Effects of increasing population and industrialization on Environment in context with India

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World Development Indicators Dataset

This Dataset is taken from Kaggle:

https://www.kaggle.com/worldbank/world-development-indicators

The World Development Indicators from the World Bank contain over a thousand annual indicators of economic development from hundreds of countries around the world.

Motivation

India is the 2nd largest country in terms of population having 1.2 billion population. Due to industrialization and privatization there is a increase in the energy consumption.

With the help of this database I have tried to analyze the various impacts of exponentially increasing population and the industrialization on various domains.

How long until it's too late to save Earth from climate disaster? This clock is counting down.

- The Washington Post

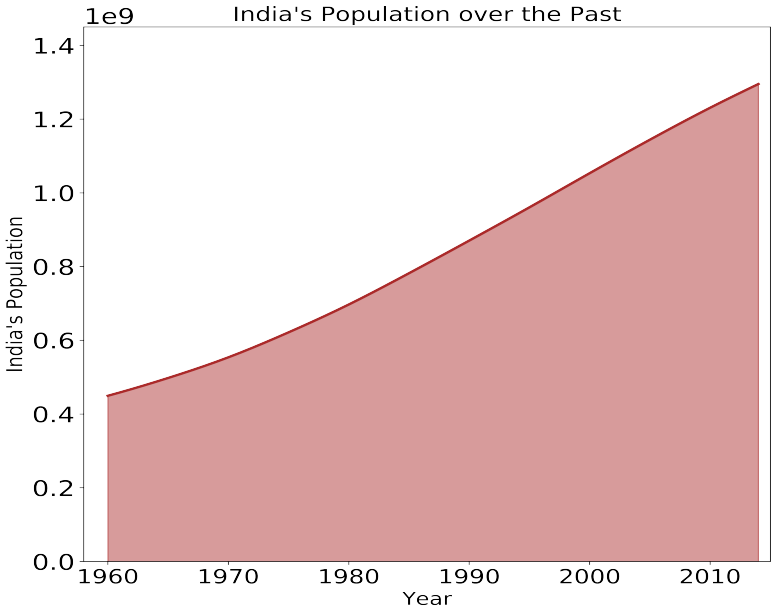
Research Question

To find and analyze the various impacts of increasing population and industrialization on environment in ‘India’ from the year 1971 to 2011.

Metronome and its Climate Clock, soon after it was activated.

Findings- I

The Population growth in India since 1960's upto 2014 is plotted visually with the help of '**Population,total**' Indicator.

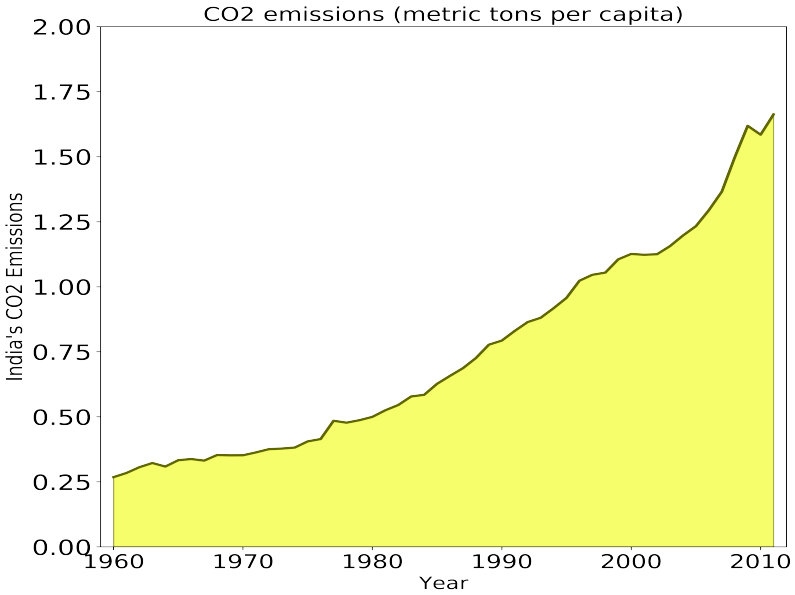


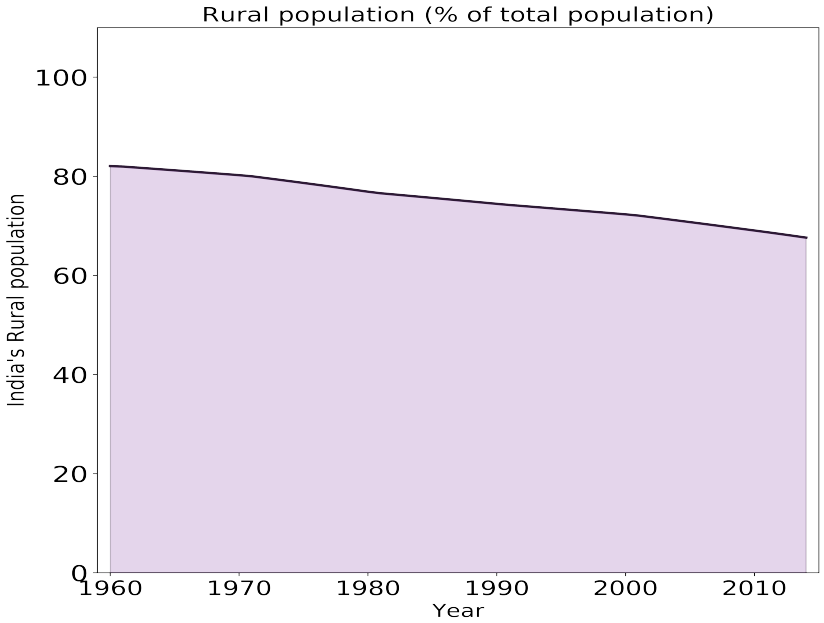
Findings - II

The Exports of Goods and Services in India since 1960's upto 2014 is plotted visually with the help of '**Exports of goods and services (current US$)**' Indicator.

Findings - III

The CO2 emissions since 1960's upto 2011 is plotted visually with the help of '**CO2 emissions (metric tons per capita)**' Indicator.





Findings - IV

The number of people living in the rural areas since 1960's upto 2014 is plotted visually with the help of 'Rural population (% of total population))' Indicator.

Findings - V

The Correlation coefficients are really high in case of:

1. Exports & Power consumption: **0.872296842**
2. CO2 emissions & Power consumption: **0.996208895**
3. Population and CO2 Emissions: **0.986383046**

Correlation	Population	Exports	Power Consumption	CO2 Emissions
Population	1	0.777575466	0.980156208	0.98638304
Exports	0.777575466	1	0.872296842	0.84987688
Power Consumption	0.980156208	0.872296842	1	0.99620889
CO2 Emissions	0.986383046	0.849876881	0.996208895	1

The above mentioned correlation coefficients are positive and greater than 0.85 that shows the rise in industrialization and population results in high carbon dioxide emissions and hence puts high risk to climate change.

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References

- The Dataset is taken from Kaggle :

https://www.kaggle.com/worldbank/world-development-indicators

- The motivation of doing this data analysis is after I read the article from 'The Washington Post'.

https://www.washingtonpost.com/climate-environment/2020/09/21/climate-change-metronome-clock-nyc/

- The Notebook is attached in the upcoming pages.