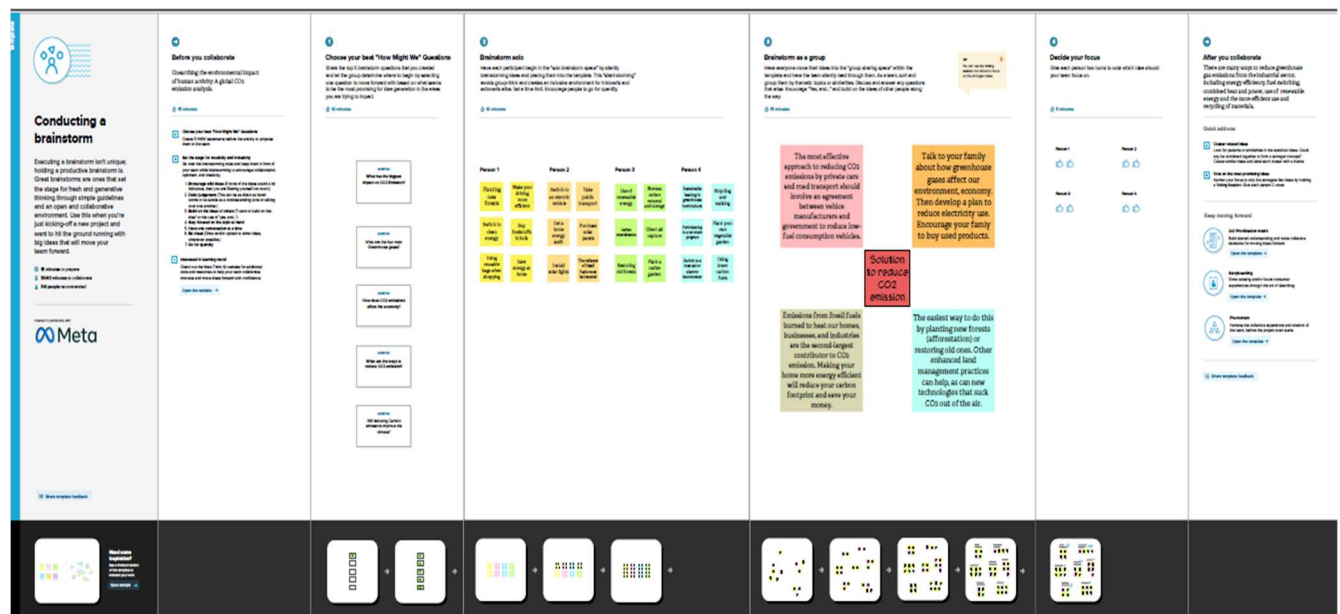
Reducing Greenhouse Gas Emissions can Improve air quality and save lives. Improvements of individuals and public health due to more active lifestyles and improved water and soil quality.

# Problem definition and Design Thinking:

## Empathy Map:

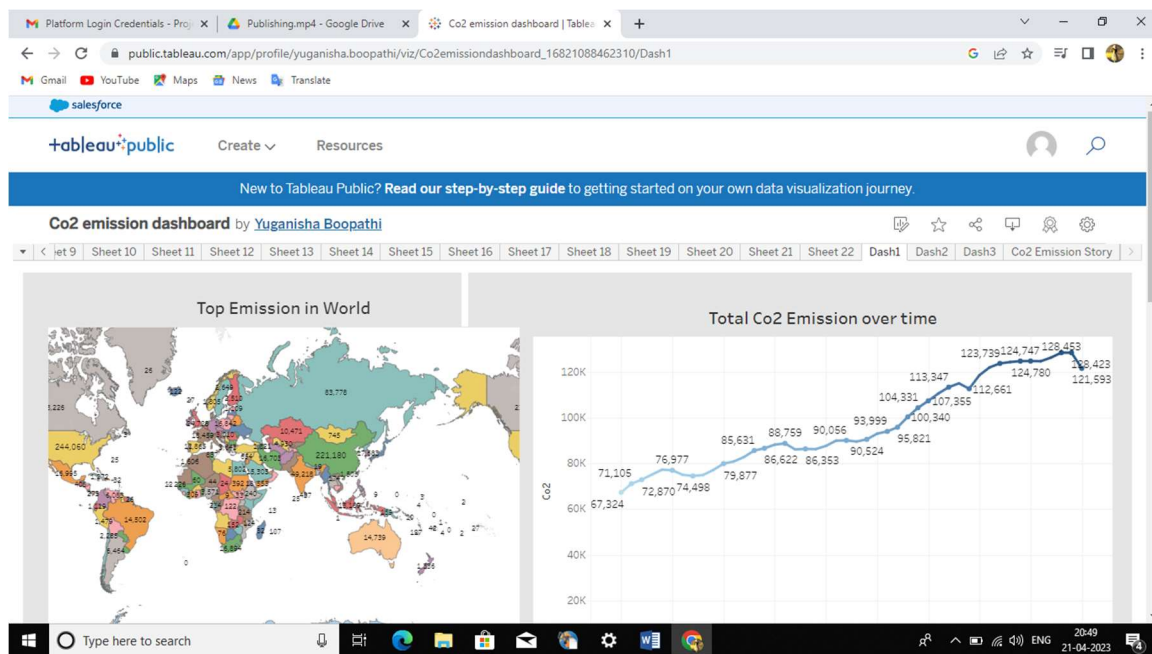


## Ideation & Brainstorming Map:



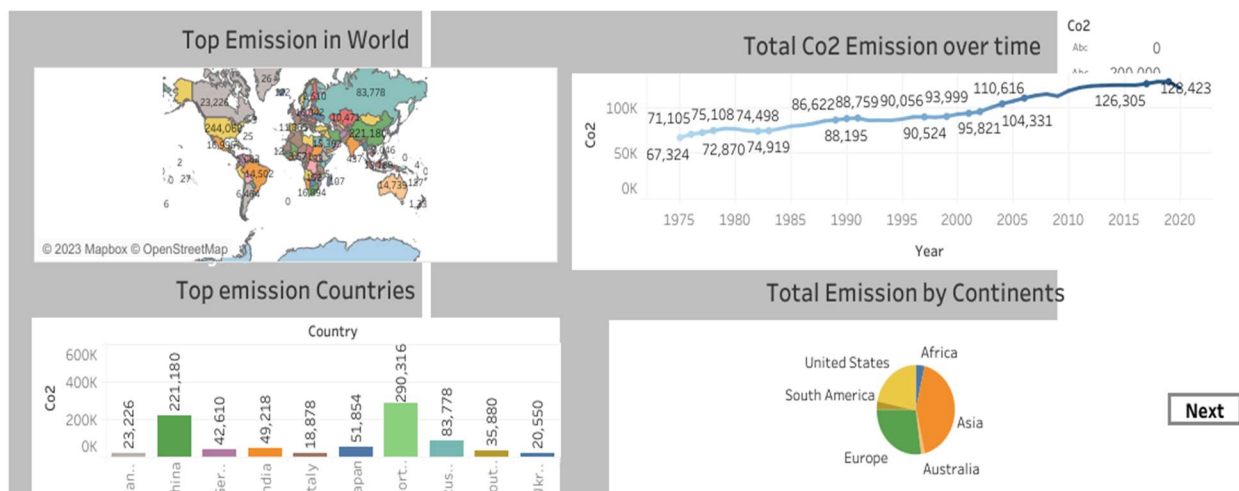
## Result:

We found that various sources are the reason for the highest Co2 emission. Specific countries play a major role in the emission of Co2 gas. And the multiple action of human increases the rate of Co2 emission.



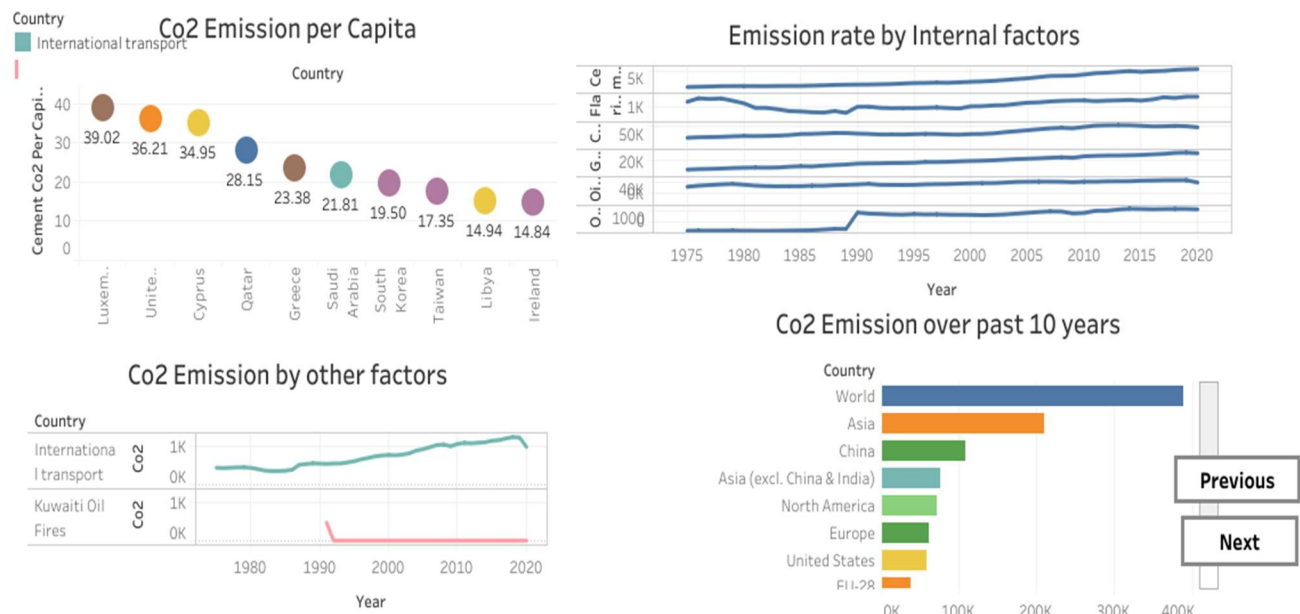
## Dashboards:

### Dashboard 1:

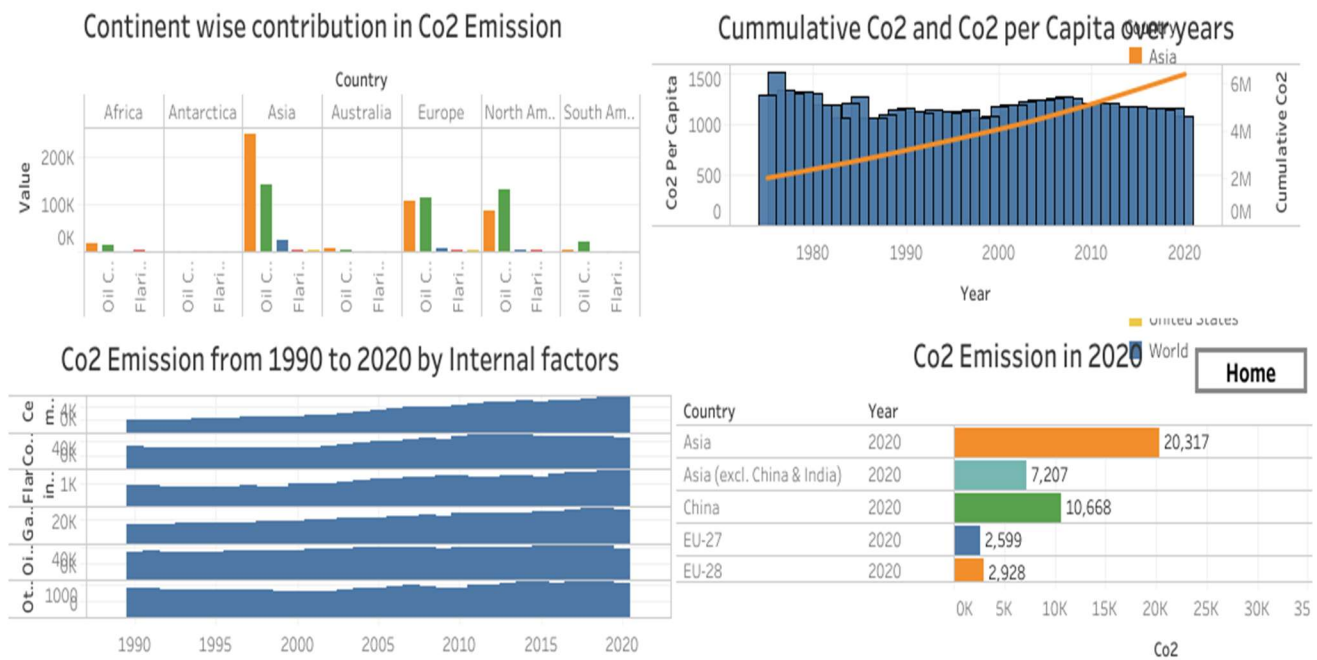


Next

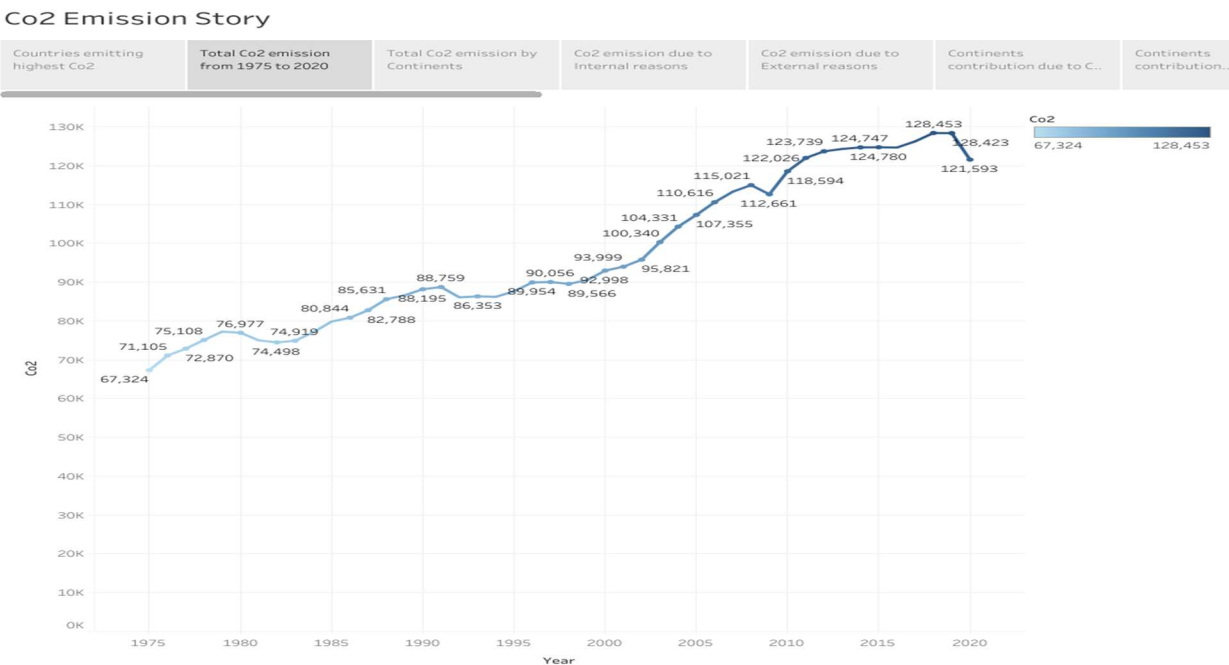
Dashboard 2:



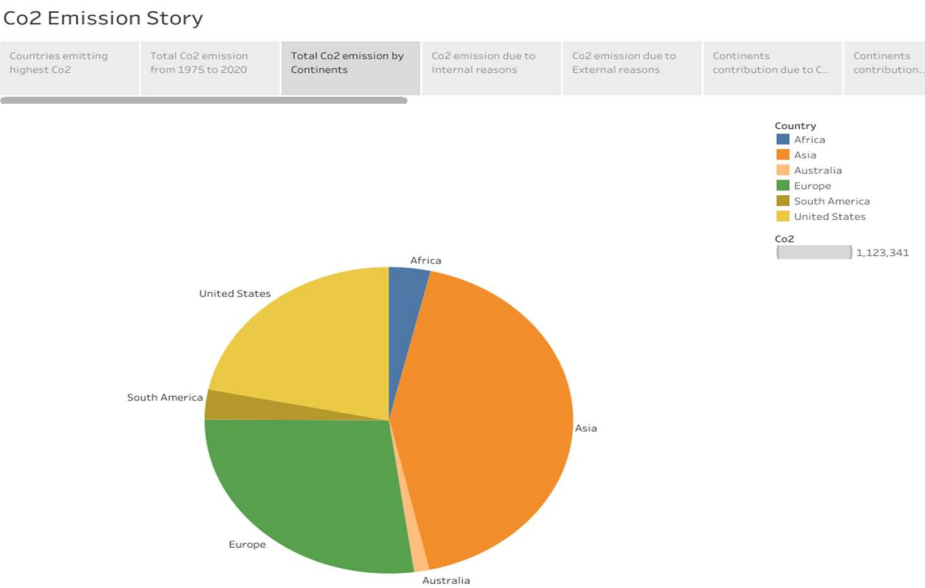
Dashboard 3:



# Story 1 (Total Co2 emission from 195 to 2020):

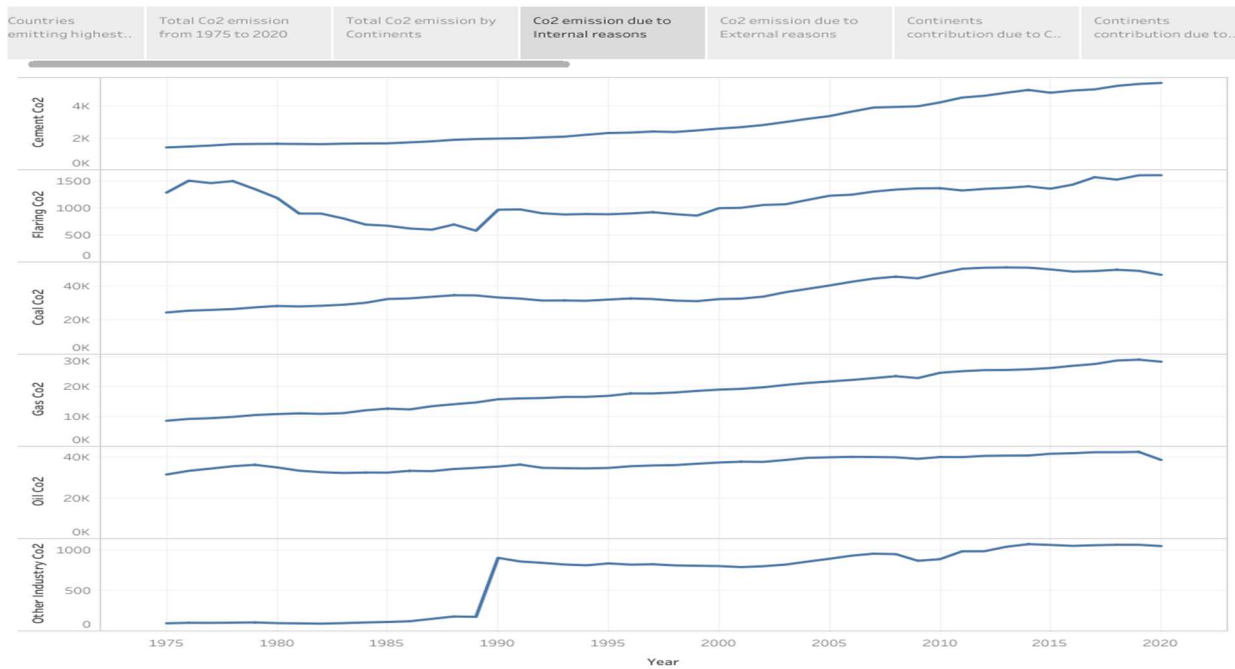


# Story 2 (Total Co2 emission by Continents):



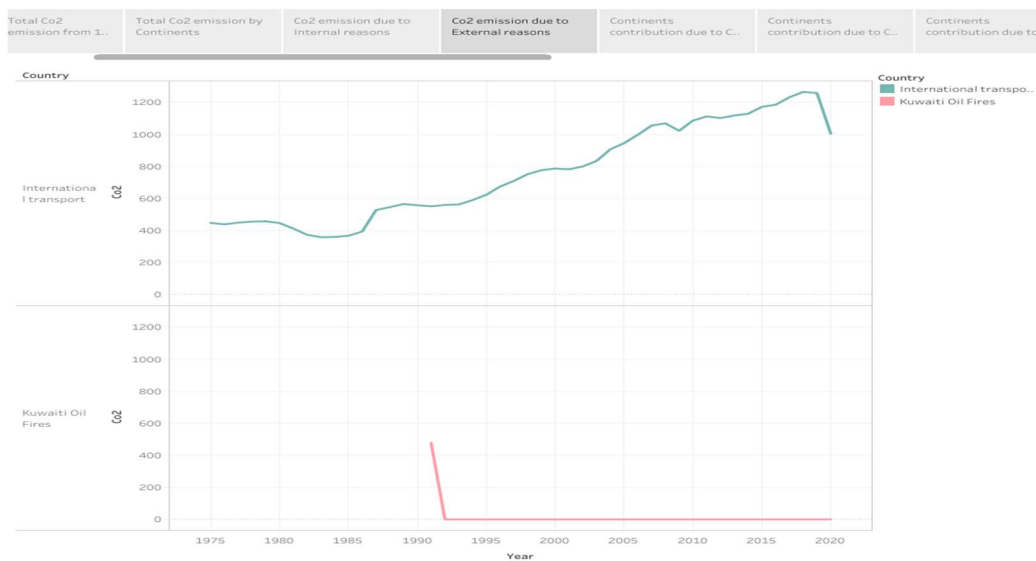
## Story 3 (Co2 emission due to Internal factors):

Co2 Emission Story



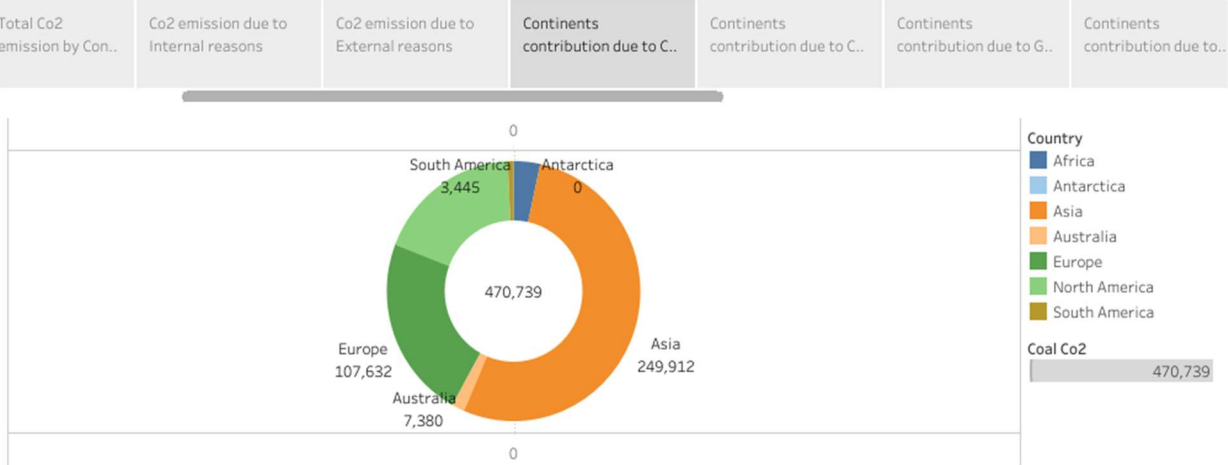
## Story 4 (Co2 emission due to External reasons):

Co2 Emission Story



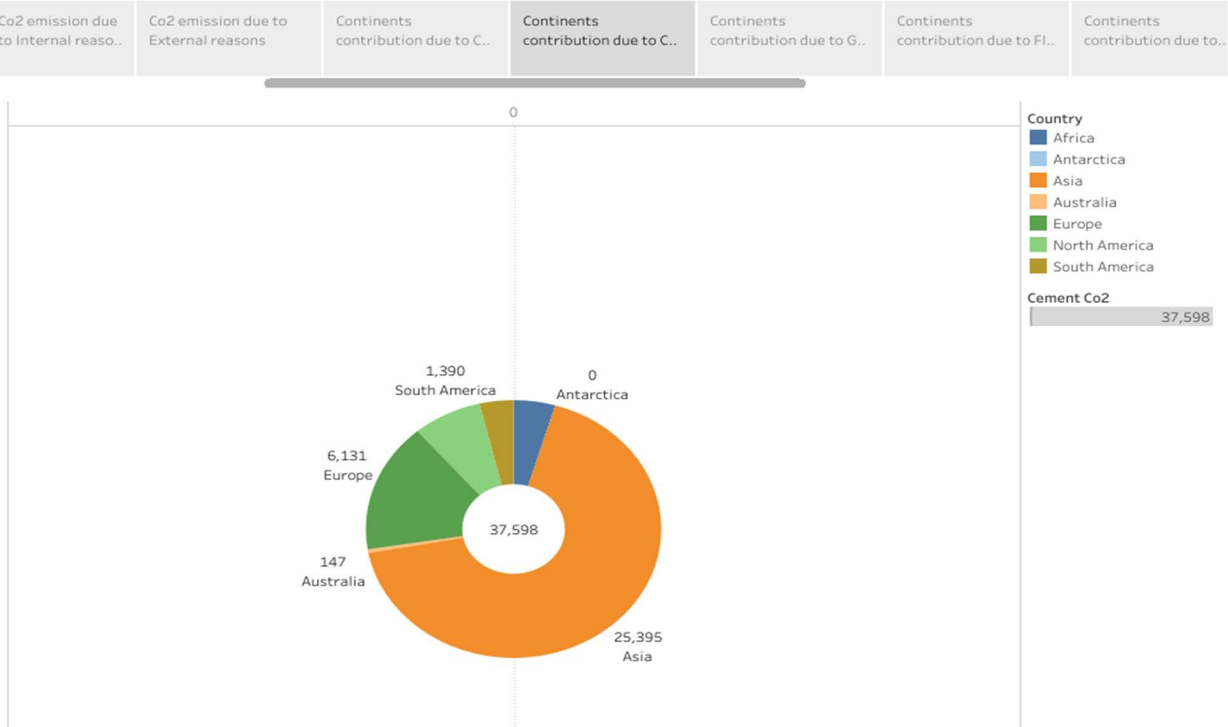
# Story 5 (Continents contribution due to Coal Co2 emission):

Co2 Emission Story



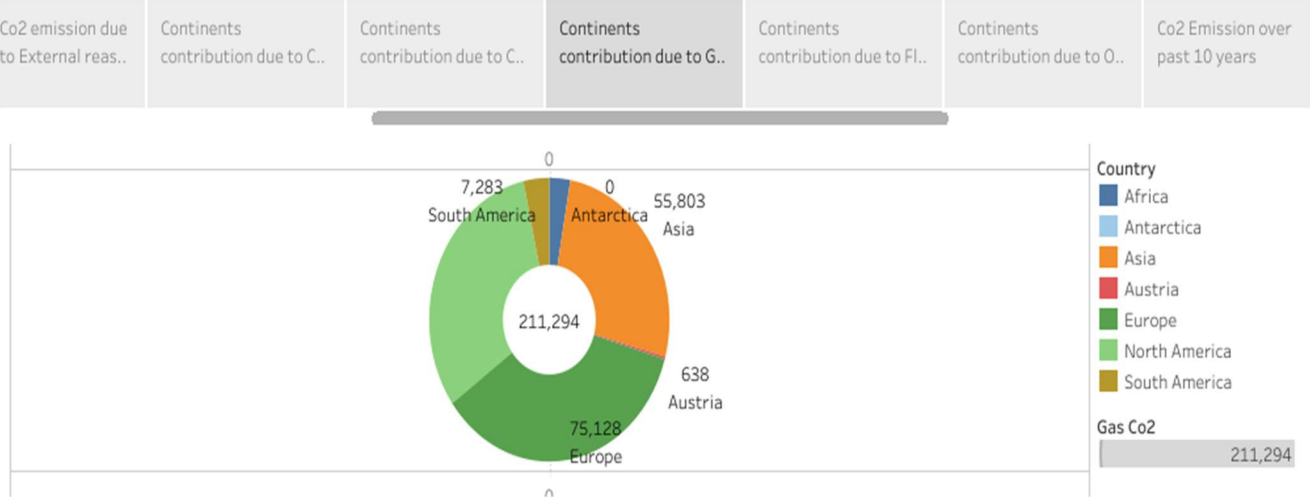
# Story 6 (Contribution due to Cement Co2 emission):

Co2 Emission Story



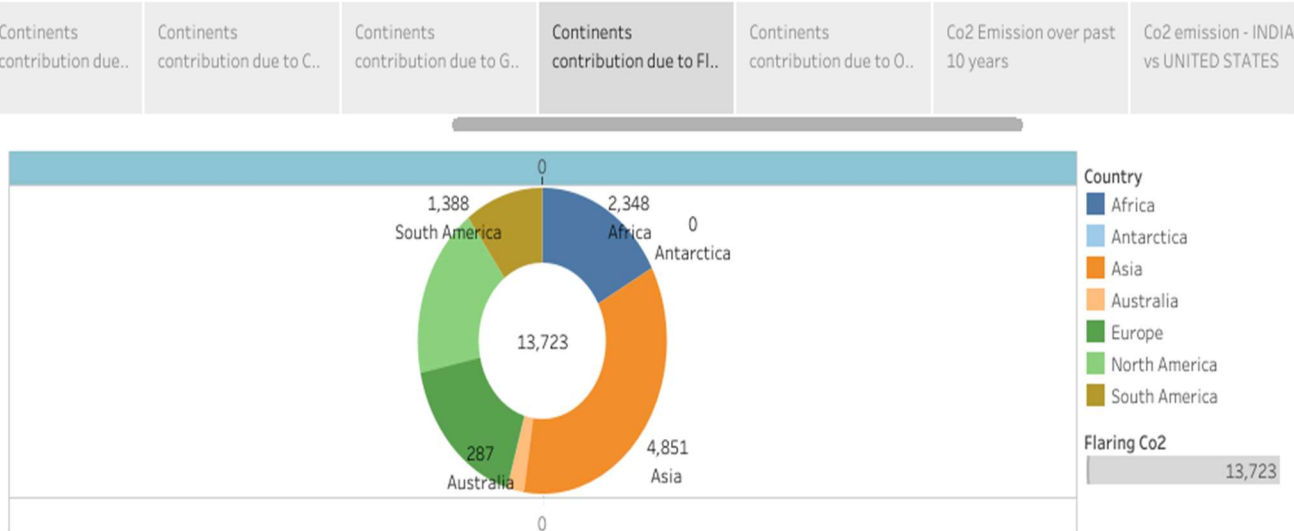
Story 7 (Contribution due to Gas Co2 emission):

Co2 Emission Story



Story 8 (Contribution due to Faring Co2 emission):

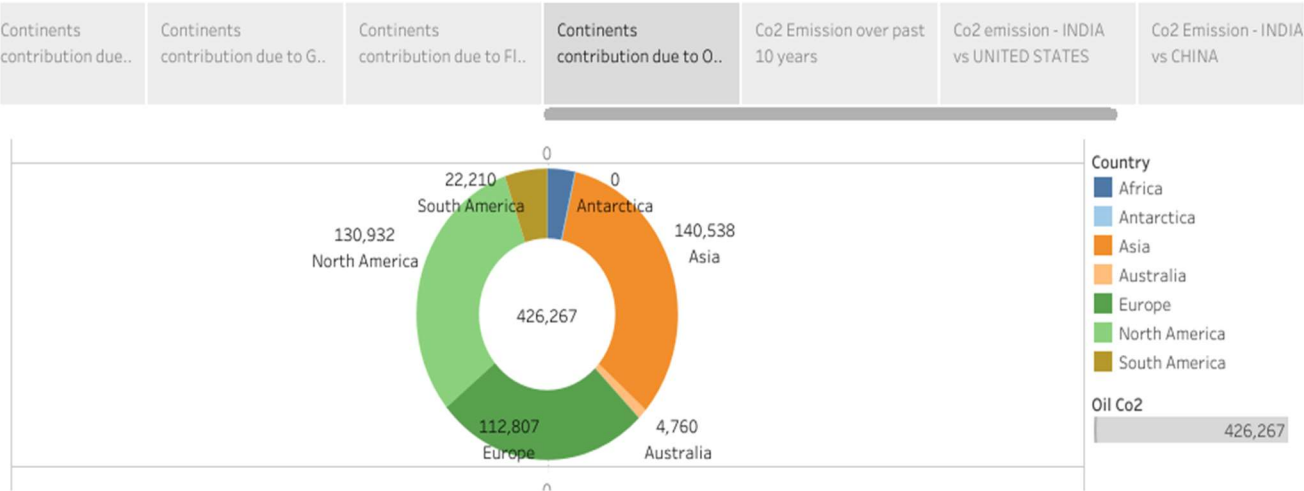
Co2 Emission Story





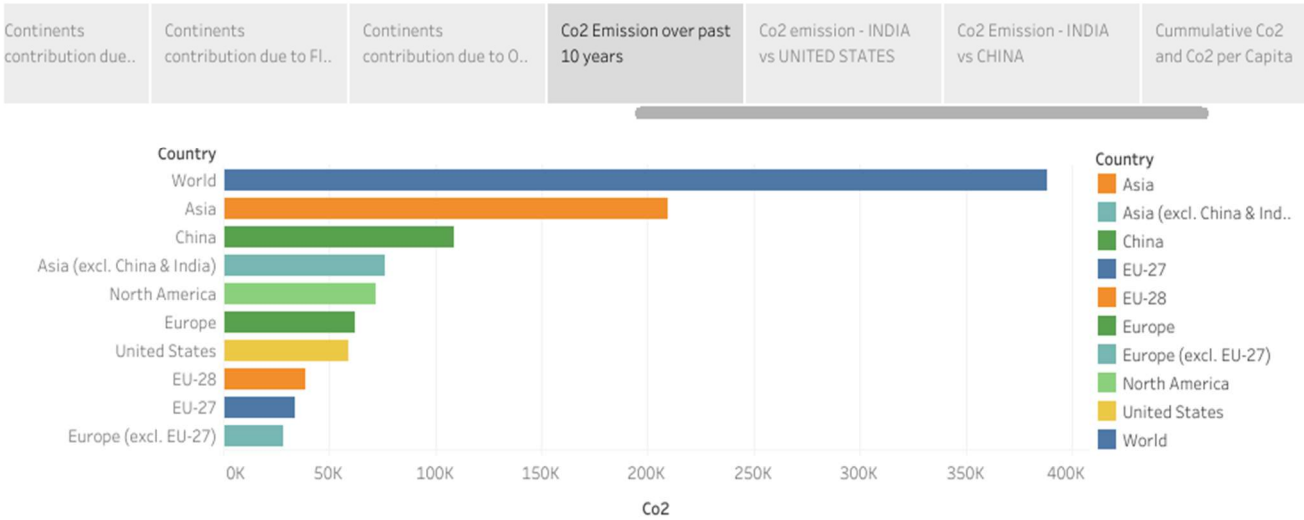
# Story 9 (Contribution due to Oil Co2 emission):

## Co2 Emission Story



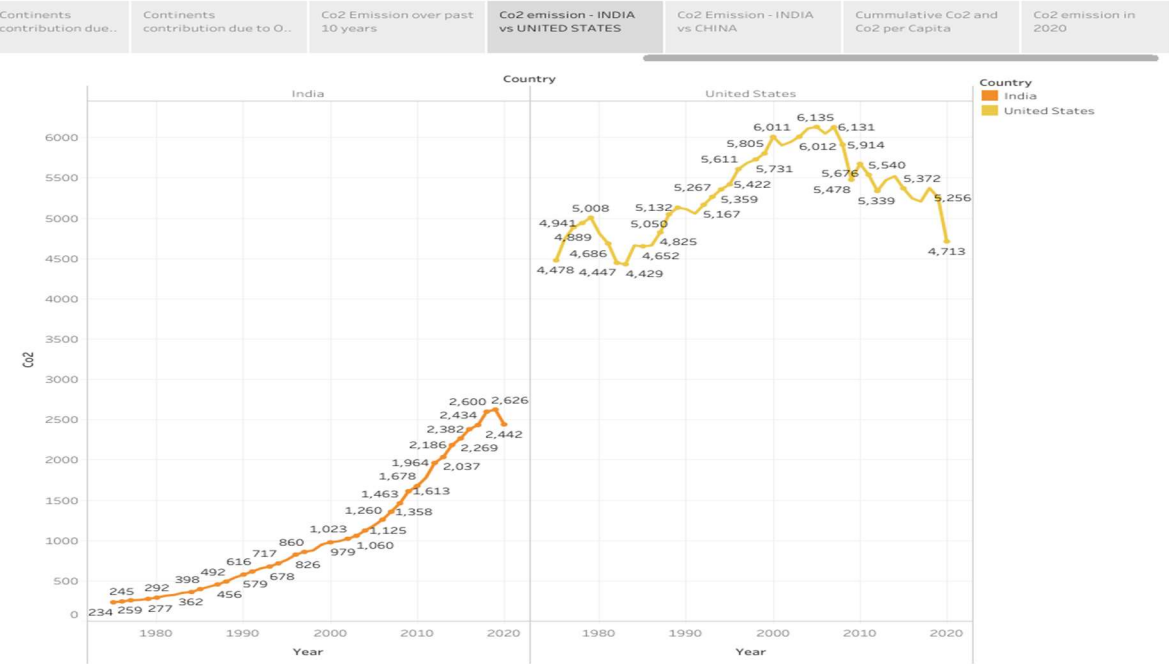
# Story 10 (Co2 Emission over past 10 years):

## Co2 Emission Story



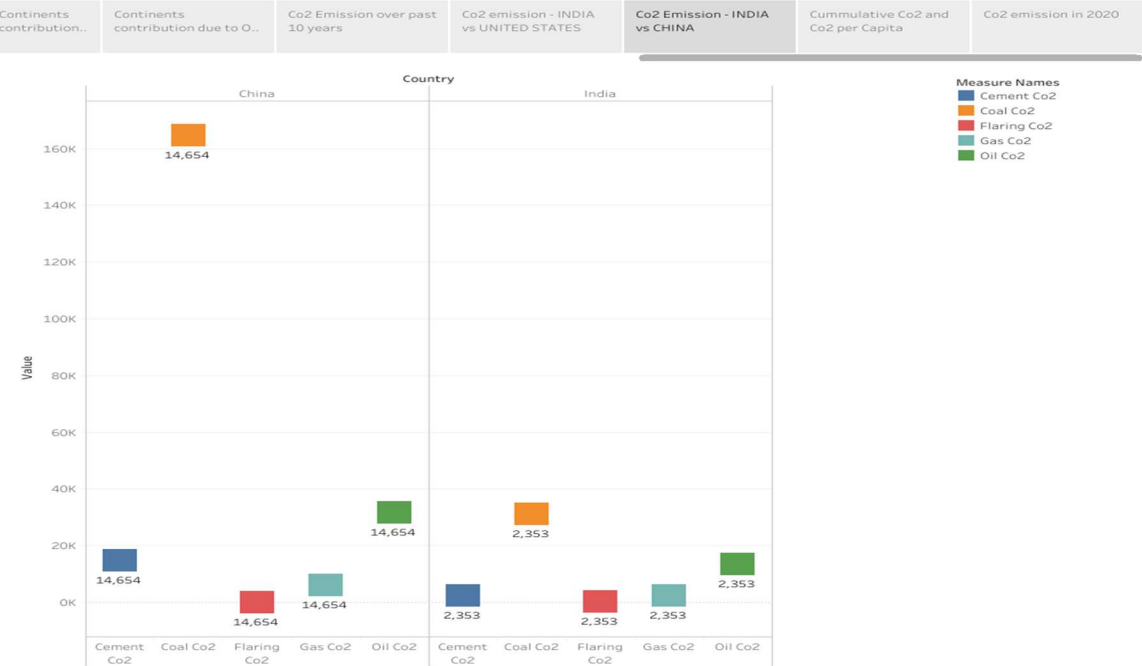
# Story 11 (Co2 emission – INDIA vs UNITED STATES):

Co2 Emission Story



# Story 12 (Co2 Emission – INDIA vs CHINA):

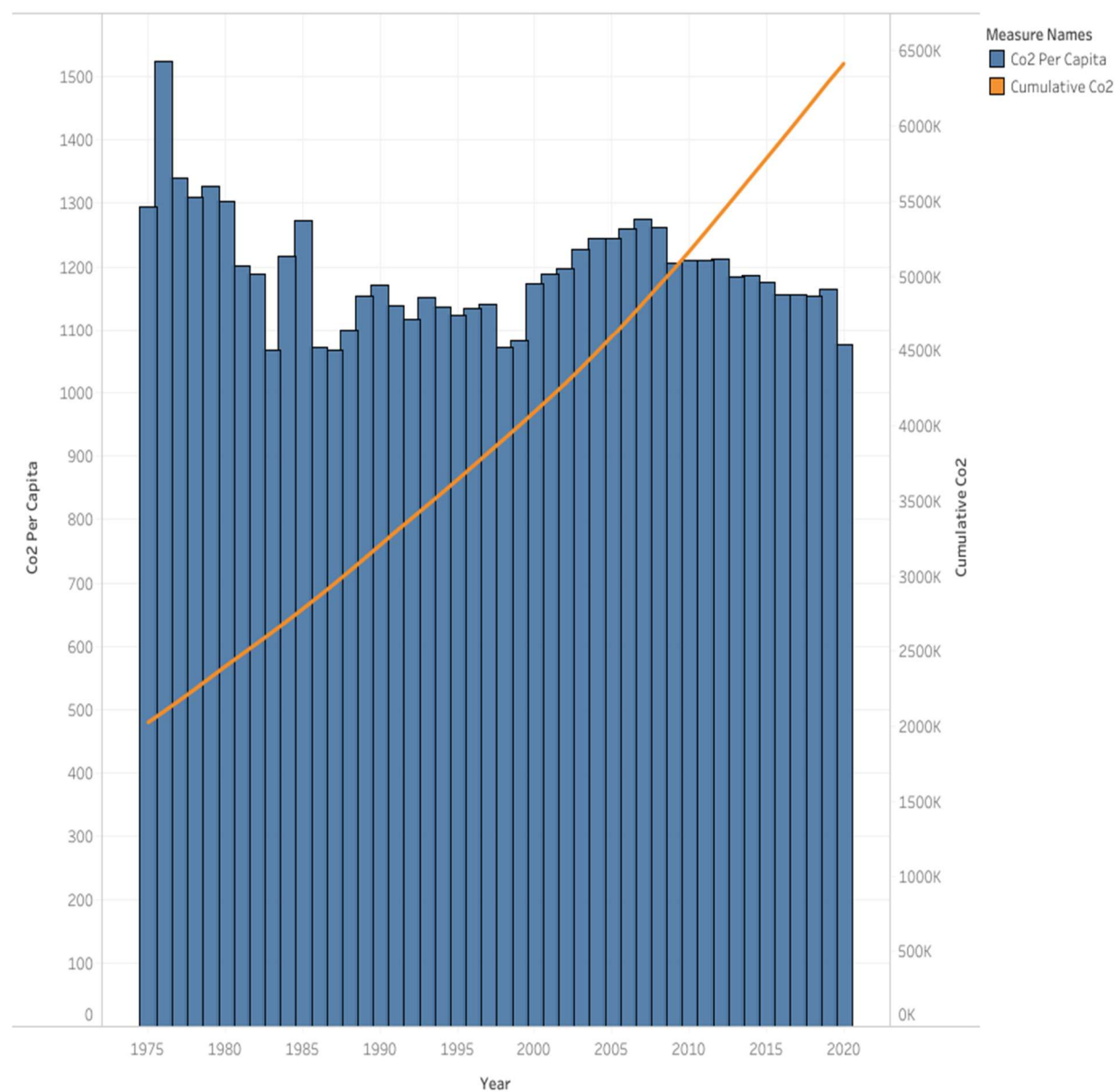
Co2 Emission Story



# Story 13 (Cumulative Co2 and Co2 per Capita):

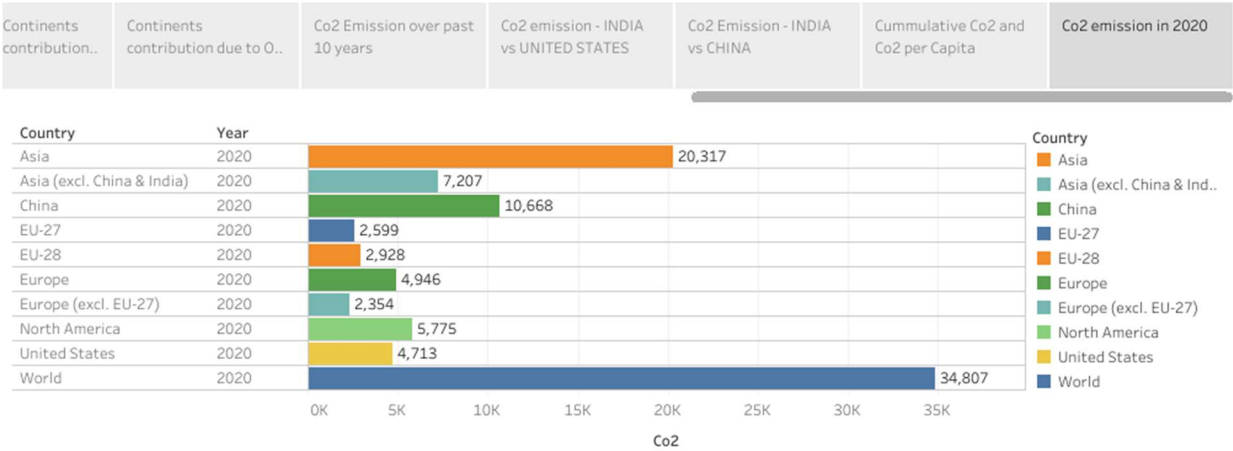
## Co2 Emission Story

Continents contribution..	Continents contribution due to O..	Co2 Emission over past 10 years	Co2 emission - INDIA vs UNITED STATES	Co2 Emission - INDIA vs CHINA	Cummulative Co2 and Co2 per Capita	Co2 emission in 2020
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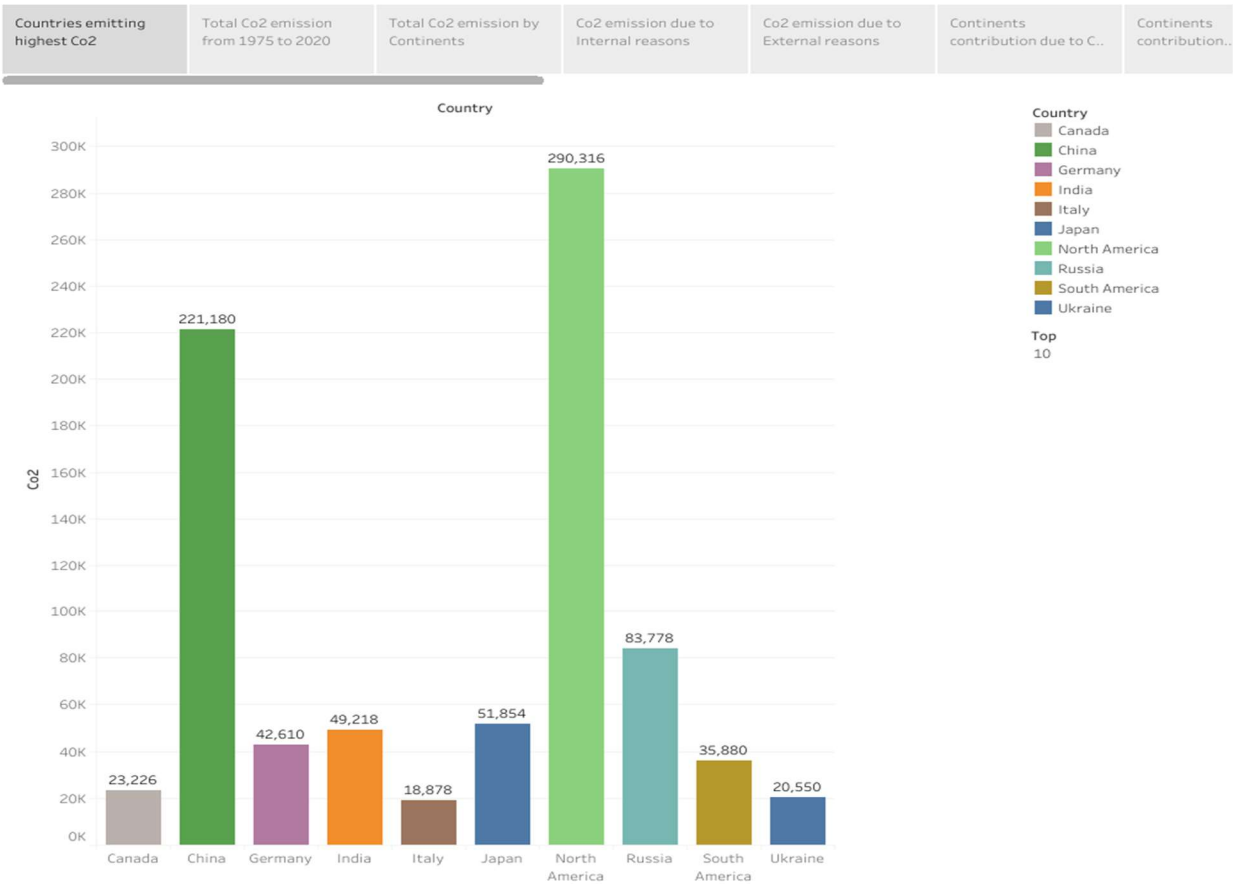
# Story 14 (Co2 emission in 2020):

## Co2 Emission Story

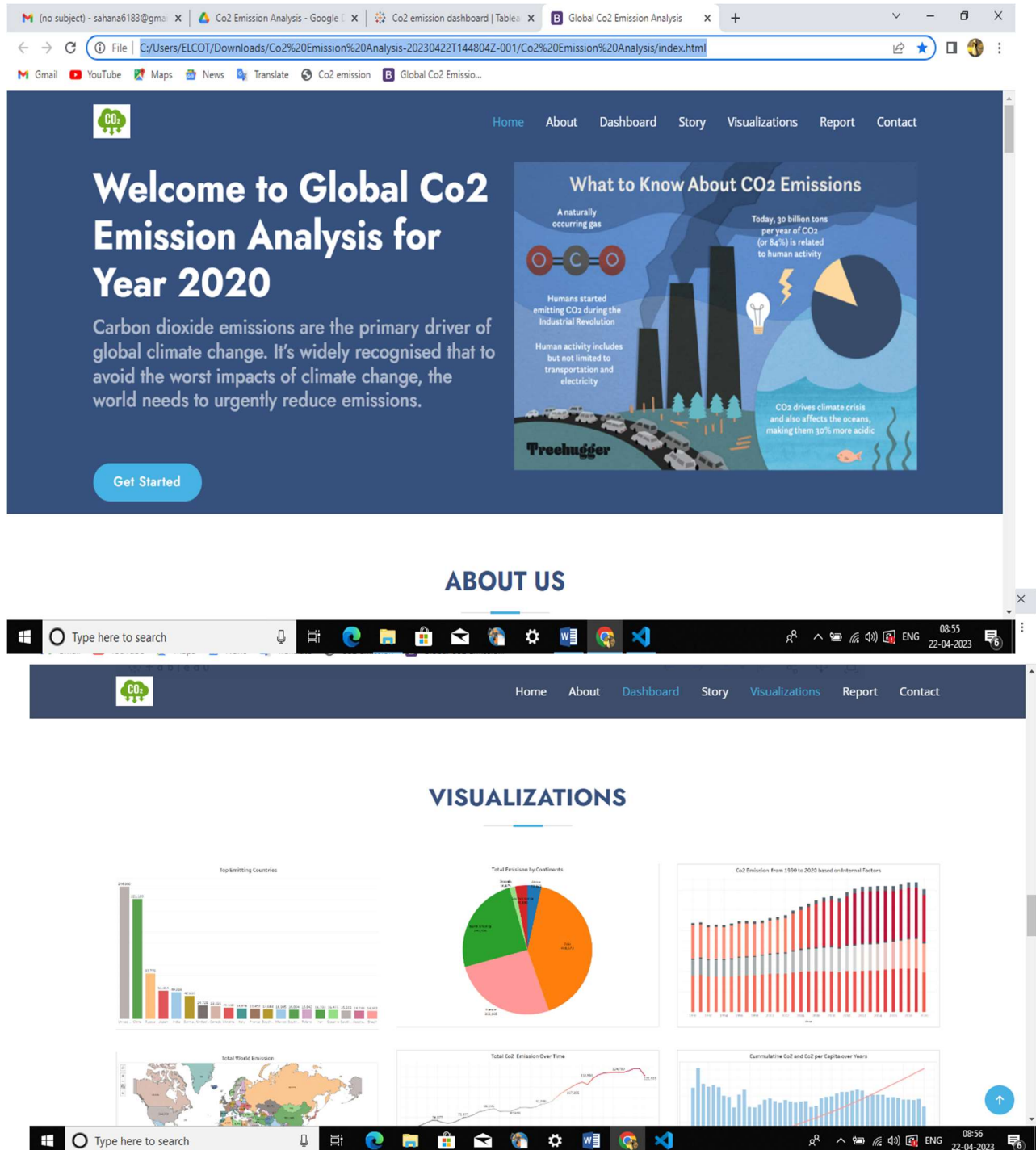


# Story 15 (Countries emitting highest Co2):

## Co2 Emission Story



# Web application:



## Advantages:

- Air pollution and greenhouse gases are often released from the same sources, cutting greenhouse gas emissions in an effort to slow climate change also reduces air pollutants, such as fine particulate matter (PM2.5). Reducing these co-emitted air pollutants improves air quality and benefits human health.
- Without reducing greenhouse gas emissions, our planet safety will be harmed, public safety will be at risk, and more climate disasters caused by pollution will occur.
- Reducing our carbon emissions helps reverse the impact of global warming overall, but more specifically, benefits the overall air quality. Plus, it makes for clear skies.
- The simple reduction of energy shrinks your carbon footprint and operating expenses.
- Greenhouse gas emissions raise air temperature, directly impacting the oxygen concentration in rainwater and contributing to lower rainfall levels.
- With healthier air, water, and food, we can significantly reduce many climate-related health issues seen today.

## Disadvantages:

- Carbon offsetting is generally not sustainable (environmentally, economically, or socially), ethical or good for the environment. Different offset project also have different levels of effectiveness. Reducing your individual carbon footprint first is a better idea.
- When you hear the words “carbon offset”, think about the term “compensation”. Essentially, carbon offsets are reductions in greenhouse gas (GHG) emissions that are used to compensate for emissions occurring elsewhere. But this system has inherent flaws which can make it a bad idea for ourselves and for our environment.
- Carbon offsets do not work at the core issue of reducing CO2 emissions, poorer countries are paid to offset carbon while “richer” countries continue to emit, carbon offset projects are also often used as greenwashing.
- If corporations are forced to pay more for carbon offsets as a result of producing carbon-intensive goods, those items are likely to become more expensive. As a result, we should anticipate a price increase in products that have significant levels of greenhouse gas emissions.

## Applications:

- Carbon dioxide and other heat-trapping gases are the main drivers of global warming. While climate change cannot be stopped, it can be slowed. To avoid the worst consequences of climate change, we'll need to reach "Net Zero" carbon emissions by 2050 or sooner.
- There are a number of benefits that can result from taking action to reduce greenhouse gas emissions and adapt to climate change, including: Improvements to individual and public health due to more active lifestyles, cleaner air, and improved water and soil quality.
- Americans breathe less pollution and face lower risks of premature death and other serious health effects. Environmental damage from air pollution is reduced. The value of Clean Air Act health benefits far exceeds the costs of reducing pollution.
- By measuring and reducing its emissions, your business will stay compliant with current and/or future legislation, build brand equity, and discover inefficiencies in its operations – in addition to joining the global fight against climate change.
- The reduction of Co2 emission includes, less environmental pollution and improvements to health. A boost to sustainable economic growth and the creation of green jobs. Enhanced food security by lessening the impact of climate change.
- Reducing emissions of these dangerous pollutants will save lives, reduce the number of nonfatal heart attacks, reduce cases of chronic bronchitis and asthma attacks, and avoid hospital admissions and emergency room visits.
- Renewable energy has taken off in recent months and years, replacing higher-emitting sources of energy and creating jobs. Between 2011 and 2013, wind generation in the United States increased by 40 percent, and in January 2014, the United States had a record month for wind power with generation of nearly 18,000 gigawatt hours.

These are the important applications of reducing Co2 emission in the overall world.

## Conclusion:

- a. To achieve the two-degree target with a probability of around 70%, it is estimated that global greenhouse gas emissions need to decrease by 50-60% from 2000 to 2050, and by almost 100% by 2100. To achieve a 1.5-degree target with a probability of around 70%, zero emissions are needed globally as early as 2050.
- b. By shrinking your carbon footprint you can reduce the contribution your lifestyle makes to climate change. It can also help you to understand the issues of science, policy and technology that are central to climate change. Furthermore, the process shrinking your footprint can motivate you to take further climate action.
- c. By this project, we can analyse the variations of countries in the emission of carbon dioxide and their effects in the atmosphere due to human behaviour. And we can also find various solutions to reduce these carbon dioxide emissions in the atmosphere via this data analysis.



## Future scope:

- a. Future changes are expected to include a warmer atmosphere, a warmer and more acidic ocean, higher sea levels, and larger changes in precipitation patterns. The extent of future climate change depends on what we do now to reduce greenhouse gas emissions.
- b. Because air pollution and greenhouse gases are often released from the same sources, cutting greenhouse gas emissions in an effort to slow climate change also reduces air pollutants, such as fine particulate matter (PM<sub>2.5</sub>). Reducing these co-emitted air pollutants improves air quality and benefits human health.
- c. Accumulation of greenhouse gases in the atmosphere – from the burning of fossil fuels and deforestation – lead to a heating of the earth's surface. This in turn leads to impacts such as shifting seasons, rising sea-levels, disappearing Arctic sea-ice and more intense heat waves.
- d. However, even if we were to cease all carbon emission today, the temperature of the Earth would still continue to rise. This is because there is a delayed period in which the carbon dioxide already released will continue to accumulate and move among the atmosphere and oceans of our planet.

# Appendix:

<file:///C:/Users/ELCOT/Downloads/Co2%20Emission%20Analysis-20230422T144804Z-001/Co2%20Emission%20Analysis/index.html>

This is my web application link.