CLIMATE ANALYSIS ON WORLD BANK API

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climate change is about to understand weather patterns which has been playing a significant role for longer time. The analysis for the report was taken from the world bank data. Greenhouse gases plays a prominent role in terms of global warming, in which co2 emissions has contributed very high. In this analysis, we have chosen co2 and greenhouse gas emissions for the past 15 years and observed their trends. To reduce the emissions of this harmful gases, we also did an analysis on renewable resources and fossil fuels.

The findings for this article explained in brief for each topic. We have also done the correlation comparison between the selected countries and the results were noted.
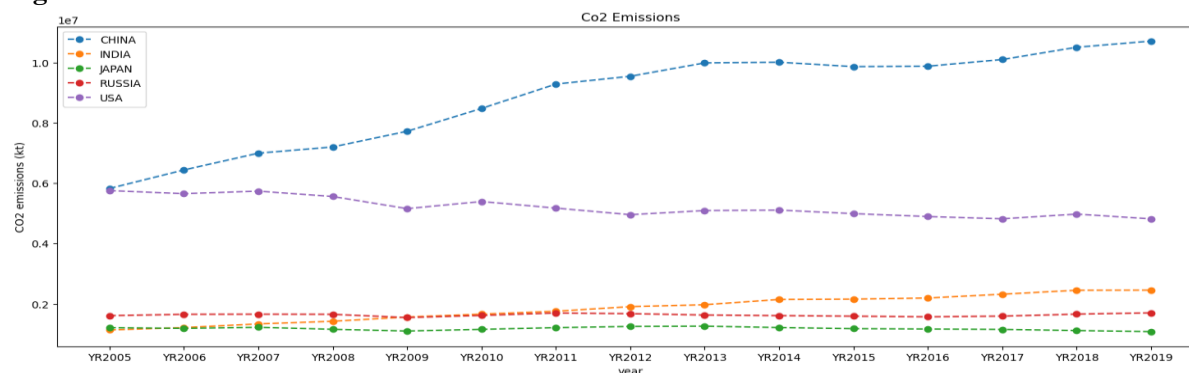
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Climate change is the over a long period alteration of global temperatures and weather trends. A solitary location or the entire world may be impacted by climate change. The weather can be erratic as a consequence of climate change. Factors that are both human-made and natural contribute to climate change. The burning of fossil fuels like coal, oil, and natural gas unleashes greenhouse gases into the atmosphere, which trap heat from the sun's rays and increase the earth's average temperature. The term "climate change" is used to characterise the increase in temperature.
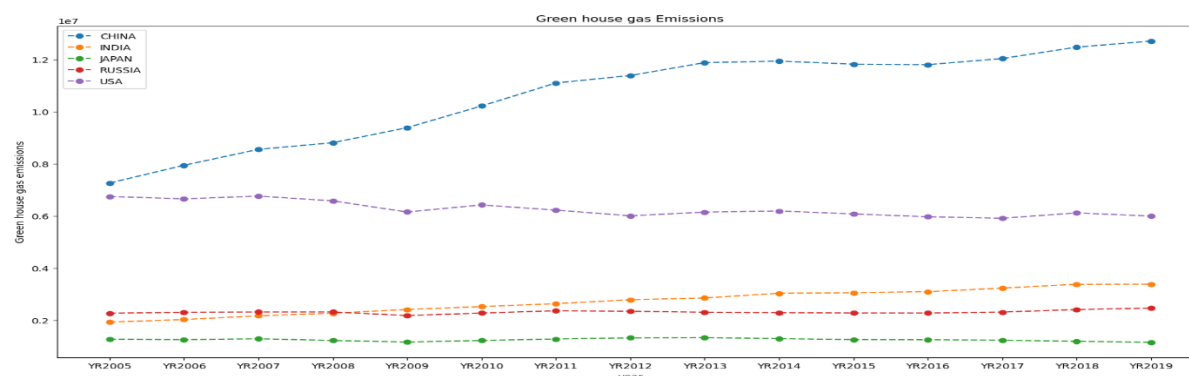
C02 emissions and Greenhouse gases:

Co2 and Greenhouse gas emissions are acting as main prominent role in terms of climate change. Fig (1) shows the trends in co2 emissions, here we have observed that India and Russia have same trend for the following year i.e., 2009 to 2011. There is a significant increase in India's co2 emission. We observed the Greenhouse gas emissions have mostly similar trends with co2 emissions. Co2 and greenhouse gas emissions are rapidly increasing over the years in China, while there is gradual decrease in the United States.

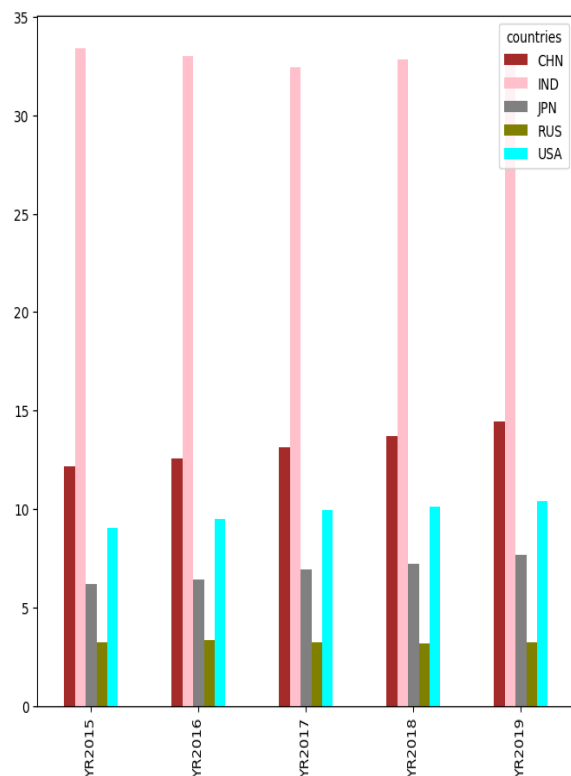**Figure 1:** shows the trend of Co2 emissions

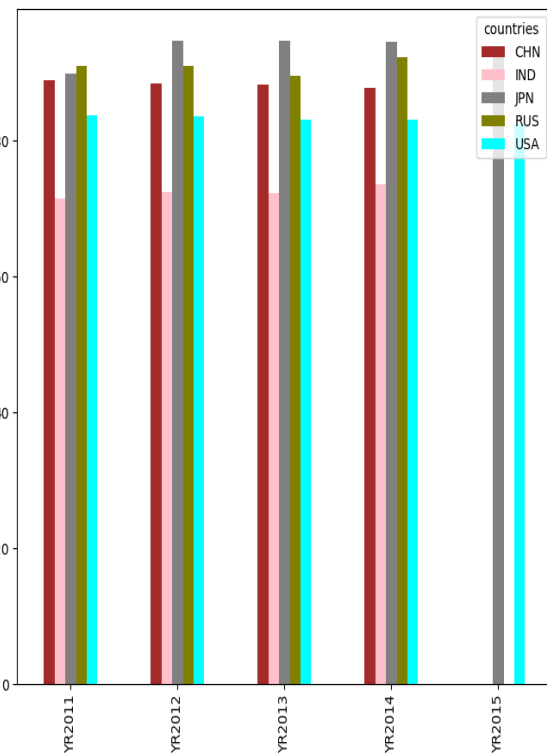
Figure 2: shows the trends of Greenhouse emissions

Renewable Energy and Fossil Fuels:

Renewable energy and fossil fuels are 2 types of energy sources, which have different impact on environment. The usage of fossil fuels is having more impact as it basically uses coal, oil and natural gases, which are also known as non-renewable resources, on the other hand renewable source usage can reduce the impact on climate change as it includes solar, wind, hydro, geothermal and biomass. Figures 3 and 4, bar graphs showed the comparison of renewable energy and fossil fuel consumption for the latest 5 years data for selected data from world bank API. We observed that India is the only country where the renewable resources are used at its best whereas Russia has very low renewable resource usage. When we compared with fossil fuel usage, Japan has high usage and India has low and constant usage of fossil fuels for over a period.

Figure 3: Shows the renewable resouces for selected countries

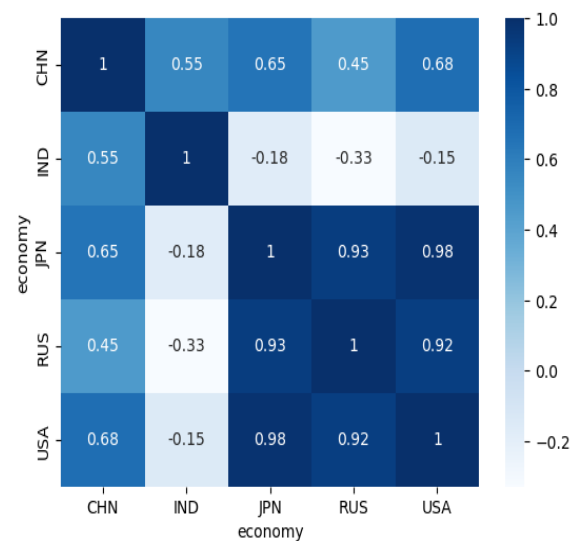**Figure 4:** Shows the fossil fuels for selected countries

Pollution:

The correlation graph of co2 for different countries has shown in the figure 5. We have observed there is a positive association for the countries Japan and United states with the value of 0.98 while the lowest correlation values are seen.

Conclusion: From the analysis, we have seen that India is using more renewable resources while Russia is using more fossil fuels. China's emission has increased rapidly when compare to India, Russia, Japan. In the correlation, we have seen the combination values for selected countries, among those, Japan and United states are at top notch.

Figure 5: correlation graph for co2

Reference: https://data.worldbank.org/indicator
Github repo: