

**Project Team :**

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**Project Title :**

Effects of Climate Change in Agriculture of Turkey

**Summary :**

This project aims to give crucial data, improve the agriculture of Turkey under the conditions of Climate Change by analyzing trends in statistical data and properties of plants.

**Problem definition :**

The problem we are addressing is that Climate Change has negative effects on agriculture due to high temperatures and droughts. Therefore, we are trying to show changes in agriculture of Turkey.

**Dataset(s) Sources :**

The "Greenhouse Gas Emissions" dataset includes data on CO<sub>2</sub> gas emissions around the world by countries. The source of the dataset is The World Bank data on CO<sub>2</sub> emissions. The data has been collected by the World Resources Institute, Climate Watch.

The "Temperature Differences" dataset contains information about temperature differences around the world, compared to previous year. The data was collected from Kaggle, where the author claimed that the data is based on the public data of "Global Surface Temperature Change" distributed by NASA Goddard Institute for Space Studies.

The "Crops Production" dataset has data about the agricultural production of crops in Turkey, including their types and groups. There are many datasets gathered from TUIK website with the information about fruits, vegetables, cereals and other crops production, for the pair of years (2018-2019, 2019-2020, etc.). The data in datasets was collected with the help of official record of Ministry of Agriculture and Forestry (MAF) and TurkStat. TurkStat published the information.

**Possible Research Questions :**

What are the effects of the Climate Change on the agriculture of Turkey?

Which plants are most resistant to the impacts of the Climate Change?

Are there any plants that are benefitting from the Climate Change?

How does the temperature change and emissions rate affect the production of crops in agriculture of Turkey?

Is there any relationship between temperature change and emission rate?

Which plants are most affected by the Climate Change?

What are the strategies for mitigating the negative effects of Climate Change on agriculture of Turkey?

Which groups of the crops are growing without problems under conditions of changing climate in Turkey?

Is there any positive correlation between CO<sub>2</sub> emission rate and production of specific groups of crops in Turkey?

Do vegetables generally grow better than fruits under the effects of global Climate Change?