

△ Objective of this project:

- The purpose of this project is to derive trends and relationships between changes in agricultural and forested areas, greenhouse gas emissions, and population growth rates by exploring the World Bank public data on climate change.

△ What kind of data is analyzed in this project .

- Public Data of World Bank.
- Dataset link : <https://data.worldbank.org/topic/climate-change>

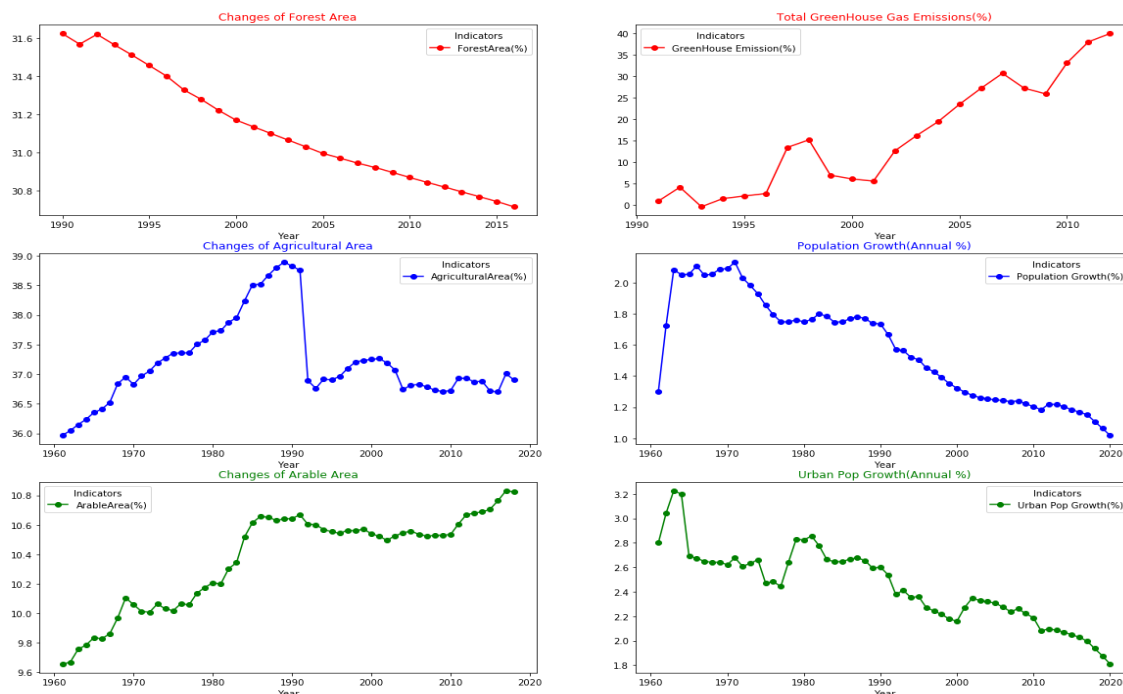
△ Description of Indicators used in this work.

- Below specific indicators used in this work to analyze.
 - 'AG.LND.ARBL.ZS' : Arable land (% of land area)
 - 'AG.LND.AGRI.ZS' : Agricultural land (% of land area)
 - 'AG.LND.FRST.ZS' : Forest area (% of land area)
 - 'SP.URB.GROW' : Urban population growth (annual %)
 - 'EN.ATM.GHGT.ZG' : Total greenhouse gas emissions (% change from 1990)
 - 'SP.POP.GROW' : Population growth (annual %)

△ What summary conclusions are obtained in this work?

- Analysis for the relationship between overall world area, population growth rate and greenhouse gas emissions

Analysis for Overall World Area, Population and GreenHouse Gas

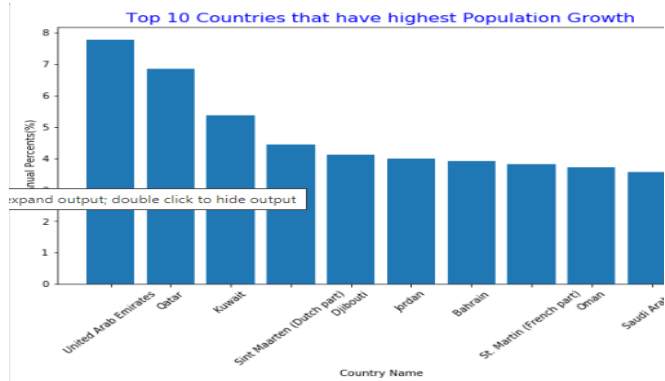


From the 1990s to the present, the forest area is gradually decreasing and the population is also decreasing as the days are increasing worldwide.

On the other hand, the amount of greenhouse gas emission is increasing rapidly and the area of arable land is also increasing.

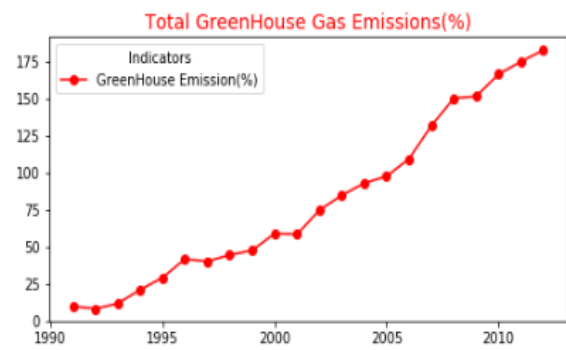
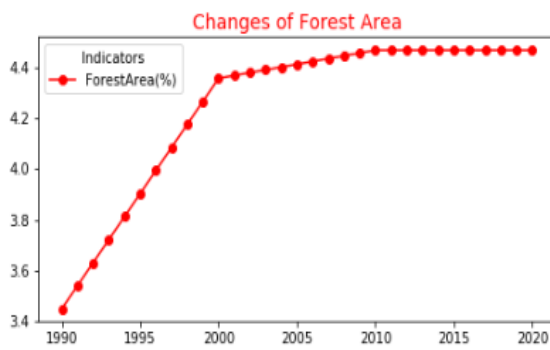
This suggests that the reduction of the world's forest area is an important factor in greenhouse gas emissions and climate change.

Analysis for the countries that have the highest population growth.

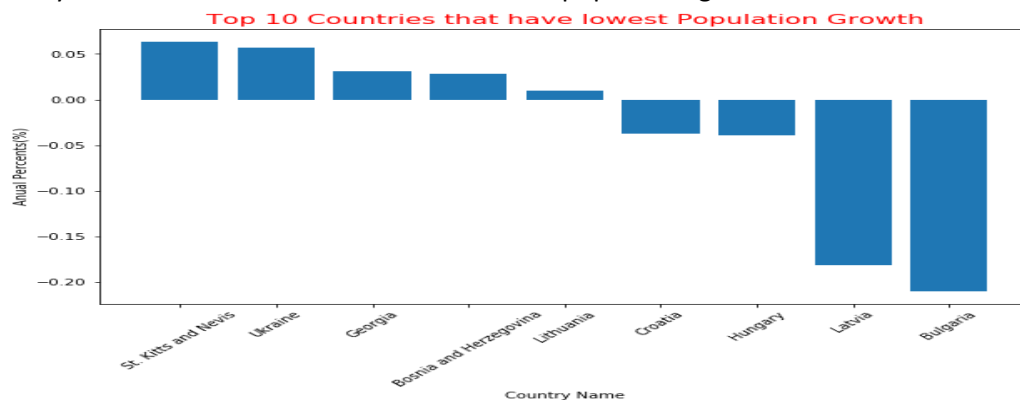


- Here we can see, United Arab Emirates, Qatar and Kuwait are the top countries that have the highest population growth rate(annual%), almost of these countries are in Asia.
- Especially, in United Arab Emirates, despite the rapid decline of the world's forested area, the forested area is increasing in United Arab Emirates.

Analysis for United Arab Emirates (have the highest population growth)



- Analysis for the countries that have the lowest population growth rate.



- Here we can see, Bulgaria, Latvia, Hungary and Croatia are the countries that have the lowest population growth rate.
- All of those countries are in Europe, It can be seen that in most European countries, the population is declining significantly