# Agricultural and Non-Agricultural Methane Production Based on World Bank Data

For this analysis 10 countries from different continents were selected and the correlations of the following factors on Agricultural and non-agricultural methane production were investigated in total Agriculture, forestry, and fishing, value added (% of GDP), Agricultural irrigated land (% of total agricultural land), Agricultural land (% of land area) and Agricultural land (sq. km).

The analysis found some correlations between the factors and causes behind them were investigated.
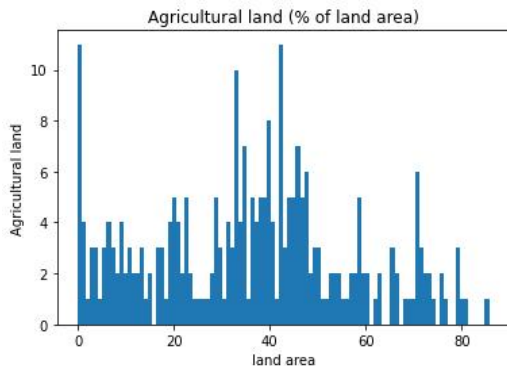

The output shows a histogram plot of the distribution of agricultural land as a percentage of the total land area for all countries in the year 2020. The x-axis represents the land area and the y-axis represents the frequency of agricultural land. The histogram is divided into 100 bins, meaning that the x-axis is divided into 100 intervals. The output also includes a printed list of the agricultural land percentage values for all countries in the year 2020.
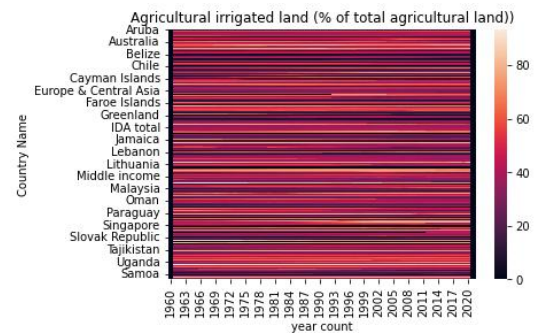
The output of the code is a heatmap showing the percentage of agricultural land for each country in the dataset for each year from 1960 to 2020. The plot is titled "Agricultural irrigated land (% of total agricultural land))". The graph defines the uses seaborn's heatmap function to create a heatmap for this filtered data from all over countries.

Country Name	Country Code
Lesotho	LSO
Saudi Arabia	SAU
Uruguay	URY
South Africa	ZAF
Kazakhstan	KAZ
Burundi	BDI
Nigeria	NGA
Bangladesh	BGD
Syrian Arab Republic	SYR
West Bank and Gaza	PSE

| Correlations of the following factors |
| --- |
| Agricultural land (sq. km) |
| Agricultural land (% of land area) |
| Agricultural irrigated land (% of total agricultural land) |
| Agricultural irrigated land (% of total agricultural land) |
| |

Agriculture, forestry, and fishing, value added (% of GDP)
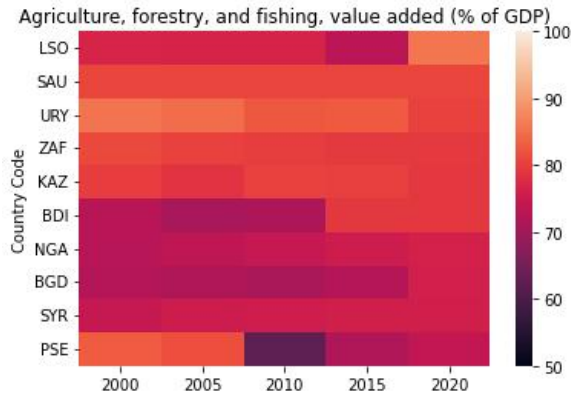
The function then creates a new dataframe glue by selecting the 'Country Code', '2000', '2005', '2010', '2015', and '2020' columns from the filtered dataframe, sets the 'Country Code' as the index, and prints this new dataframe. It then creates a heatmap using the sns.heatmap function, with a minimum value of 50 and a maximum value of 100, and sets the title of the plot to 'Agriculture, forestry, and fishing, value added (% of GDP)'.

Agricultural land (% of land area)
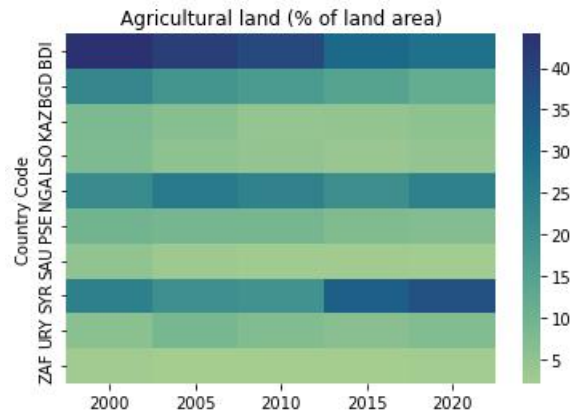
The second heatmap plot showing the value added by agriculture, forestry, and fishing as a percentage of GDP for the top 10 countries. It creates a new DataFrame df that includes only the rows where the 'Indicator Name' column is equal to 'Agricultural land (% of land area)'. It sorts the new DataFrame df by the '2020' column in descending order, selects the top 10 rows, and stores the corresponding 'Country Code' values in a list li. It creates a new DataFrame glue that includes only the 'Country Code', '2000', '2005', '2010', '2015', and '2020' columns from the original DataFrame df, and sets the 'Country Code' column as the index.

agricultural deatail of top 10 country in Agricultural land (% of land area)
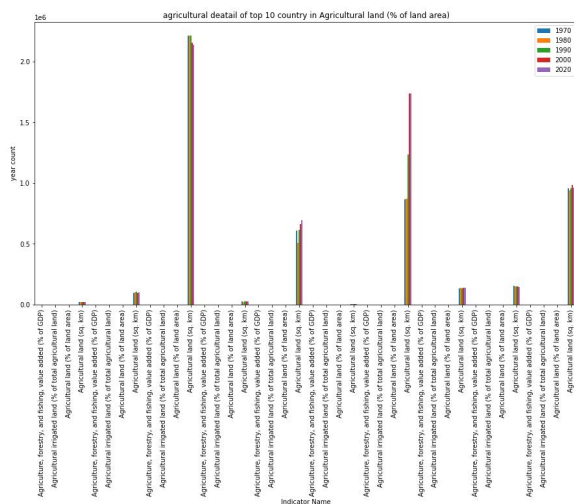
The combar function takes two inputs, df and li. df is a pandas DataFrame that contains the agricultural data, while li is a list of top 10 countries based on the percentage of agricultural land area. The function first prints the set of unique values in the 'Indicator Name' column of df. It filters df again to only include rows where the 'Country Code' is in the li list of top 10 countries. Next, the function selects specific columns from df and sets the 'Indicator Name' as the index. It creates a bar plot of the selected data using the pandas plot method, with the x-axis representing the years and the y-axis representing the count of each indicator.

The plot title is "agricultural detail of top 10 country in Agricultural land (% of land area)".