Analysis on CLIMATE CHANGES -WORLD BANK DATA API

What is Climate Change?

Climate change refers to changes in average long-term conditions (such as temperature and precipitation) in a region. The Earth's climate is constantly changing-long before humans appeared. However, scientists have recently observed anomalous changes. For example, in the last 150 years, the average temperature of the earth has risen much faster than expected.

Data of Climate change is taken from the World bank data API, where we can find data of almost everything. We have various types of indicators in the world bank API and One of them is CLIMATE CHANGE

Indicator types in Climate change that interest me are given below:

- ARABLE AREA (% CHANGE FROM 1990): ARABLE LAND is farmland mainly used for cultivation.
- FOREST AREA (%): The land is covered with forest, or it is set aside for the growth of forests.
- C02 EMISSION(KT): Carbon dioxide emission are those stemming from the burning of fossil fuels.
- NITROUS GAS EMISSION(KT): When any fossil fuel is burnt, portion of the nitrogen that's within the fuel and encompassing air gets oxidized making nitrous oxide emissions

Arable area (%) vs Forest Area (%):

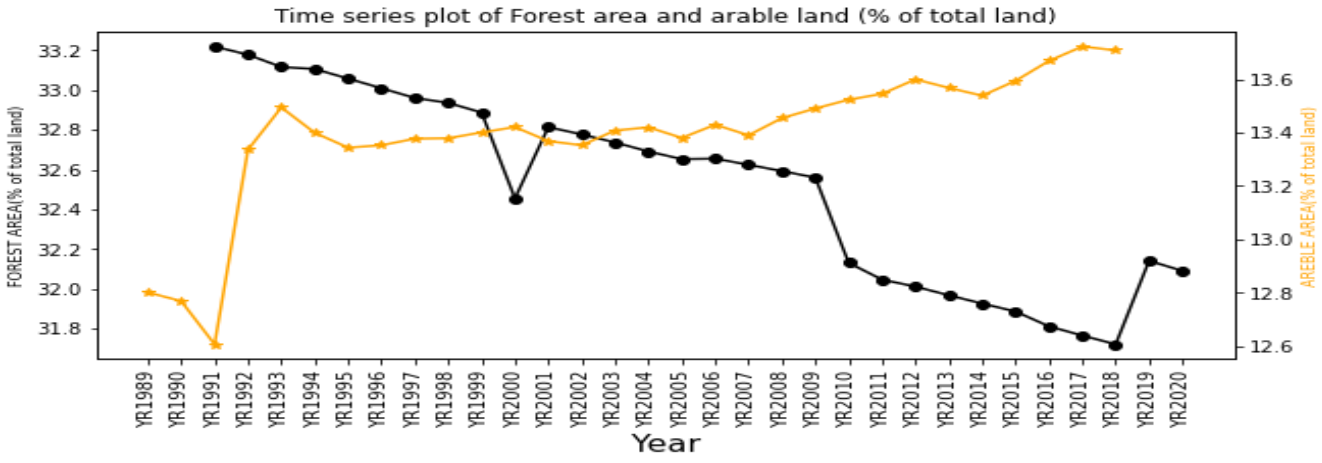


Fig (1)

From the above time series, we can see the forest area and the arable area statistics all over the world. Where Forest area (%) in the world is higher when compared to the Arable. We can see the growth of the Forest Area from 1980-2018 which is tend to increase by the year and same with the Arable land Area.

Nitrous Gas Emission(%) vs C02 gas Emission(kt):

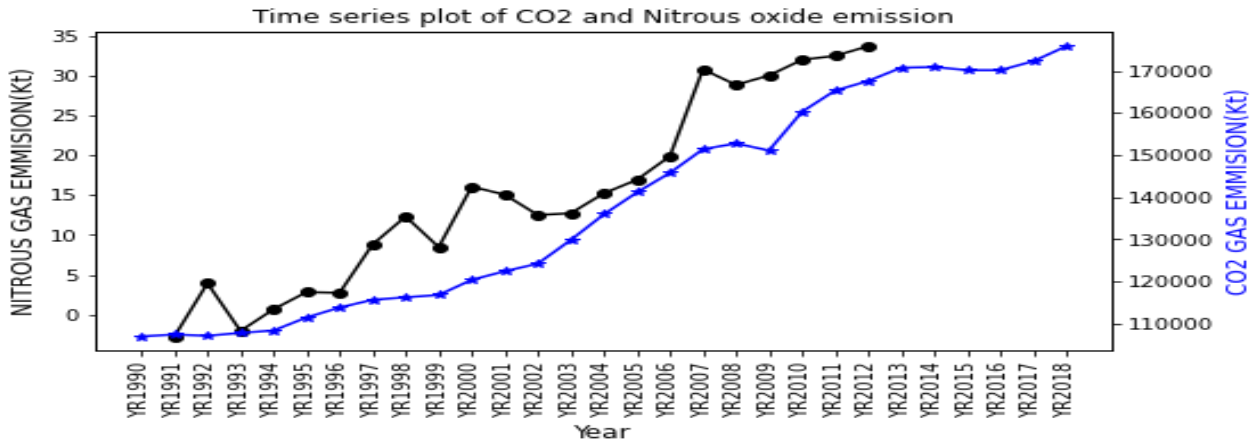
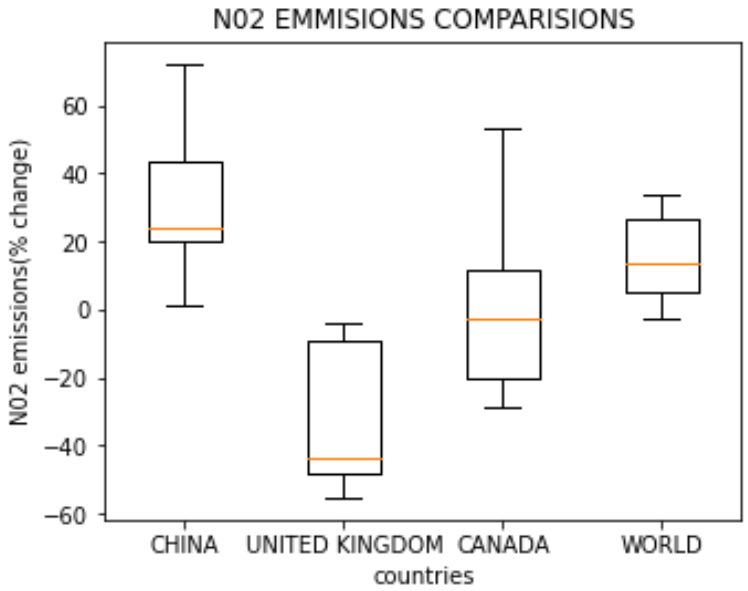


Fig (2)

From the Fig (2) we see the time series plot of Co2 emissions and Nitrous emission statistics. Where co2 emissions are taken as (kt) and Nitrous gas emissions are taken as (%).

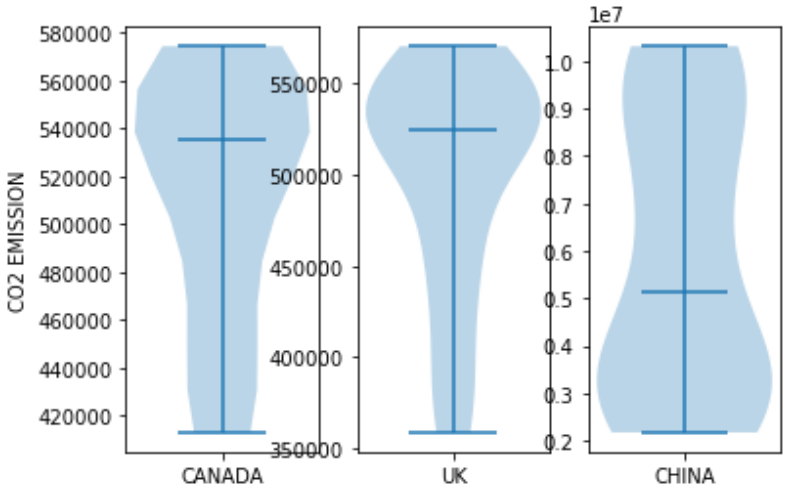
Nitrous oxide emissions (%) countries vs Nitrous oxide emissions world (%)



Here NO2 emissions of CHINA, UNITED KINGDOM, CANADA, WORLD is compared with the world statistics. As you can see the NO2 emissions are high in China compared to rest and the lowest are in the United Kingdom.

Fig (3)

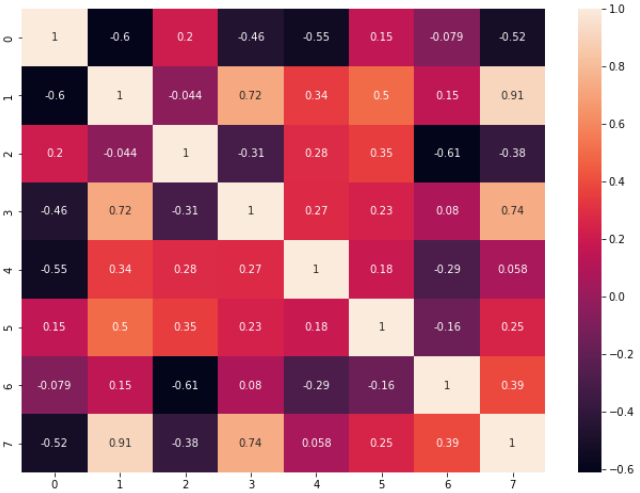
C02 emissions for different countries (kt):



Here CO2 emissions are taken and compared for different countries (“CHINA”,” UNITED KINGDOM”,” CANADA”). Canada is high compared to the rest of two countries and China records the lowest.

Fig (4)

The pairwise correlation of Forest area (%) of the world:



Here are the results of forest area (%) correlation of the world. This calculates every column in the data. And interprets the results.

Fig (5)

Reference: https://databank.worldbank.org/