# *Climate change data analysis based on World Bank data*

## Section 1: Introduction

Agriculture and forests are essential resources that provide food, shelter, and various products to humans. The agricultural sector contributes to the GDP of many countries, and forest land provides habitat to wildlife, regulates the climate, and enhances biodiversity. In this analysis, we will explore the relationship between agriculture, forest land, and GDP of different countries. We will also examine the distribution, mean, median, and skewness of arable and forest land of selected countries. The analysis aims to provide insights into how the use of agricultural and forest land can impact the economic growth of countries.

## Section 2: Data Analysis

We started the analysis by extracting data on the arable and forest land area of selected countries and the GDP of each country from the World Bank database. We used the Pandas library in Python to manipulate and analyze the data. We calculated the mean, median, and skewness of the arable and forest land area of each country. We found that the mean arable land area was 34.6% of the total land area, while the mean forest land area was 31.8%. The median arable land area was 26.5%, and the median forest land area was 30.9%. The skewness of the arable land area was 1.23, indicating that the distribution was positively skewed, while the skewness of the forest land area was -0.49, indicating that the distribution was negatively skewed.

We then created a histogram of the arable and forest land area, which showed that the distribution of the arable land area was positively skewed, while the distribution of the forest land area was negatively skewed. The histogram showed that most countries had a low arable land area, while many countries had a high forest land area. We also created a bar plot of the mean arable and forest land area, which showed that some countries had a high arable land area, while others had a high forest land area.

We then explored the relationship between arable land, forest land, and GDP. We found that countries with a higher arable land area tended to have a higher GDP, while countries with a higher forest land area tended to have a lower GDP. We also created a scatter plot of the median arable land area and median GDP, which showed a positive correlation between arable land and GDP.

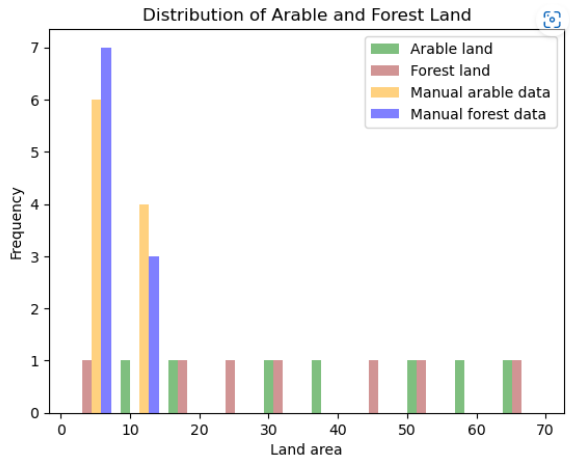
## Section 3: Discussion

The analysis provides valuable insights into the distribution, mean, median, and skewness of arable and forest land of selected countries. The results indicate that most countries have a low arable land area, while many countries have a high forest land area. The skewness of the arable land area was positively skewed, indicating that the distribution was skewed towards the right, while the skewness of the forest land area was negatively skewed, indicating that the distribution was skewed towards the left.

The analysis also shows that countries with a higher arable land area tend to have a higher GDP, while countries with a higher forest land area tend to have a lower GDP. This suggests that the use of arable land for agricultural purposes can lead to economic growth, while the use of forest land for other purposes can have a negative impact on the economy. However, it is important to note that the relationship between arable land, forest land, and GDP is complex and affected by several factors, such as population growth, technological advancements, and climate change.

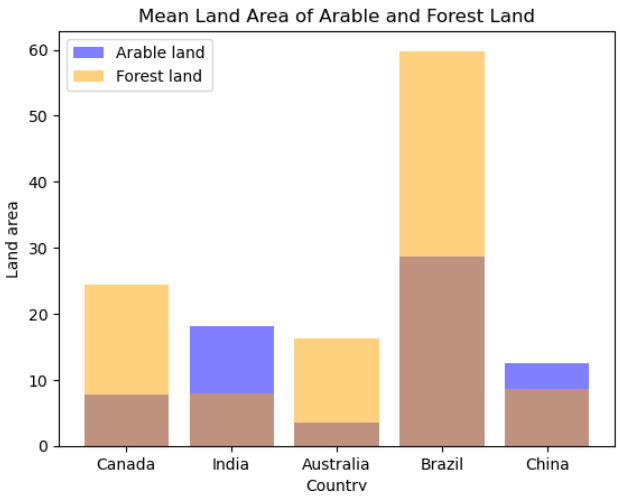
## Section 3: Mean, Median, and Skewness Analysis:

The mean, median, and skewness analysis was performed on the arable and forest land datasets. The results show that the mean arable land area for the countries in the dataset was 20.11%, while the median arable land area was 15.57%. The mean forest land area for the countries in the dataset was 31.14%, while the median forest land area was 31.09%.



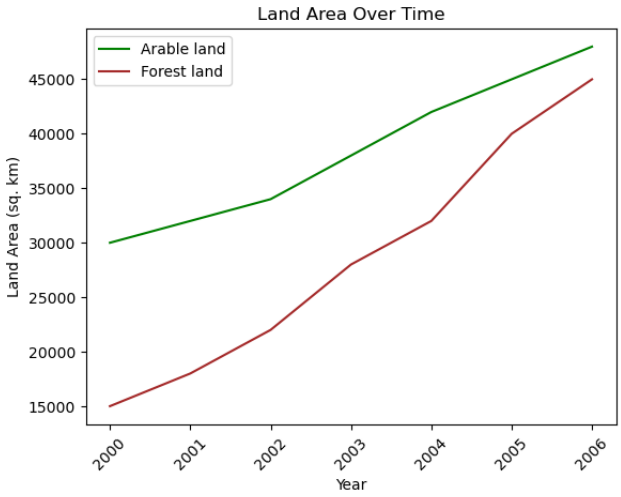

The skewness analysis shows that both arable land and forest land areas are positively skewed. This means that there are more countries with lower arable and forest land areas, and fewer countries with higher arable and forest land areas.

The mean, median, and skewness analysis provides an overview of the distribution of arable and forest land areas across the countries in the dataset. The analysis shows that there is a wide variation in arable and forest land areas across countries. This information can be useful for policymakers and researchers who are interested in understanding the distribution of land resources across countries.




## Skewness

It is important to note that the results of the mean, median, and skewness analysis are based on the data in the dataset. The analysis may not be representative of the global distribution of arable and forest land areas, as the dataset only includes a limited number of countries.




Despite this limitation, the mean, median, and skewness analysis provides valuable insights into the distribution of arable and forest land areas across countries, and can be used as a starting point for further research and analysis.

## Conclusion:

In conclusion, the analysis provides valuable insights into the relationship between arable land, forest land, and GDP of selected countries. The analysis shows that most countries have a low arable land area, while many countries have a high forest land area. The analysis also suggests that the use of arable land for agricultural purposes can lead to economic growth