

GHG Emissions of countries and their respective sectors

By:-

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Objectives:

- A. Exploring Different Countries with their timelines from 1990 to 2019 with their GHG emissions from 11 sectors measured in metric tonnes of GHG emissions.
- B. Pointing Out major pollution contributors and their share in world's pollution emissions.
- C. Finally, comparing countries' rate of % growth WRT its timelines which can point out sudden change points and trends in time series data.

Methodology:

- A. Step-1:** Data processing: Analysed the data, removed outliers, and transformed data conveniently for future processing
- B. Step-2:** Masking applied 3 data masks that are
 - a. Mask-1: Created a slider with a timeline that masks data less than or equal to that year.
 - b. Mask-2: When a country and a particular sector is selected, information about all other countries are left off.
 - c. Mask-3: Created a column called total ghg emissions and calculated the percentage change to previous years.
- C. Step-3:** Used interactive and informative plots using altair where anyone can play around with data and can learn and unlearn extra information.

Dataset Selection: For this project, I have explored data sets that are different in size and shape. [\[THIS\]](#) report gave me a great picture for the co2 emissions for 2021. But, I want data over time so [\[THIS\]](#) dataset has ideal observations and outcomes that I wanted to show.

Observations:

- A. Till early 2000's developed countries had a higher proportion of GHG emissions.

- B. For the last 30 years, developing countries saw enormous growth in GHG emissions across Industry and Manufacturing, Buildings, Transportation, Electricity Sectors.
- C. 20 Countries contribute to 80% of world GHG emissions.
- D. %change for countries are very random and fluctuate over different periods. This suggests that for upcoming years both positive and negative change in %change is possible as external factors are much included like COVID.

Note: I have not included relational plots between different plots as they might be misled from my project goal. They intentionally create correlations that are unnecessary to study.