# UNEARTHING THE ENVIRONMENTAL IMPACT OF HUMAN ACTIVITY: A GLOBAL CO2 EMISSION ANALYSIS

## INTRODUCTION:

## Overview:

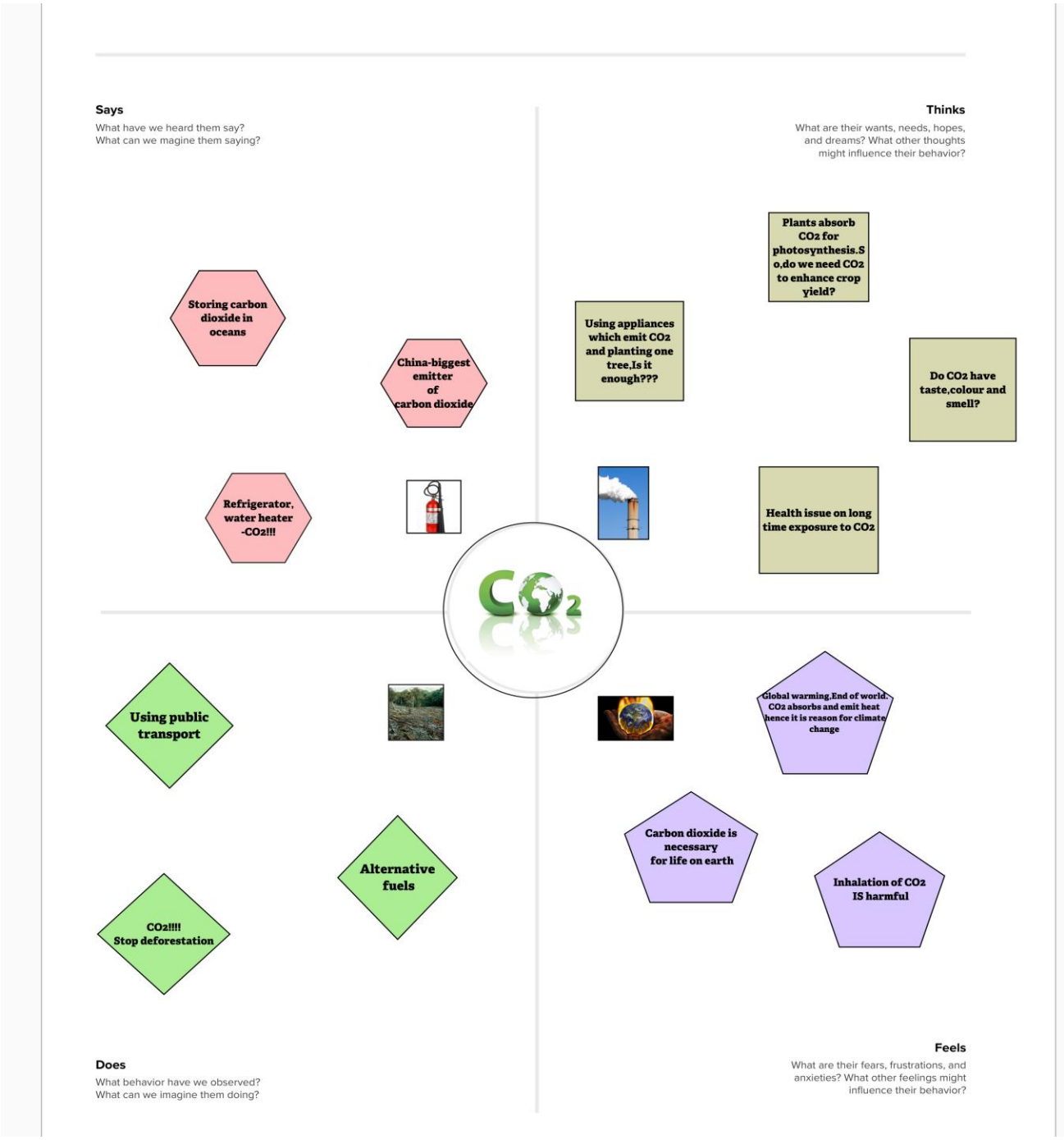
Global warming is one of the biggest challenges currently being faced by the human race, although correlation is not causation, a likely cause of global warming is due to increased atmospheric carbon dioxide from human activities. **CO2 Emission** refers to the Carbon Dioxide emitted throughout the world. 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 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.

## Purpose:

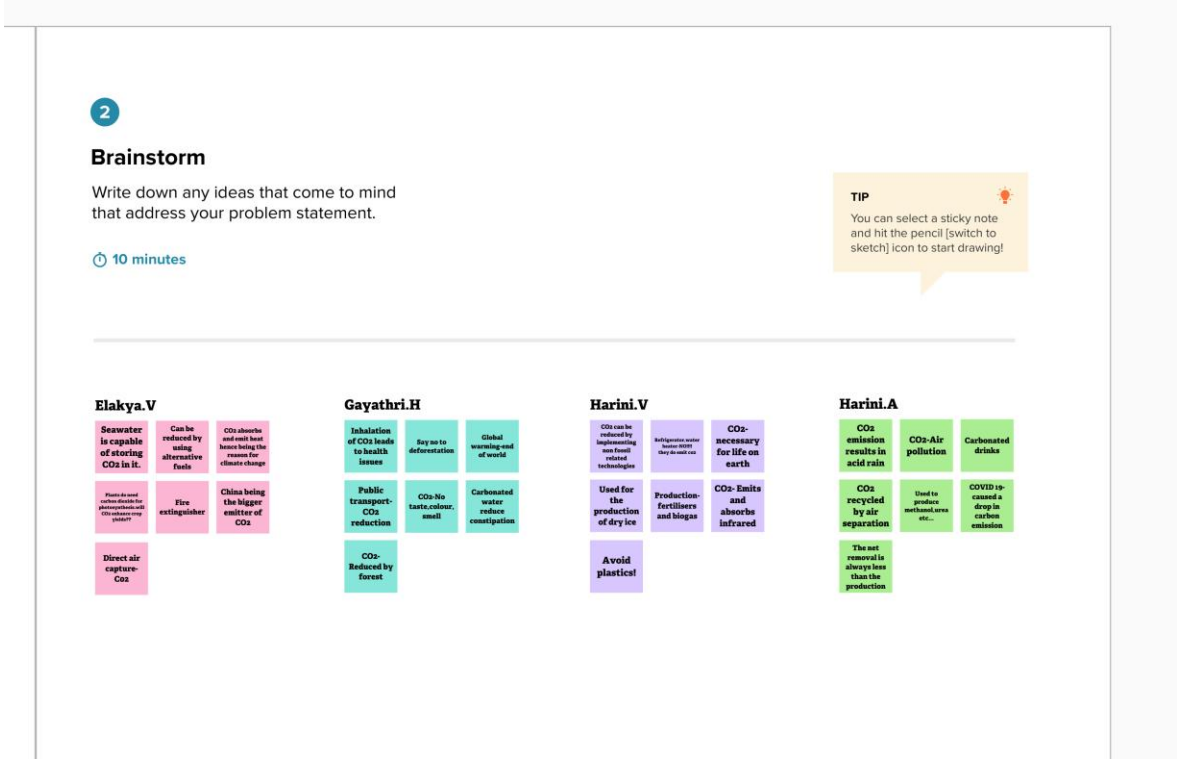
The use of this project is to find the ways to minimize CO2 emission and to find the factors that emit CO2. From this project one can find the top emitting countries of CO2 and can take the effective measure accordingly. One can achieve a pollution free environment by knowing all the pros and cons from this project.

# PROBLEM DEFINITION AND DESIGN THINKING:

## Empathy map:



# BRAINSTORMING MAP:

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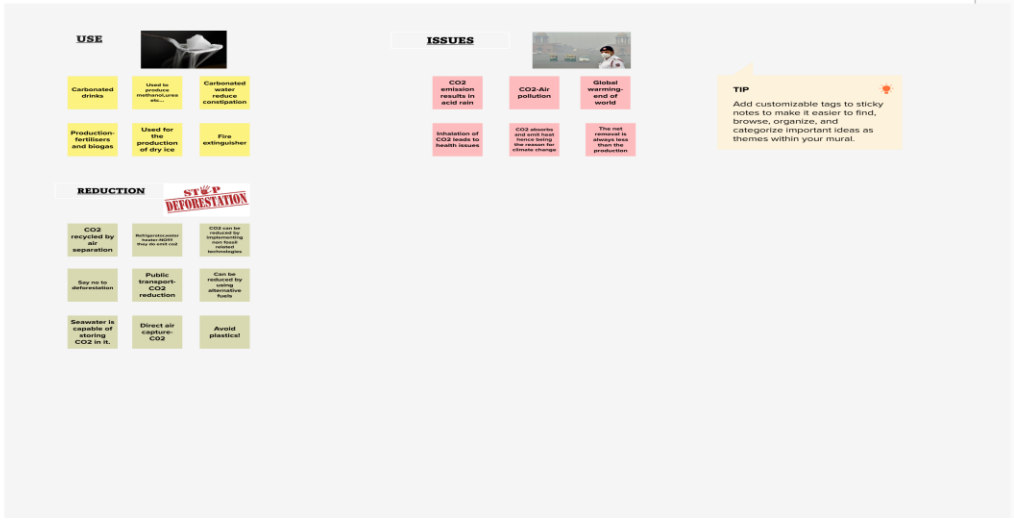
## Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you and break it up into smaller sub-groups.

20 minutes

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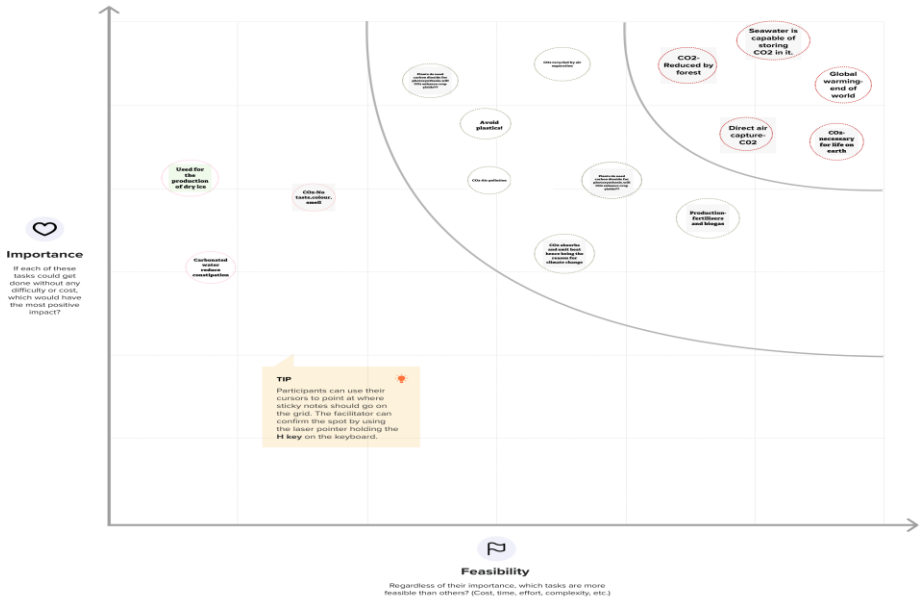
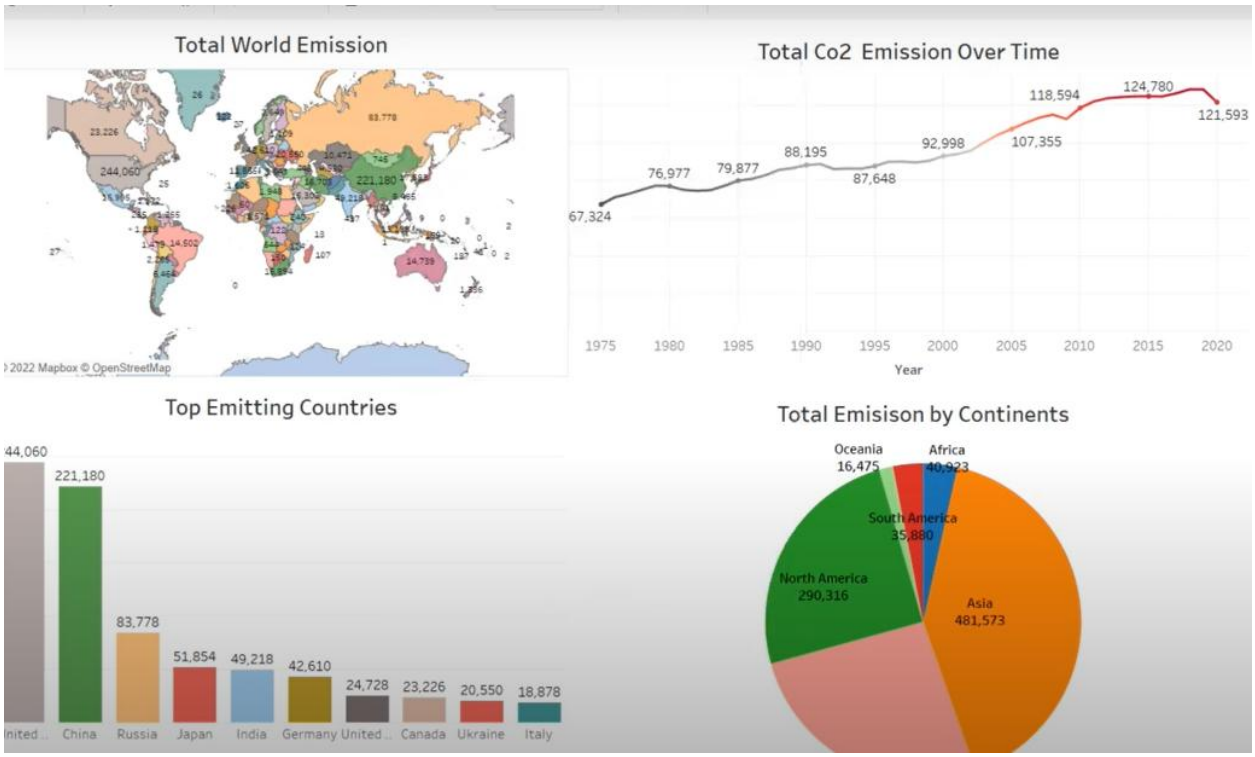
## Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

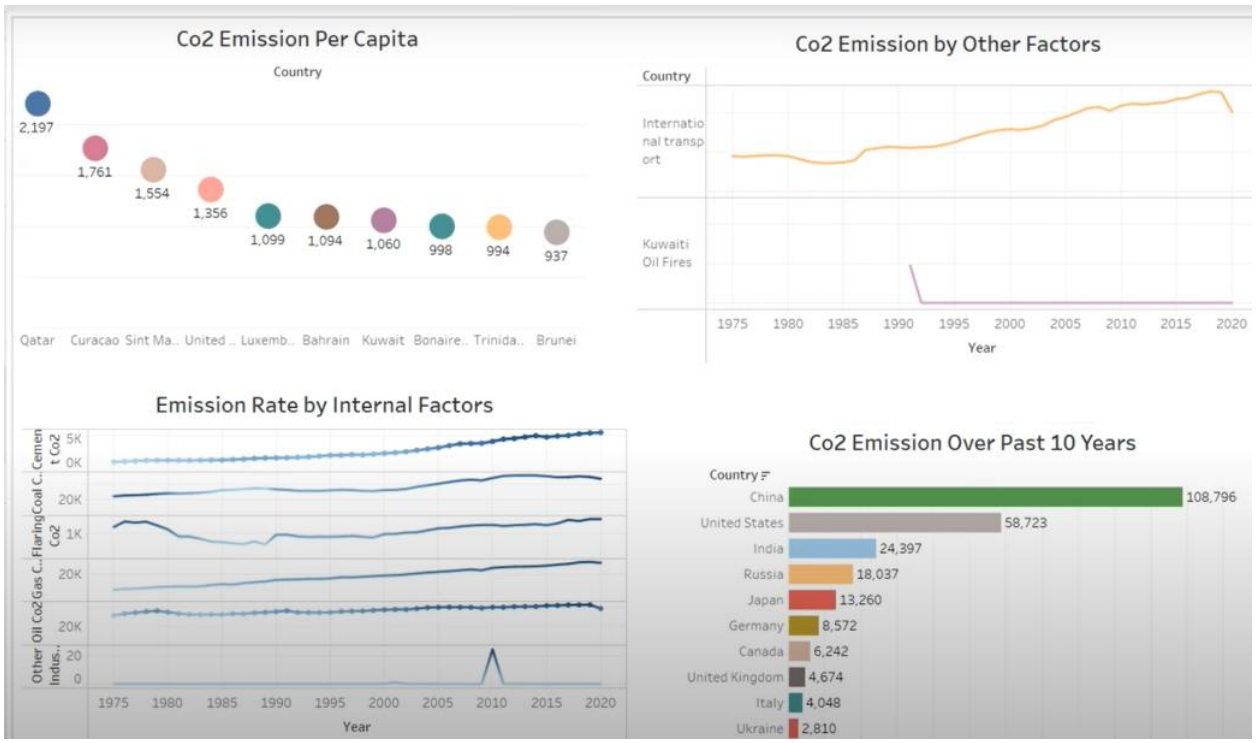
20 minutes



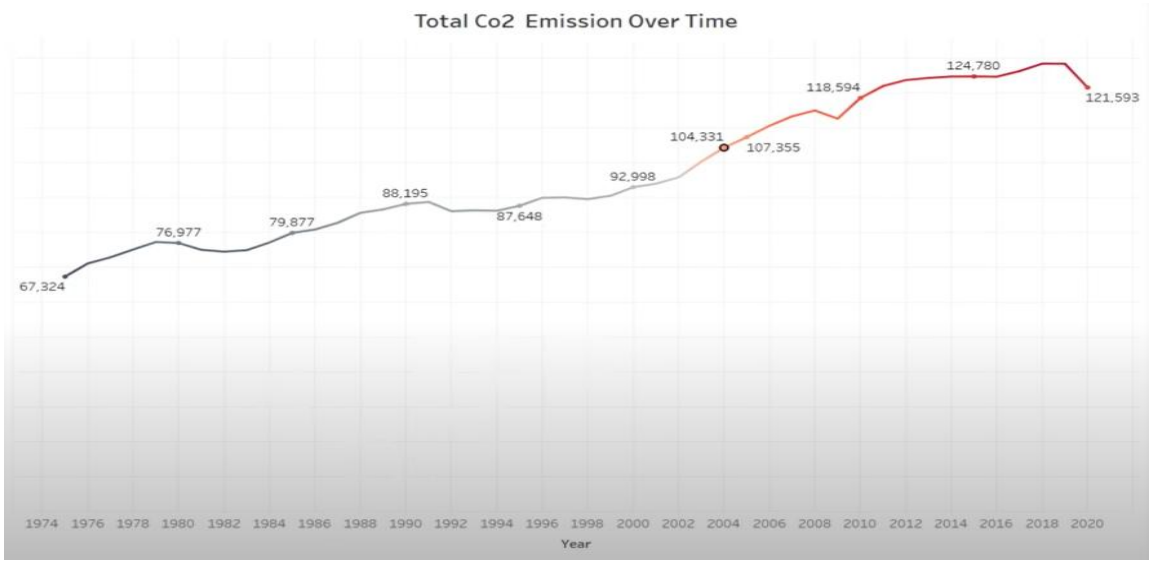
# RESULT:



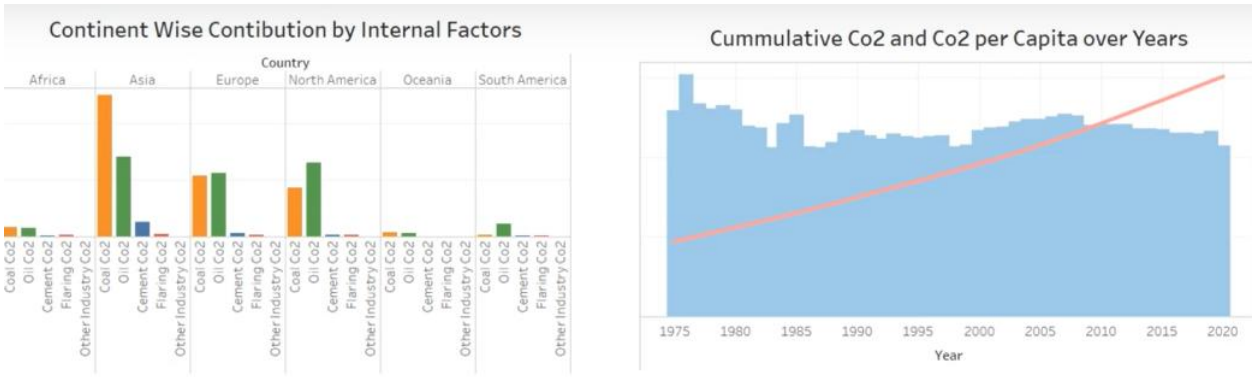

China being the top country to emit CO2 due to the coal burning and coal mining in its production and consumption terms. China opened the coal power plants in 2020.It emits 27% of global CO2.United states stays in the second place.The source of emission in united states is from burning fossil fuels for electricity, heat and transportation. India stays in the third place. In India coal power plants, rice paddies and cattle are the major source of emission. Russia is in the fourth position, where the CO2 emission is mostly from fossil gas, oil and coal.



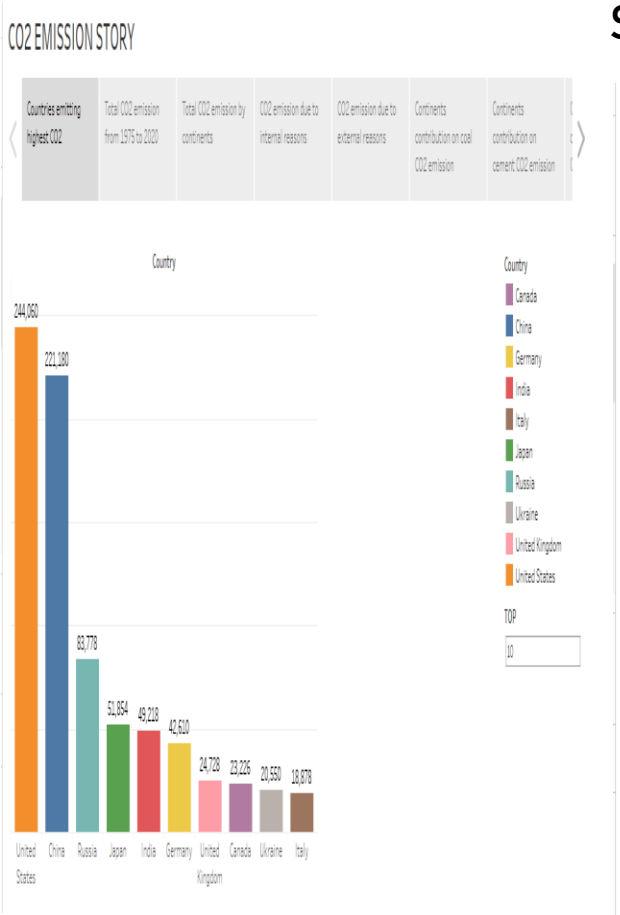

This is the overall contribution by India in CO2 emission where the CO2 emission is mostly by coal CO2 and oil CO2.

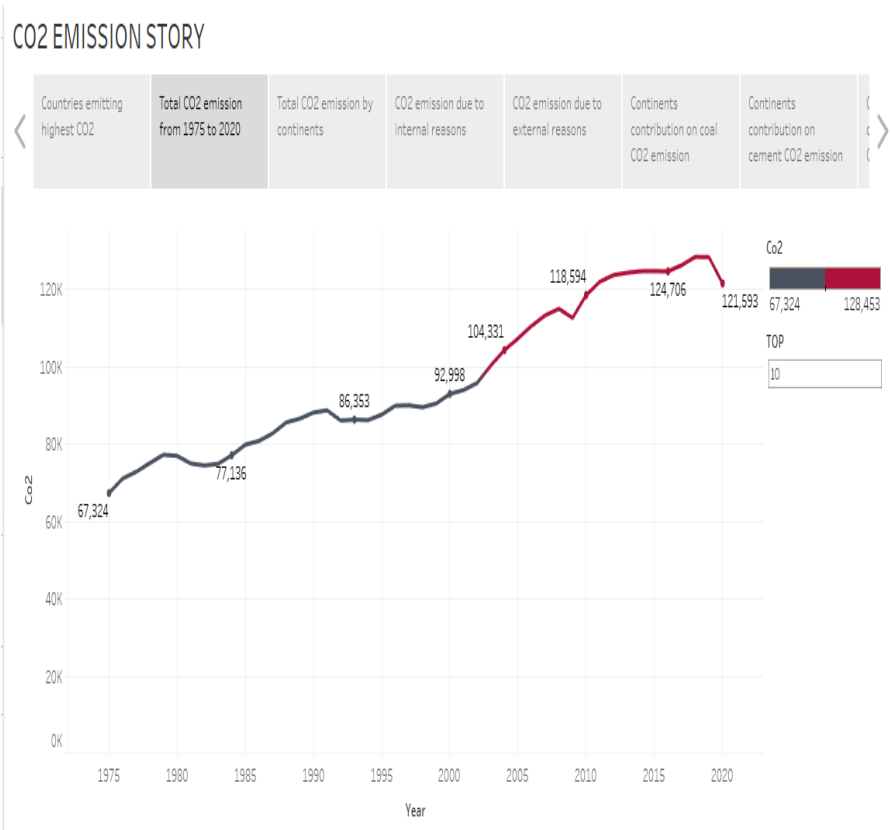



This is the visualization on total CO2 emission over time .It is clearly seen that it increases with time.


Continent Wise Contibution by Internal Factors
Country
Africa
Asia
Europe
North America
Oceania
South America
Coal Co2
Oil Co2
Cement Co2
Flaring Co2
Other Industry Co2
Cummulative Co2 and Co2 per Capita over Years
1975
1980
1985
1990
1995
2000
2005
2010
2015
2020
Year
Co2 Emission from 1990 to 2020 based on Internal Factors
Co2 Emission in 2020
Country
China
10,668
United Stat..
4,713
India
2,442
Russia
1,577
Japan
1,031
Germany
644
Canada
536
United Kin..
330

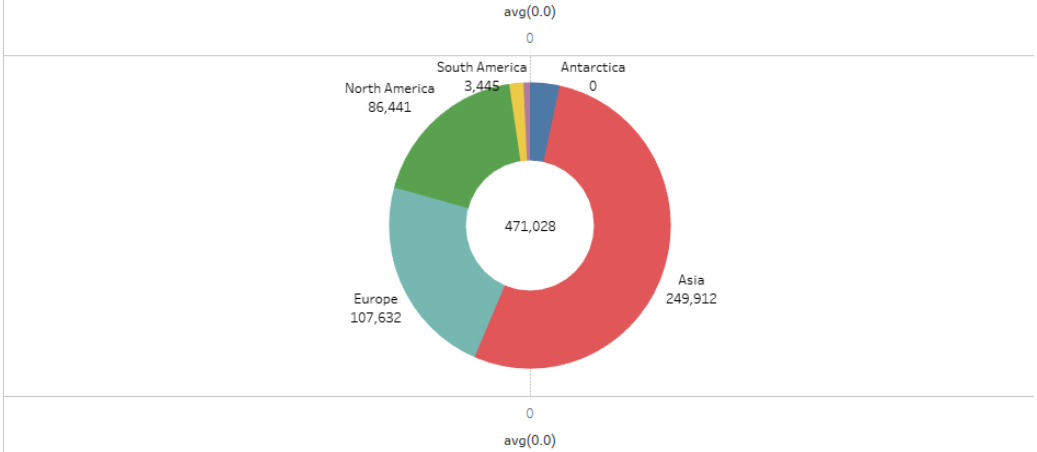
# STORY


CO2 EMISSION STORY
Countries emitting highest CO2
Total CO2 emission from 1975 to 2020
Total CO2 emission by continents
CO2 emission due to internal reasons
CO2 emission due to external reasons
Continents contribution on coal CO2 emission
Continents contribution on cement CO2 emission
Country
244,060
221,180
83,778
52,854
49,218
42,610
24,708
23,226
20,550
18,878
United States
China
Russia
Japan
India
Germany
United Kingdom
Canada
Ukraine
Italy
Country
Canada
China
Germany
India
Italy
Japan
Russia
Ukraine
United Kingdom
United States
TOP
10


CO2 EMISSION STORY
Countries emitting highest CO2
Total CO2 emission from 1975 to 2020
Total CO2 emission by continents
CO2 emission due to internal reasons
CO2 emission due to external reasons
Continents contribution on coal CO2 emission
Continents contribution on cement CO2 emission
Co2
67,324
77,136
86,353
92,998
104,331
118,594
124,706
121,593
120K
100K
80K
60K
40K
20K
0K
1975
1980
1985
1990
1995
2000
2005
2010
2015
2020
Year
Co2
67,324
128,453
TOP
10

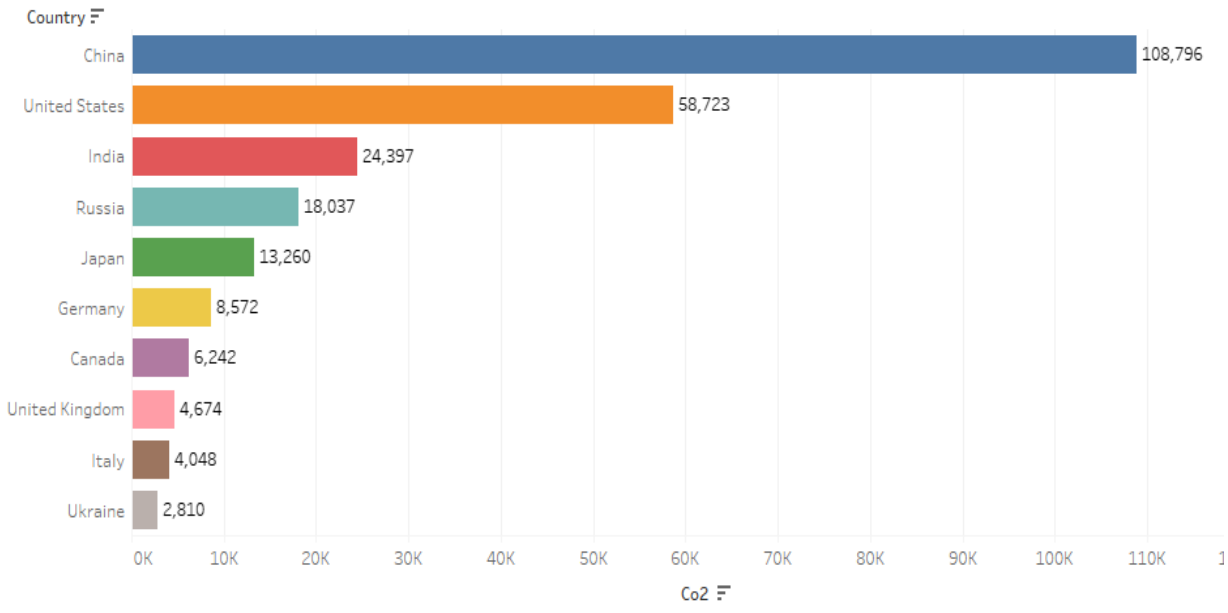
## CO2 EMISSION STORY

Countries emitting highest CO2 | Total CO2 emission from 1975 to 2020 | Total CO2 emission by continents | CO2 emission due to internal reasons | CO2 emission due to external reasons | Continents contribution on coal CO2 emission

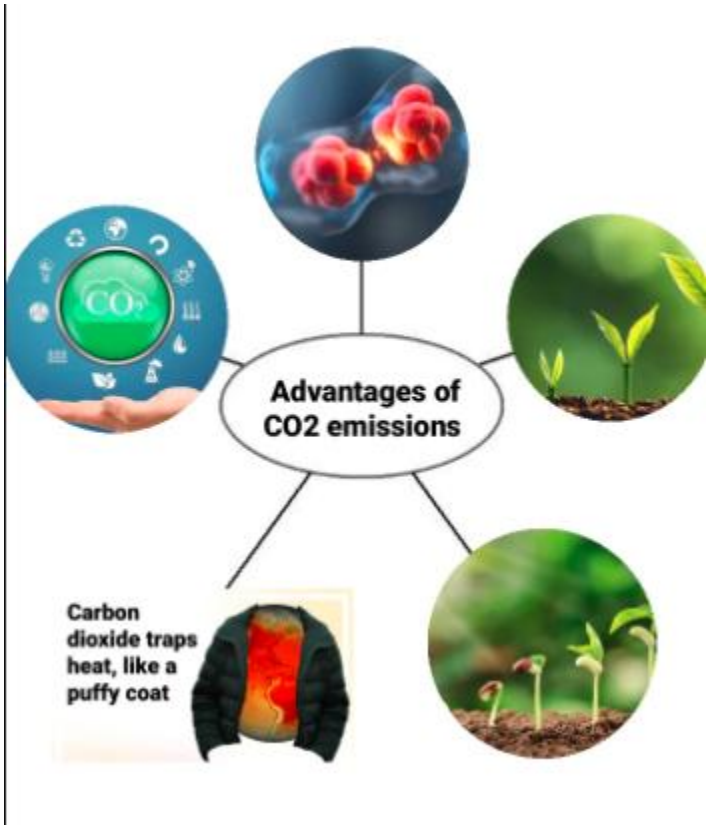



## CO2 EMISSION STORY

emission due to rnal reasons | Continents contribution on coal CO2 emission | Continents contribution on cement CO2 emission | Continents contribution on gas CO2 emission | Continents contribution on flaring CO2 emission | Continents contribution on oil CO2 emission | CO2 past



## ADVANTAGES :




-Carbon dioxide is an important green house gas that helps to trap heat in our atmosphere

-Photosynthesis, a biochemical process by which plants and some microbes create food

-Green plants grow faster with more CO2

-Non flammable CO2 is used in some fire extinguishers

## DISADVANTAGES:


-They can increase the risk of heart and respiratory diseases

-ozone is the major factor causing asthma

-They are responsible for climate change

**APPLICATION:** It has the application that industry gets to know the serious effect of C02 and work in such a way that they do not pollute the environment

## CONCLUSION:

CO2 emission has some adverse effect in environment which include health issue , climate change that leads to global warming etc..Even though it has negative effects it also have advantages which include plant growth , used in extinguishers, and helps to trap heat in our atmoshphere.

## FUTURE SCOPE:

CO2 capture and storage is possible in future generation with technologies.