

# PROJECT REPORT

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

### 1. INTRODUCTION:

#### 1.1 OVERVIEW:

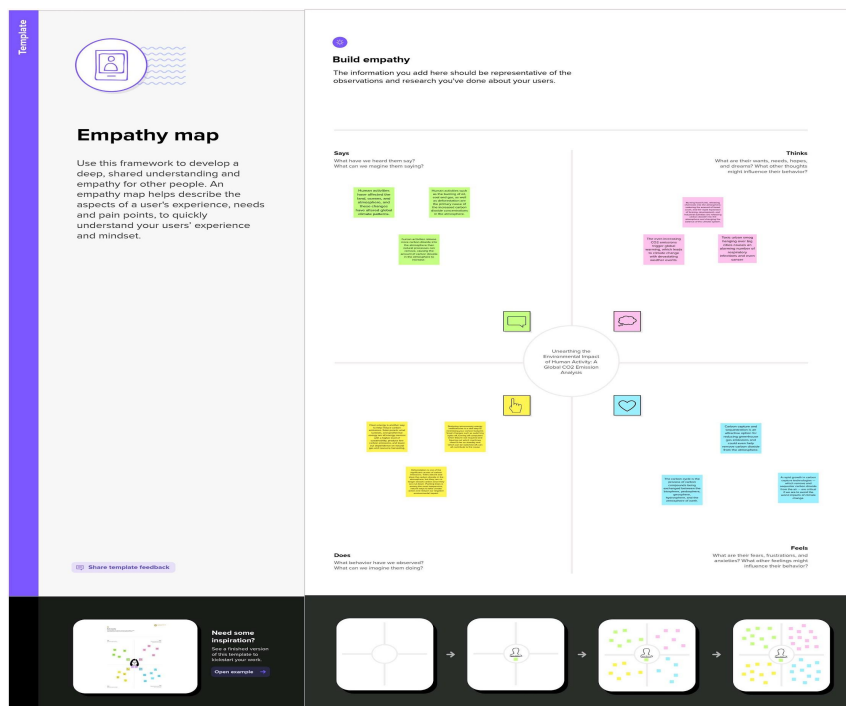
A suitable carbon footprint analysis is all-encompassing and includes direct and indirect emissions. The analysis should determine the exclusive global amount of carbon dioxide and other greenhouse gases accumulated over the full lifecycle of a product, service, or operation.

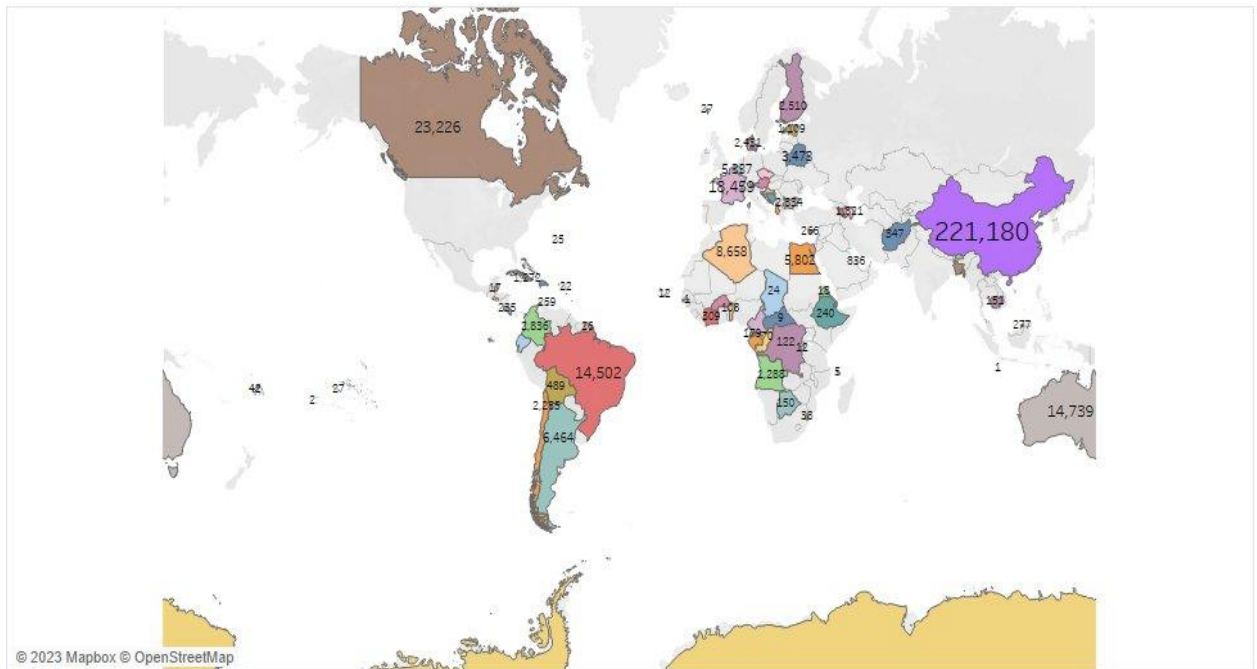
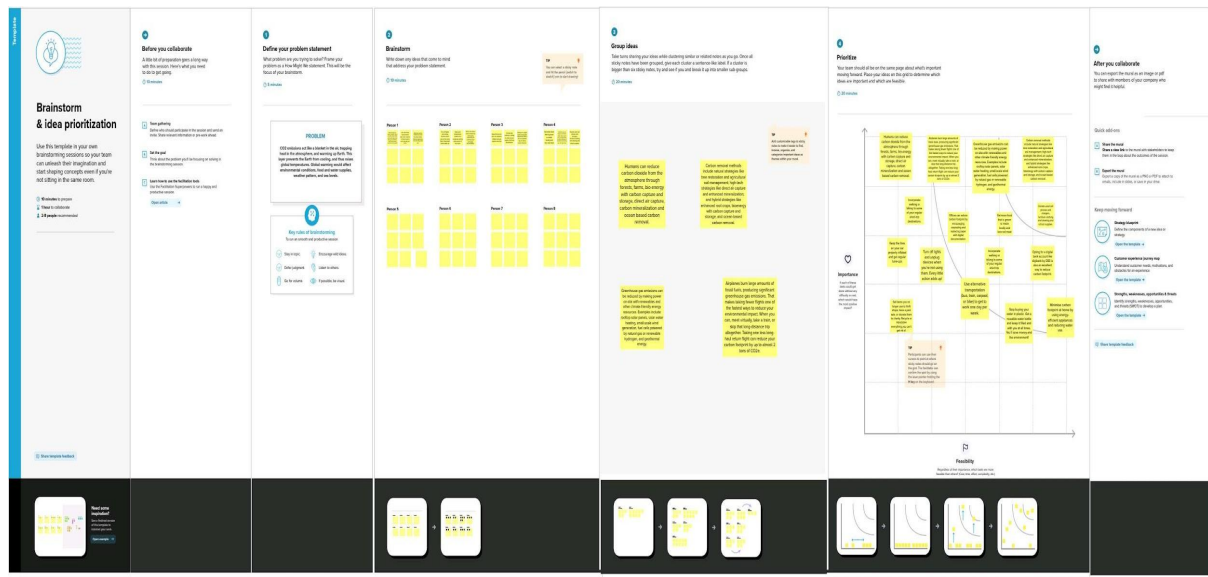
#### 1.2 PURPOSE:

The analysis should determine the exclusive global amount of carbon dioxide and other greenhouse gases accumulated over the full lifecycle of a product, service, or operation.

### 2. PROBLEM DEFINITION & DESIGN THINKING

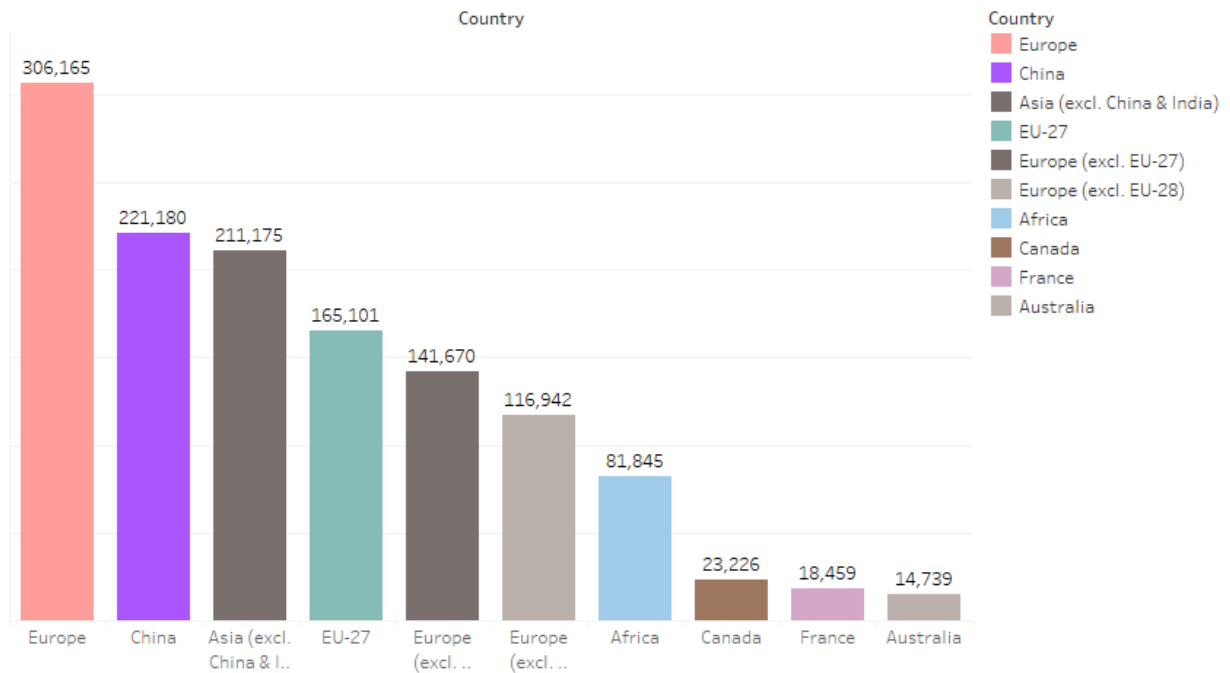
#### 2.1 EMPATHY MAP





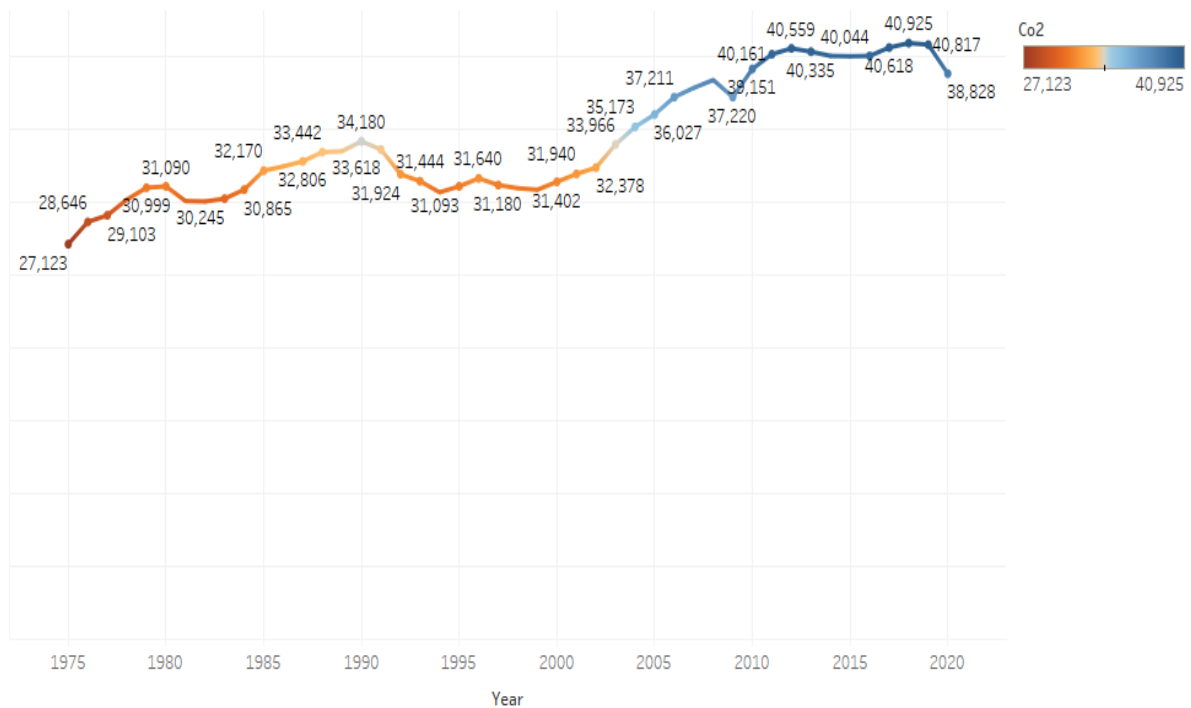
Map based on Longitude (generated) and Latitude (generated). Color shows details about Country. Size shows sum of Co2. The marks are labeled by sum of Co2.

## Top Emitting Country



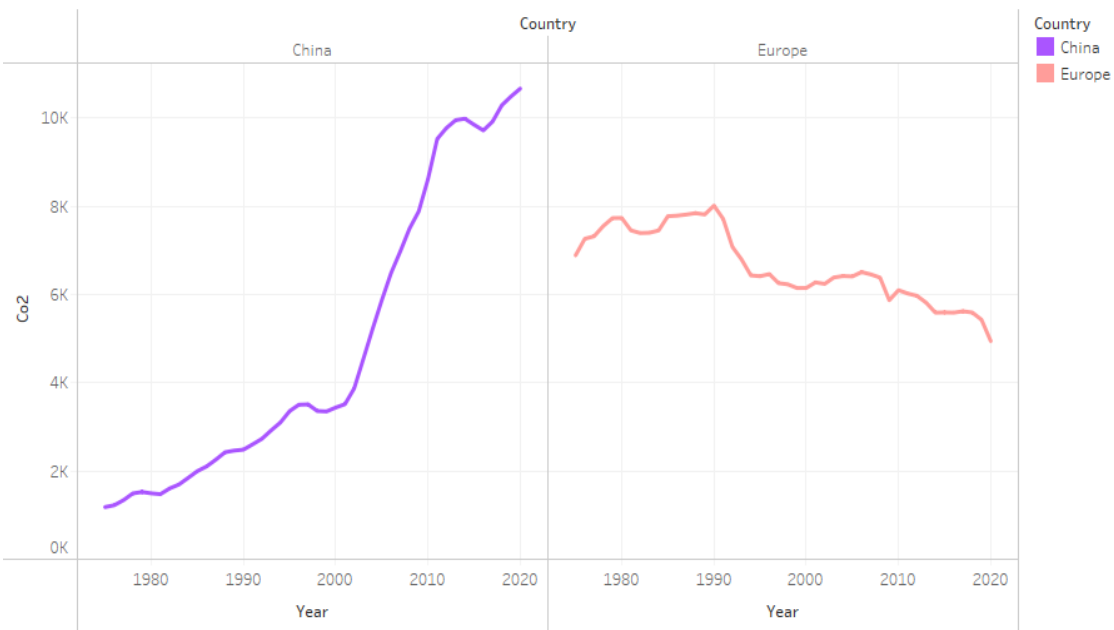
Sum of Co2 for each Country. Color shows details about Country. The marks are labeled by sum of Co2. Details are shown for Country. The view is filtered on Country, which has multiple members selected.

## Total CO2 Emission Over Time



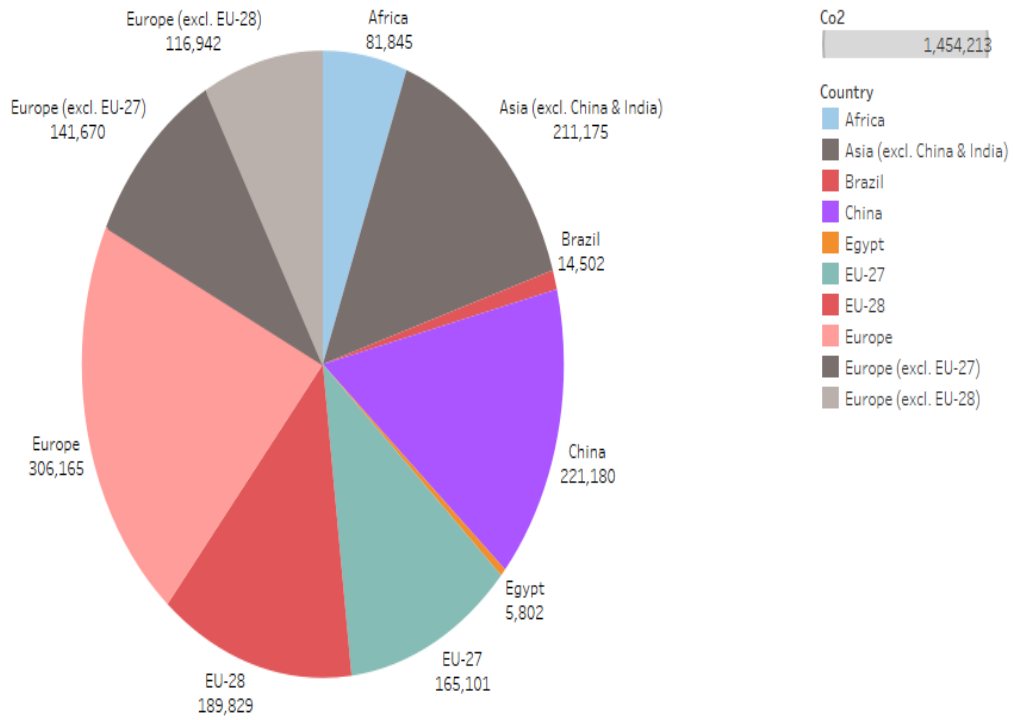
The trend of sum of Co2 for Year. Color shows sum of Co2. The view is filtered on sum of Co2, which ranges from 27,123 to 40,925.

### Co2 Emission China vs Europe



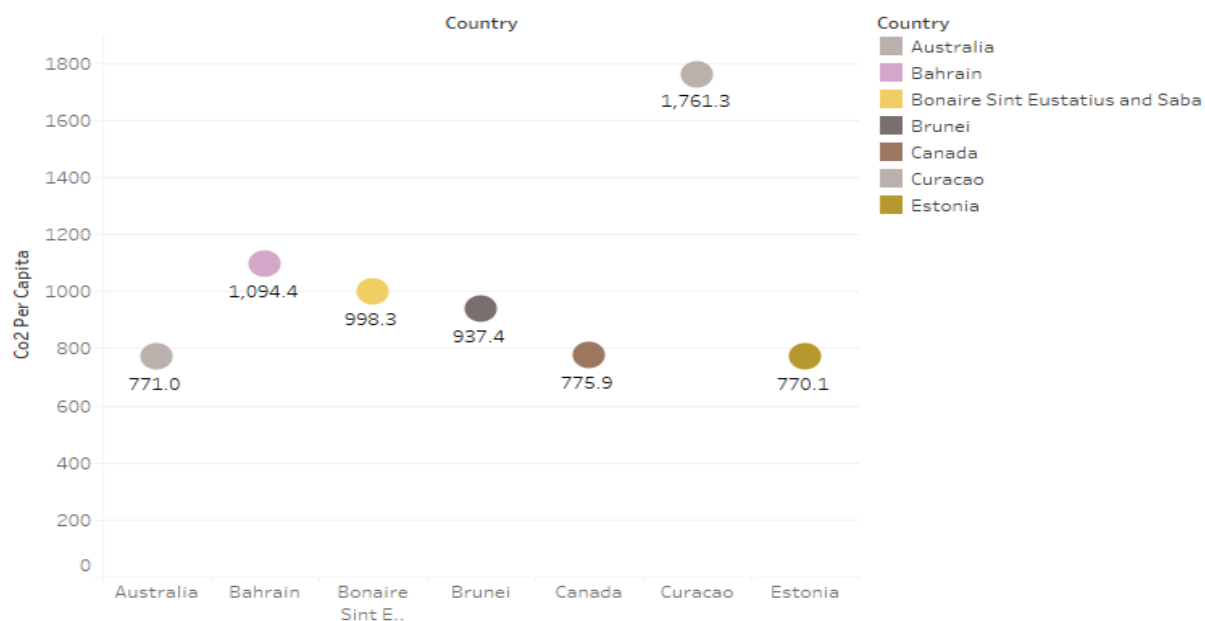
The trend of sum of Co2 for Year broken down by Country. Color shows details about Country. The view is filtered on Country, which has multiple members selected.

### Total Emission by continents



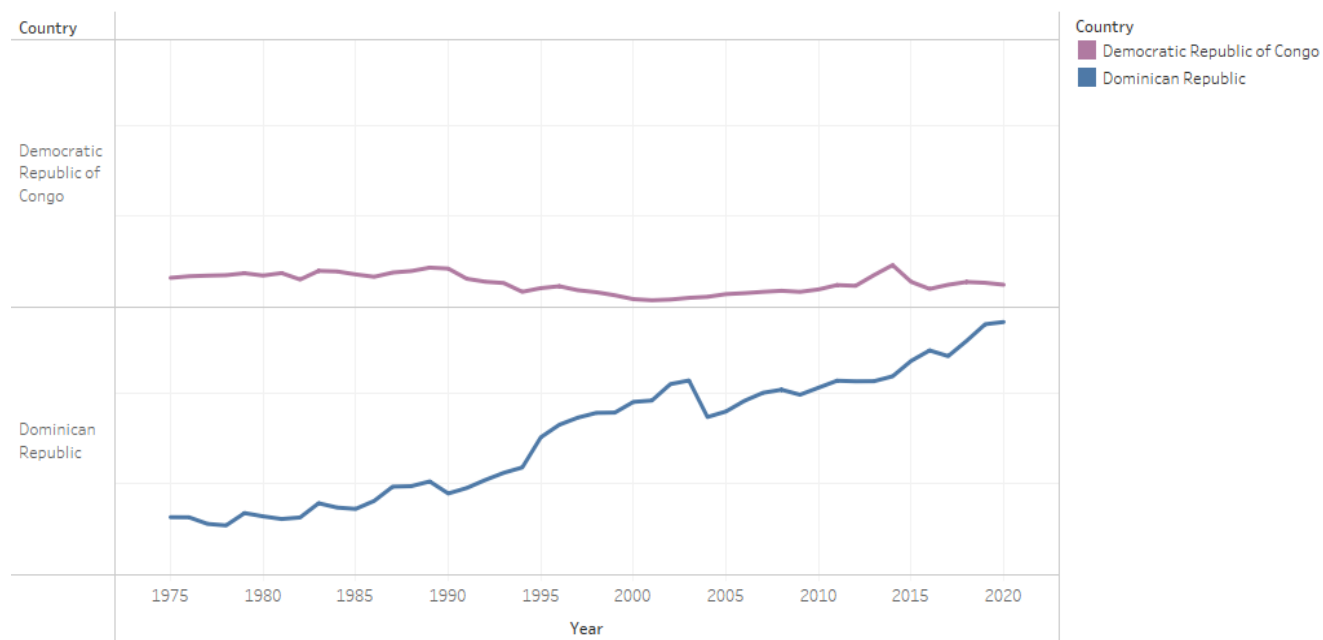
Country and sum of Co2. Color shows details about Country. Size shows sum of Co2. The marks are labeled by Country and sum of Co2. The view is filtered on Country, which has multiple members selected.

## Co2 Emission Per Capita



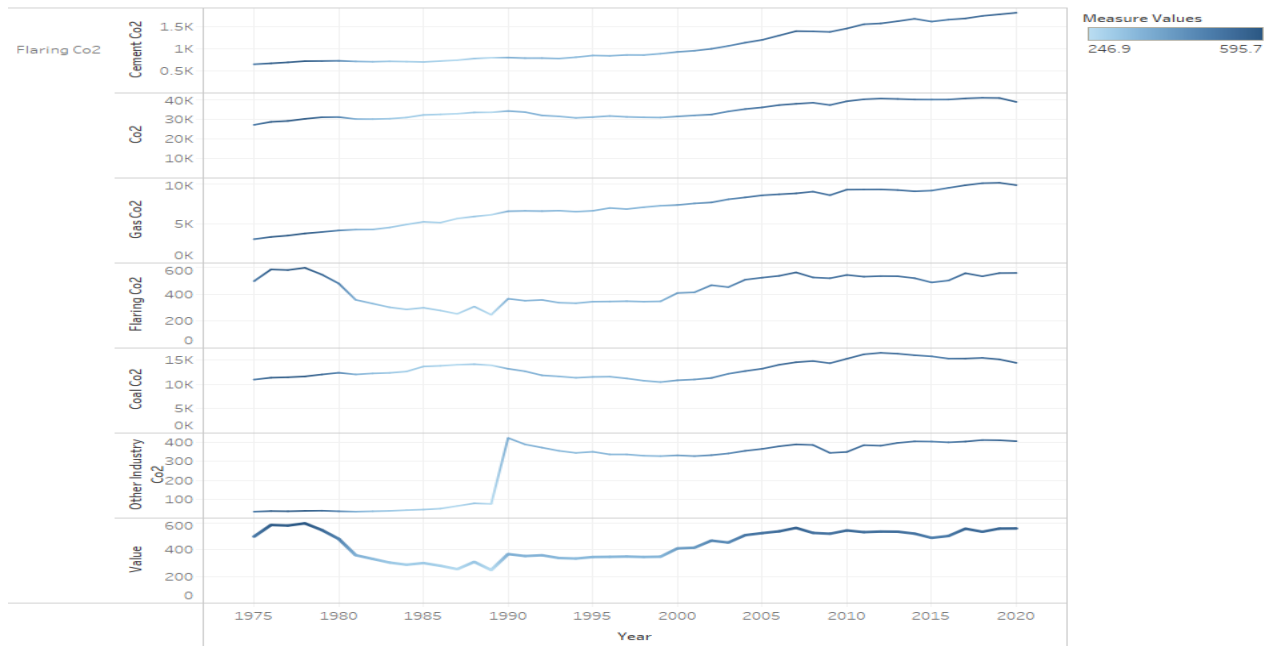
Sum of Co2 Per Capita for each Country. Color shows details about Country. The view is filtered on Country, which has multiple members selected.

## Co2 Emission By Other factors



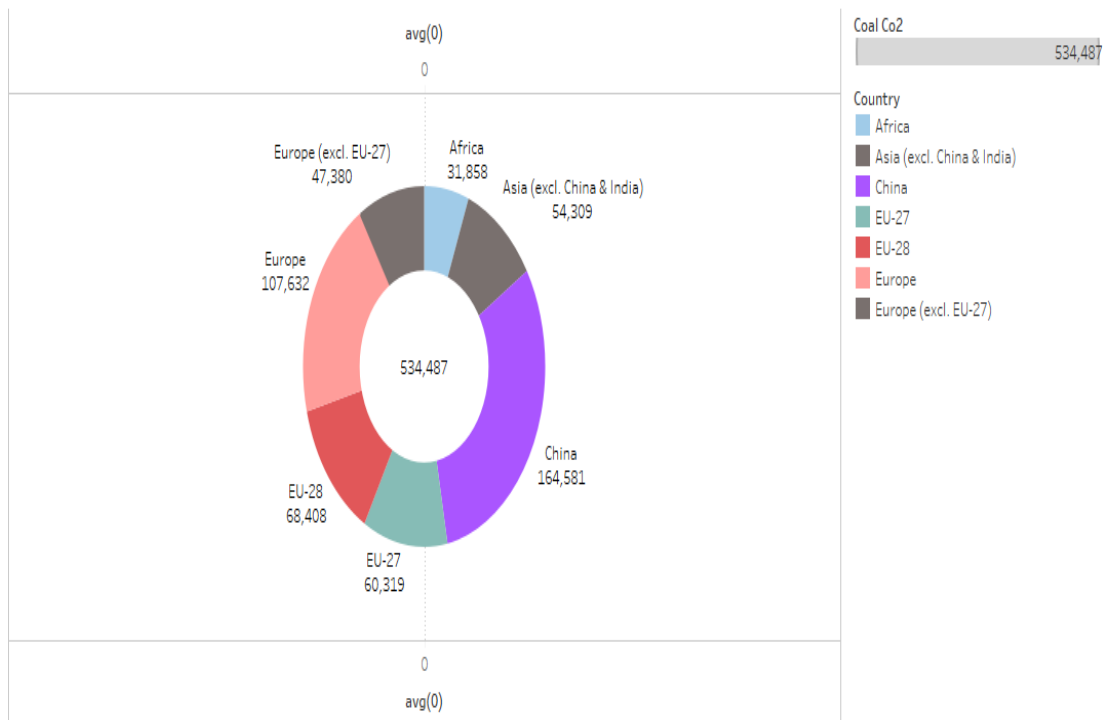
The trend of sum of Co2 for Year broken down by Country. Color shows details about Country. The view is filtered on Country, which keeps Democratic Republic of Congo and Dominican Republic.

## Emission Rate By International Factors



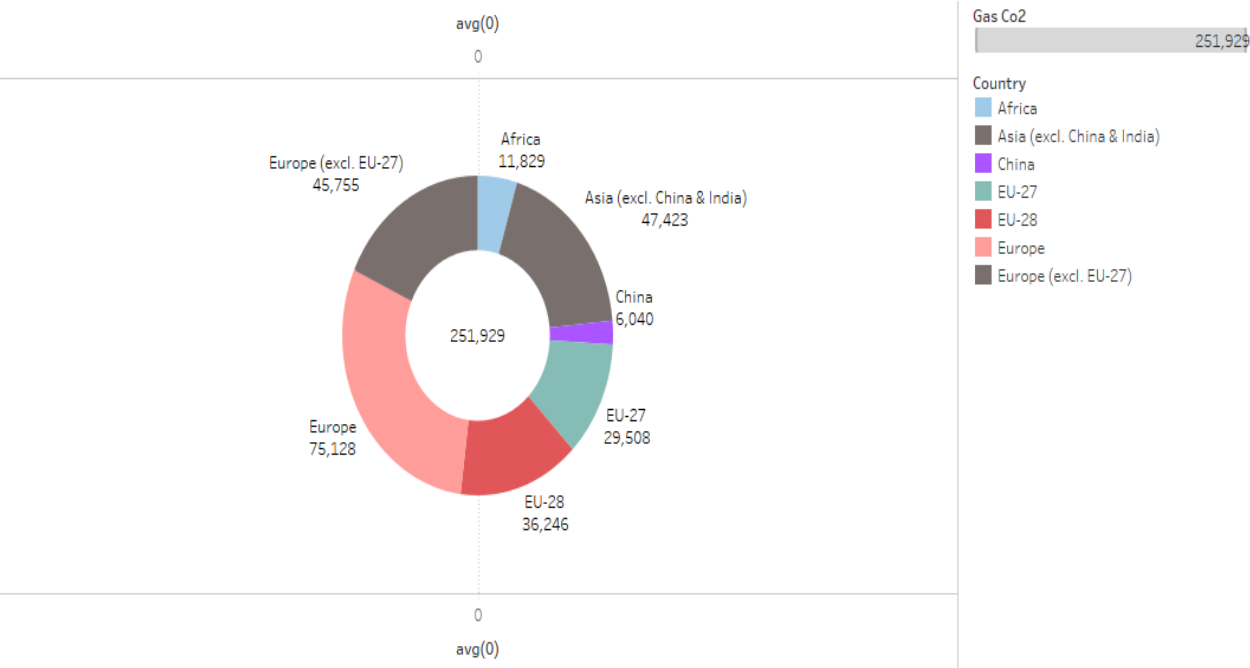
The trends of sum of Cement Co2, sum of Co2, sum of Gas Co2, Flaring Co2, sum of Coal Co2, sum of Other Industry Co2 and Flaring Co2 for Year. Color shows Flaring Co2.

## Donut Chart For Coal Co2



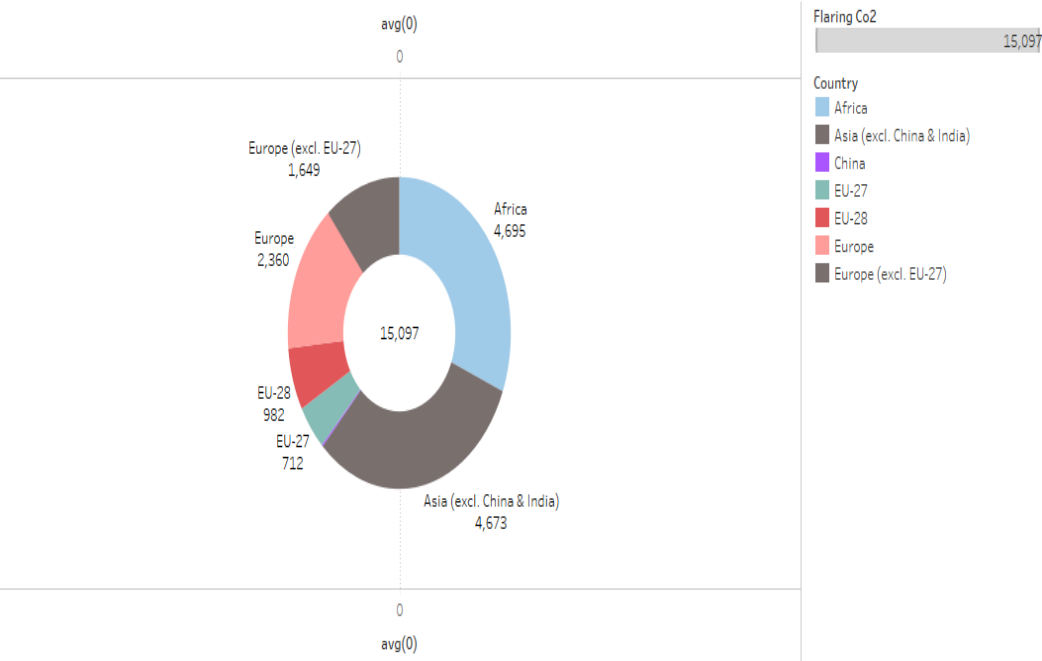
Avg(0) and avg(0). For pane Avg(0): Color shows details about Country. Size shows sum of Coal Co2. The marks are labeled by Country and sum of Coal Co2. The view is filtered on Country, which has multiple members selected.

Donut Chart For Gas Co2 Emission



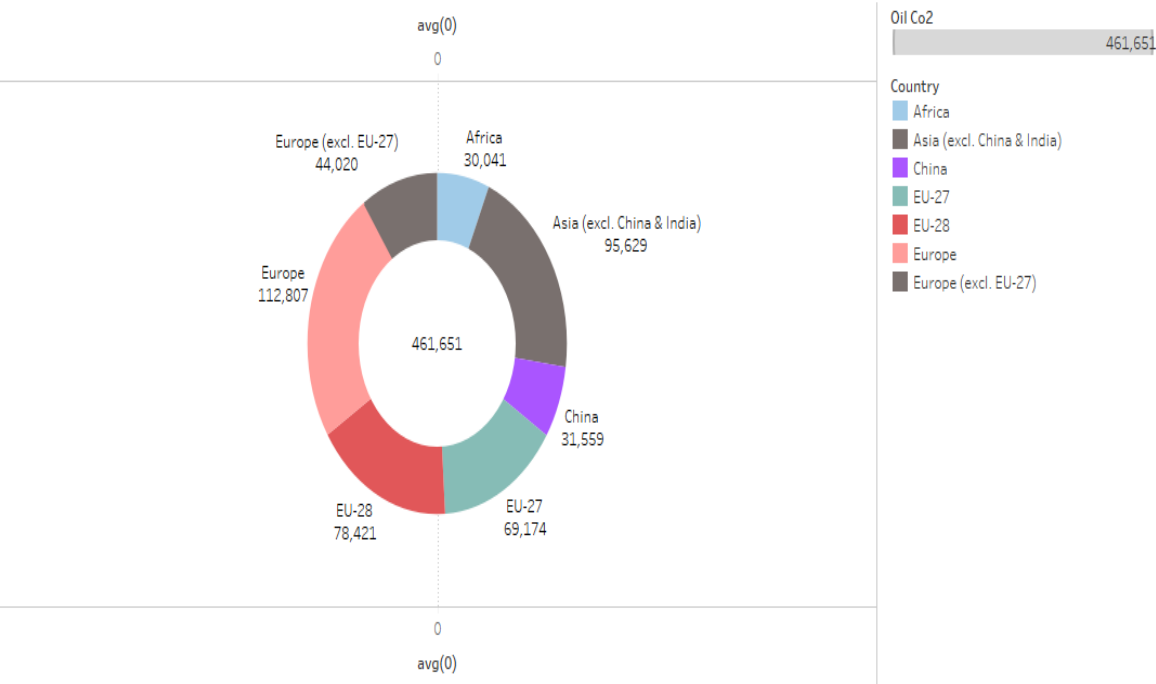
Avg(0) and avg(0). The marks are labeled by sum of Gas Co2. For pane Avg(0): Color shows details about Country. Size shows sum of Gas Co2. The marks are labeled by Country and sum of Gas Co2. The view is filtered on Country, which has multiple members selected.

Donut Chart For Flaring Co2 Emission



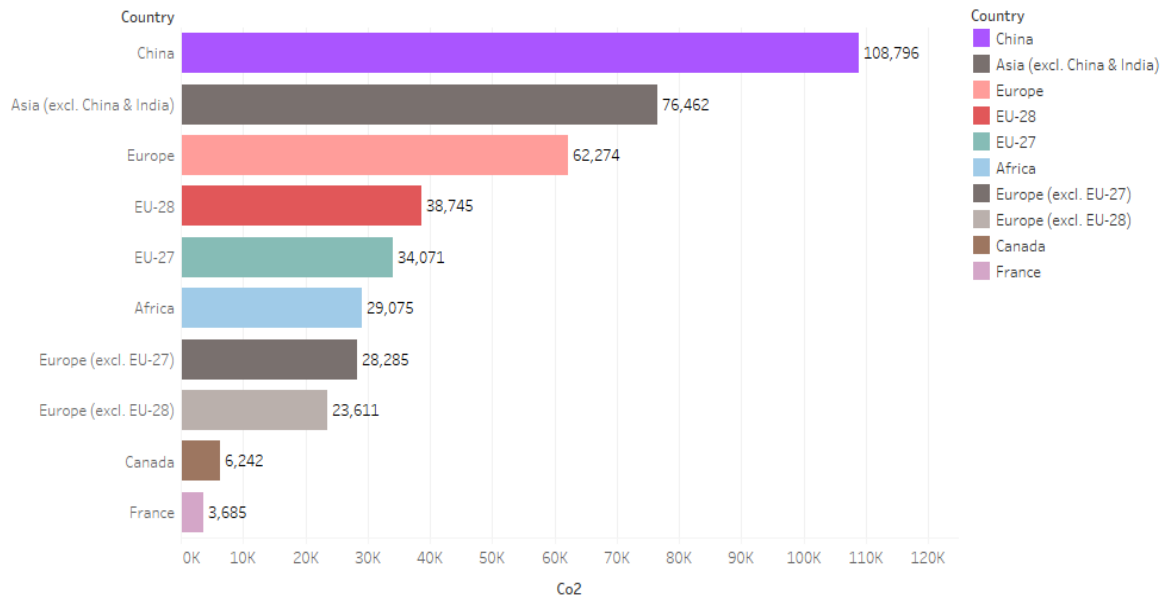
Avg(0) and avg(0). For pane Avg(0): Color shows details about Country. Size shows sum of Flaring Co2. The marks are labeled by Country and sum of Flaring Co2. The view is filtered on Country, which has multiple members selected.

Donut Chart For Oil Co2 Emission



Avg(0) and avg(0). The marks are labeled by sum of Oil Co2. For pane Avg(0): Color shows details about Country. Size shows sum of Oil Co2. The marks are labeled by Country and sum of Oil Co2. The view is filtered on Country, which has multiple members selected.

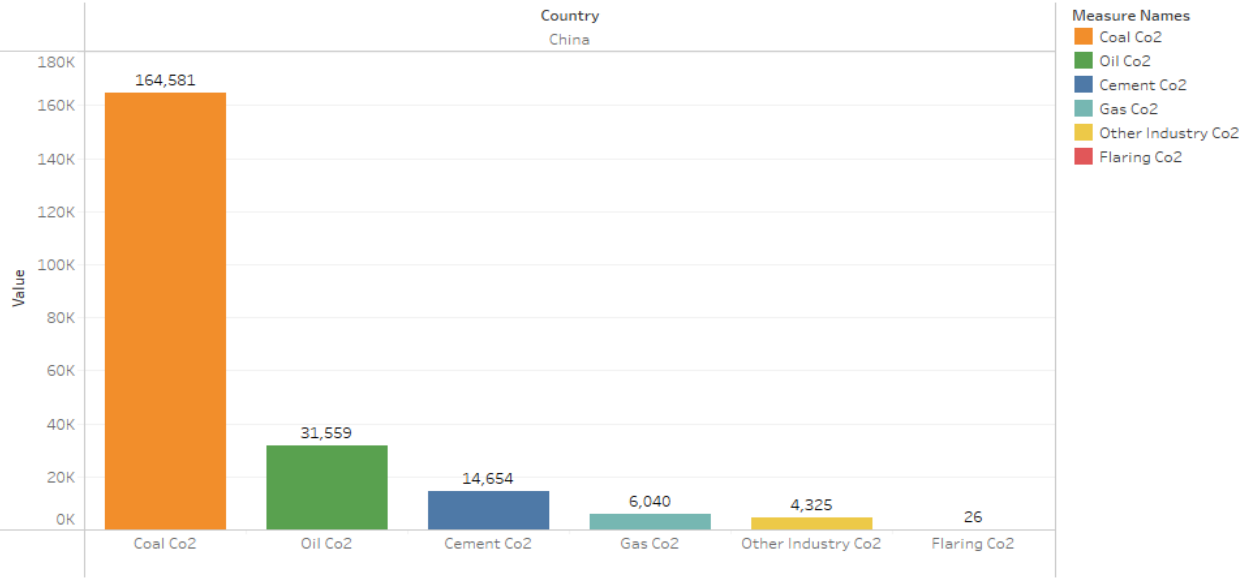
Co2 Emission Over Past 10 Years



Sum of Co2 for each Country. Color shows details about Country. The data is filtered on Year, which ranges from 2010 to 2020. The view is filtered on Country, which has multiple members selected.

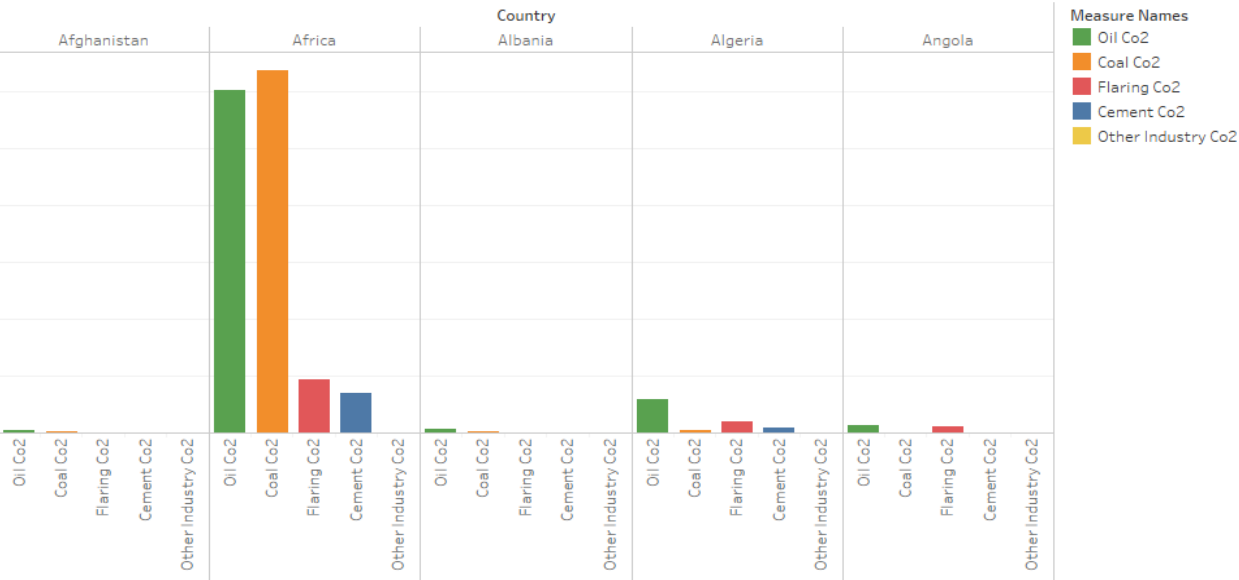


Overall Contribution By China In Co2 Emission



Cement Co2, Coal Co2, Flaring Co2, Gas Co2, Oil Co2 and Other Industry Co2 for each Country. Color shows details about Cement Co2, Coal Co2, Flaring Co2, Gas Co2, Oil Co2 and Other Industry Co2. The view is filtered on Country, which keeps China.

Contient Wise Contribution By Internal Factors



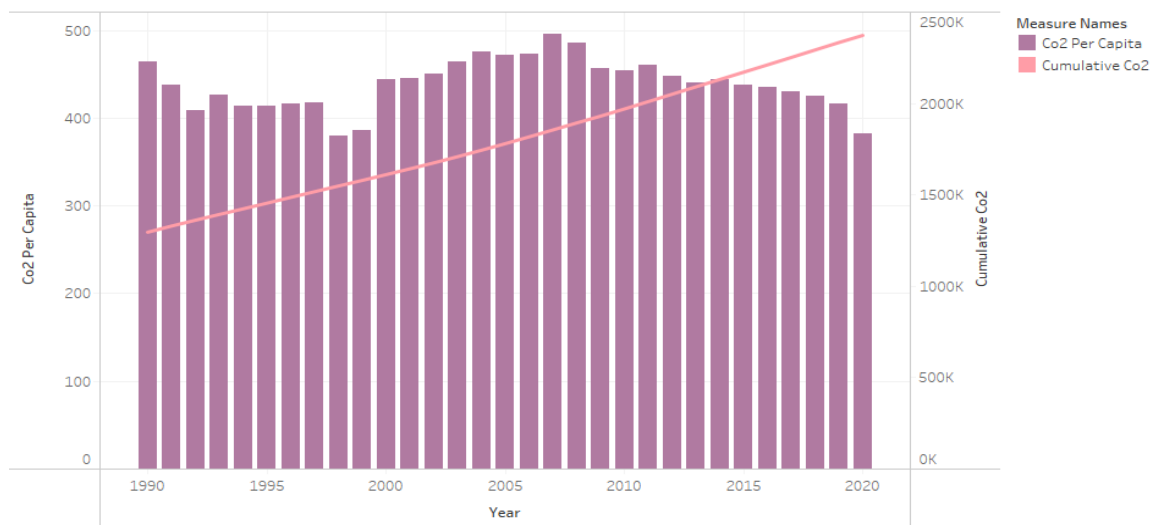
Cement Co2, Coal Co2, Flaring Co2, Oil Co2 and Other Industry Co2 for each Country. Color shows details about Cement Co2, Coal Co2, Flaring Co2, Oil Co2 and Other Industry Co2. The view is filtered on Country, which has multiple members selected.

Co2 Emission From 1990 to 2020 based on Internal Factors



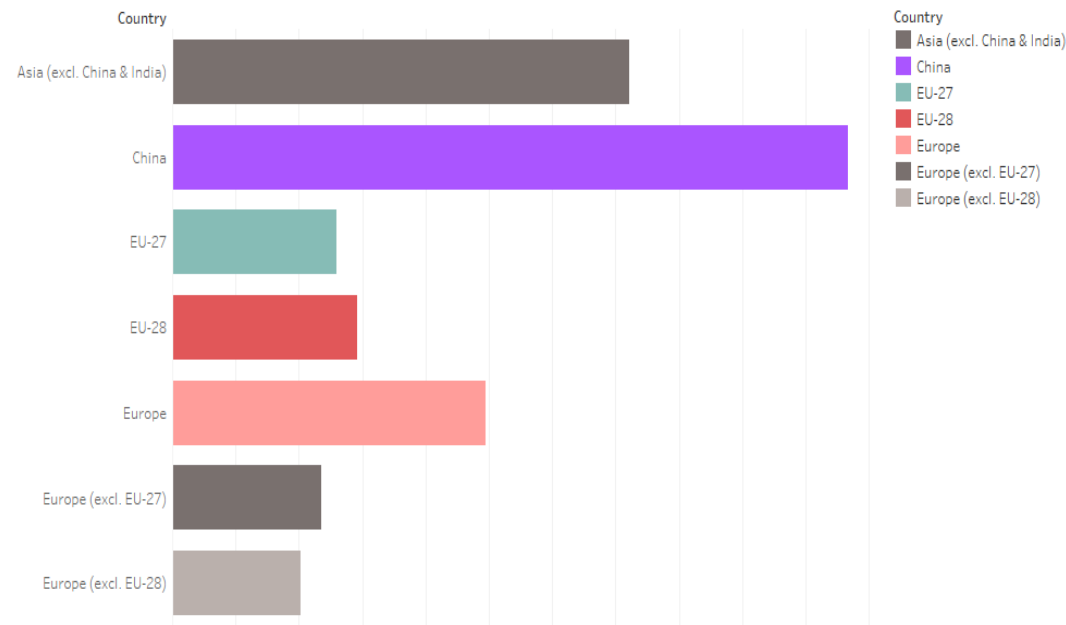
The plots of Cement Co2, Coal Co2, Flaring Co2, Gas Co2, Oil Co2 and Other Industry Co2 for Year. Color shows Cement Co2, Coal Co2, Flaring Co2, Gas Co2, Oil Co2 and Other Industry Co2. The view is filtered on Year, which ranges from 1990 to 2020.

Cumulative Co2 and Co2 Per Capita



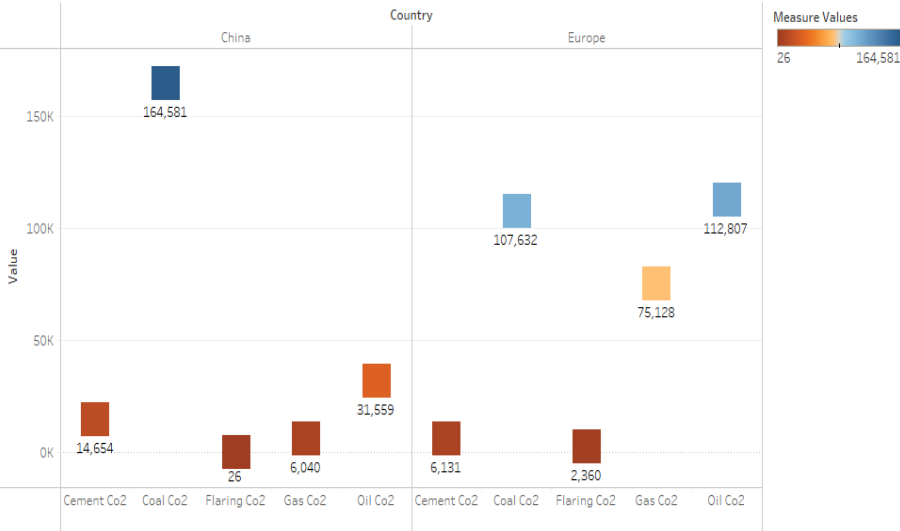
The trends of Co2 Per Capita and Cumulative Co2 for Year. Color shows details about Co2 Per Capita and Cumulative Co2. The view is filtered on Year, which ranges from 1990 to 2020.

Co2 Emission In 2020



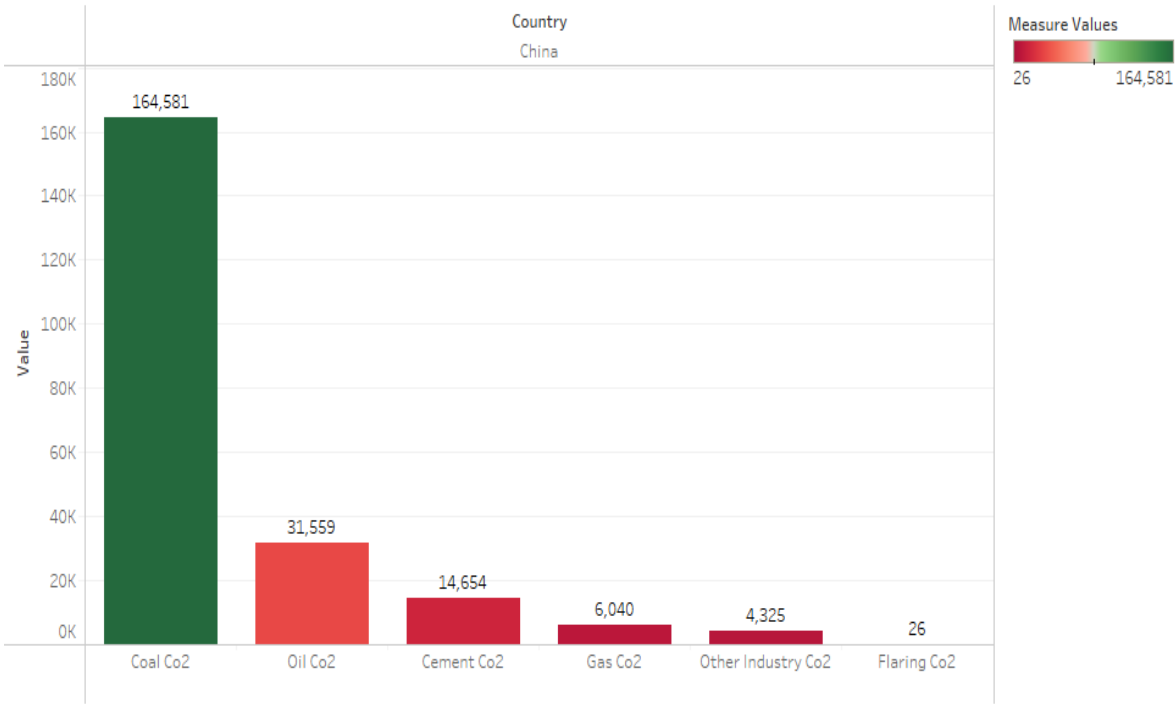
Sum of Co2 for each Country. Color shows details about Country. The data is filtered on Year, which ranges from 2020 to 2020. The view is filtered on Country, which has multiple members selected.

China VS Europe Internal Factors



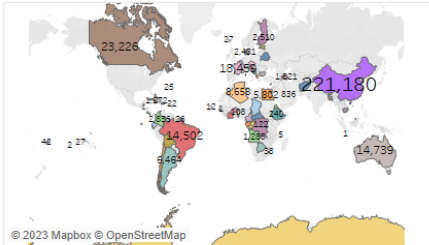
Cement Co2, Coal Co2, Flaring Co2, Gas Co2 and Oil Co2 for each Country. Color shows Cement Co2, Coal Co2, Flaring Co2, Gas Co2 and Oil Co2. The view is filtered on Country, which keeps China and Europe.

Overall contribution By China in Co2 Emission

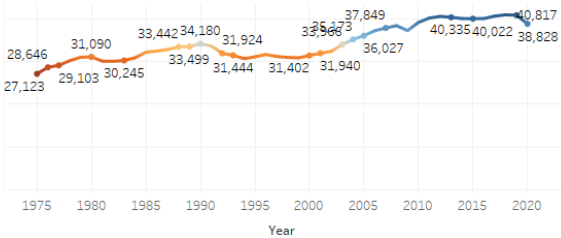


Coal Co2, Oil Co2, Cement Co2, Gas Co2, Other Industry Co2 and Flaring Co2 for each Country. Color shows Coal Co2, Oil Co2, Cement Co2, Gas Co2, Other Industry Co2 and Flaring Co2. The view is filtered on Country, which keeps China.

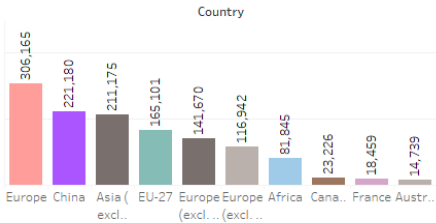
Total World Emission



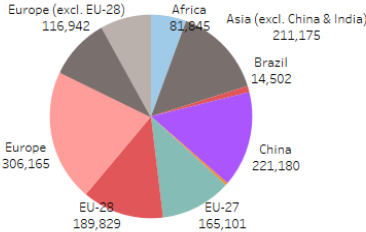
Total Co2 Emission Over Time



Top Emitting Country

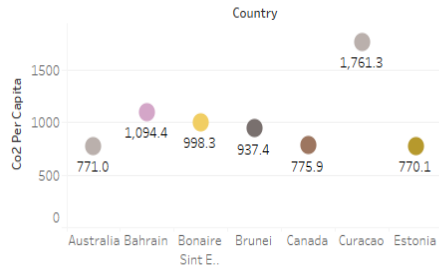


Total Emission by continents

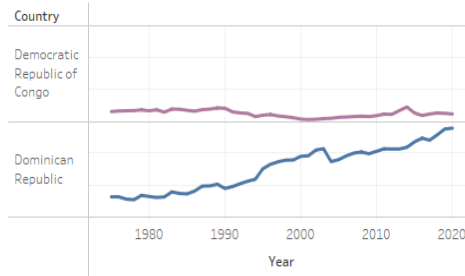


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Co2 Emission Per Capita



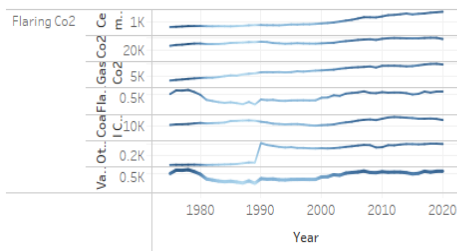
Co2 Emission By Other factors



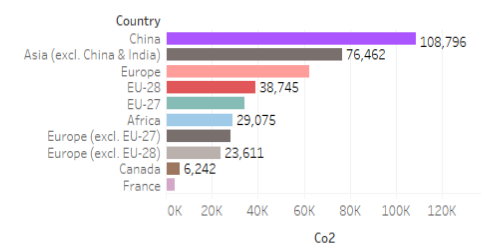
- Country
- Australia
  - Bahrain
  - Bonaire Sint Eustatius
  - Brunei
  - Canada
  - Curacao
  - Estonia

Previous

Emission Rate By International Factors

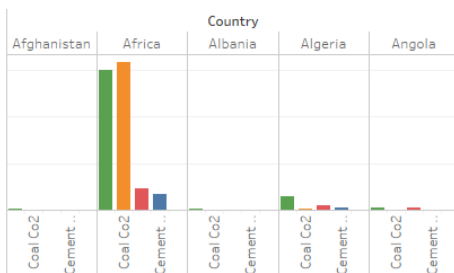


Co2 Emission Over Past 10 Years

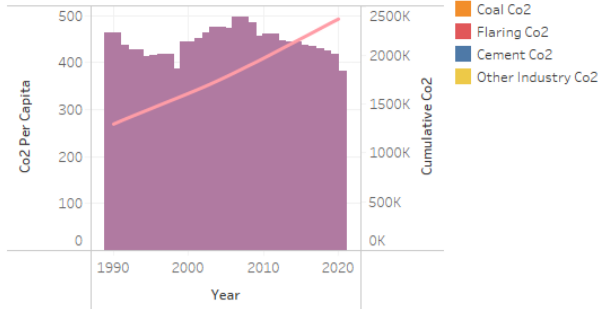


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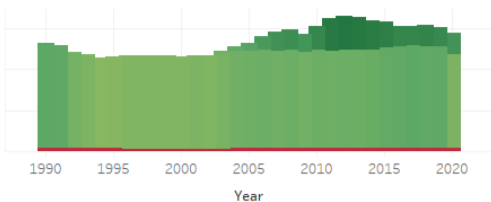
Contient Wise Contribution By Internal Factors



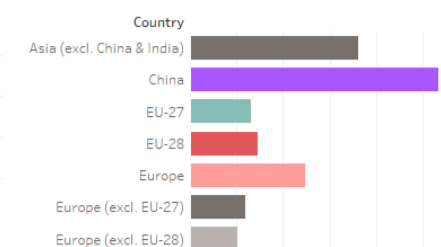
Cumulative Co2 and Co2 Per Capita



Co2 Emission From 1990 to 2020 based on Internal Factors



Co2 Emission In 2020



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#### **4.ADVANTAGES & DISADVANTAGES :**

##### **ADVANTAGES:**

Carbon dioxide is an important greenhouse gas that helps to trap heat in our atmosphere. Without it, our planet would be inhospitably cold.

Green plants grow faster with more CO<sub>2</sub>. Many also become more drought- resistant because higher CO<sub>2</sub> levels allow plants to use water more efficiently. More abundant vegetation from increased CO<sub>2</sub> is already apparent.

##### **DISADVANTAGES:**

CO<sub>2</sub> emissions act like a blanket in the air, trapping heat in the atmosphere, and warming up the Earth . This layer prevents the Earth from cooling, and thus raises global temperatures. Global warming would affect environmental conditions, food and water supplies, weather pattern, and sea levels.

However, an increase in CO<sub>2</sub> concentrations in our atmosphere is causing average global temperatures to rise, disrupting other aspects of Earth's climate.

Carbon dioxide (CO<sub>2</sub>) released into the oceans as a result of water pollution by nutrients — a major source of this greenhouse gas that gets little public attention — is enhancing the unwanted changes in ocean acidity due to atmospheric increases in CO<sub>2</sub>.

#### **5.APPLICATION:**

CO<sub>2</sub> is a versatile industrial material, used, for example, as an inert gas in welding and fire extinguishers, as a pressurizing gas in air guns and oil recovery, and as a supercritical fluid solvent in decaffeination of coffee and supercritical drying.

## 6.CONCLUSION:

- Carbon capture and sequestration is an attractive option for reducing greenhouse gas emissions and could even help remove carbon dioxide from the atmosphere.
- Reducing forest loss will reduce carbon emissions. Forests are crucial for reducing emissions from the agriculture and land-use sectors. They are also important for reducing the effects of climate change on people, and maintaining and strengthening food security.
- shrinking your 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.
- Reducing your carbon footprint is important because it mitigates the effects of global climate change, improves public health, boosts the global economy, and maintains biodiversity. When we cut carbon emissions we help ensure cleaner air, water, and food for our generation and for generations yet to come.

## SCOPE:

To succeed in your reducing carbon footprint, you first need to know how much carbon you produce as an individual or a company. That's why GHG emissions scopes have been drafted.

There are three scopes that refer to both a businesses own operations, upstream and downstream emissions, and indirect GHG emissions.