DATA SOURCE

1.The data given to us for this research.

Which has 54 variables related to electricity, gas emissions and renewable energy by country from 1990 to 2021.

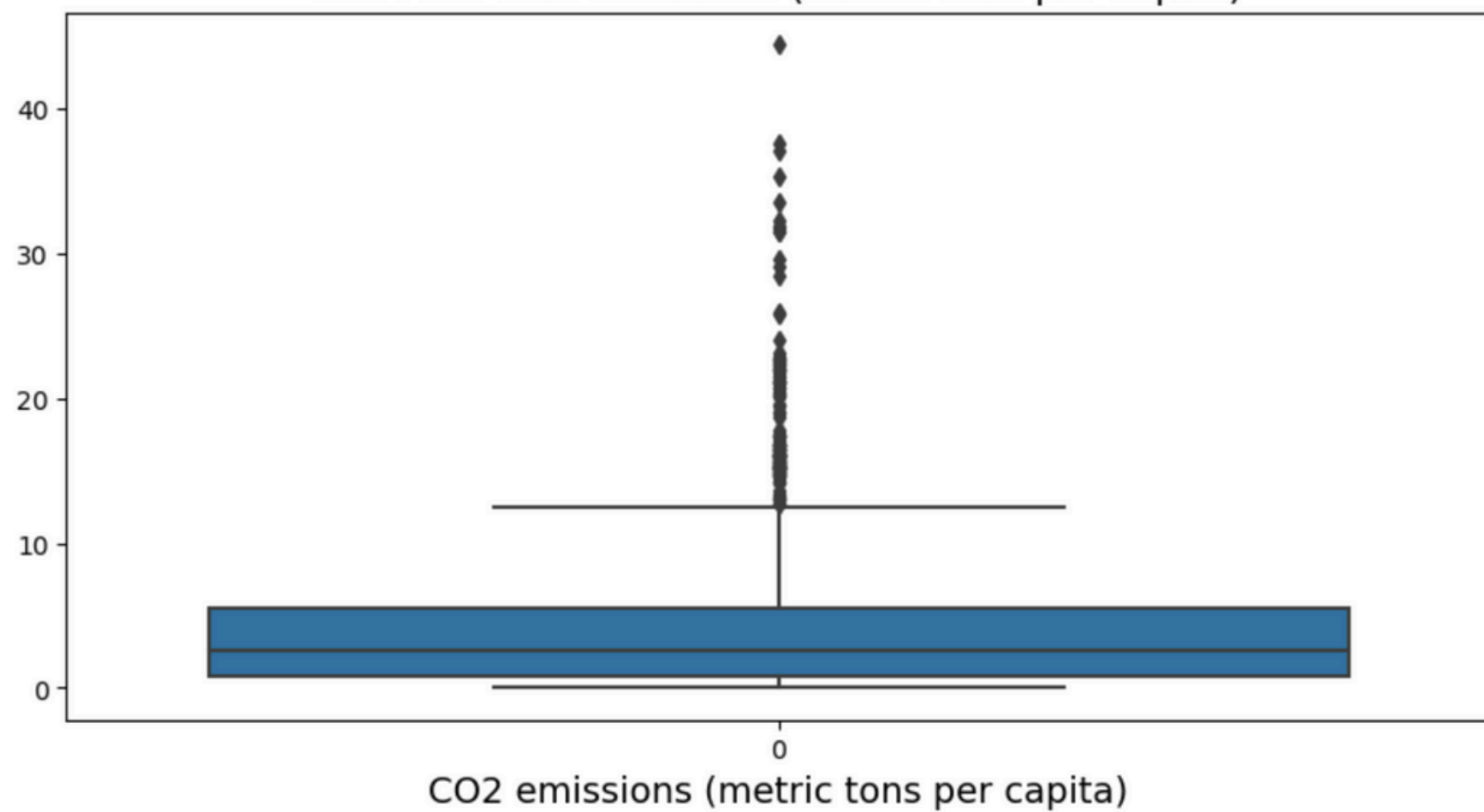2.Data found on global countries geometry.
The source is:

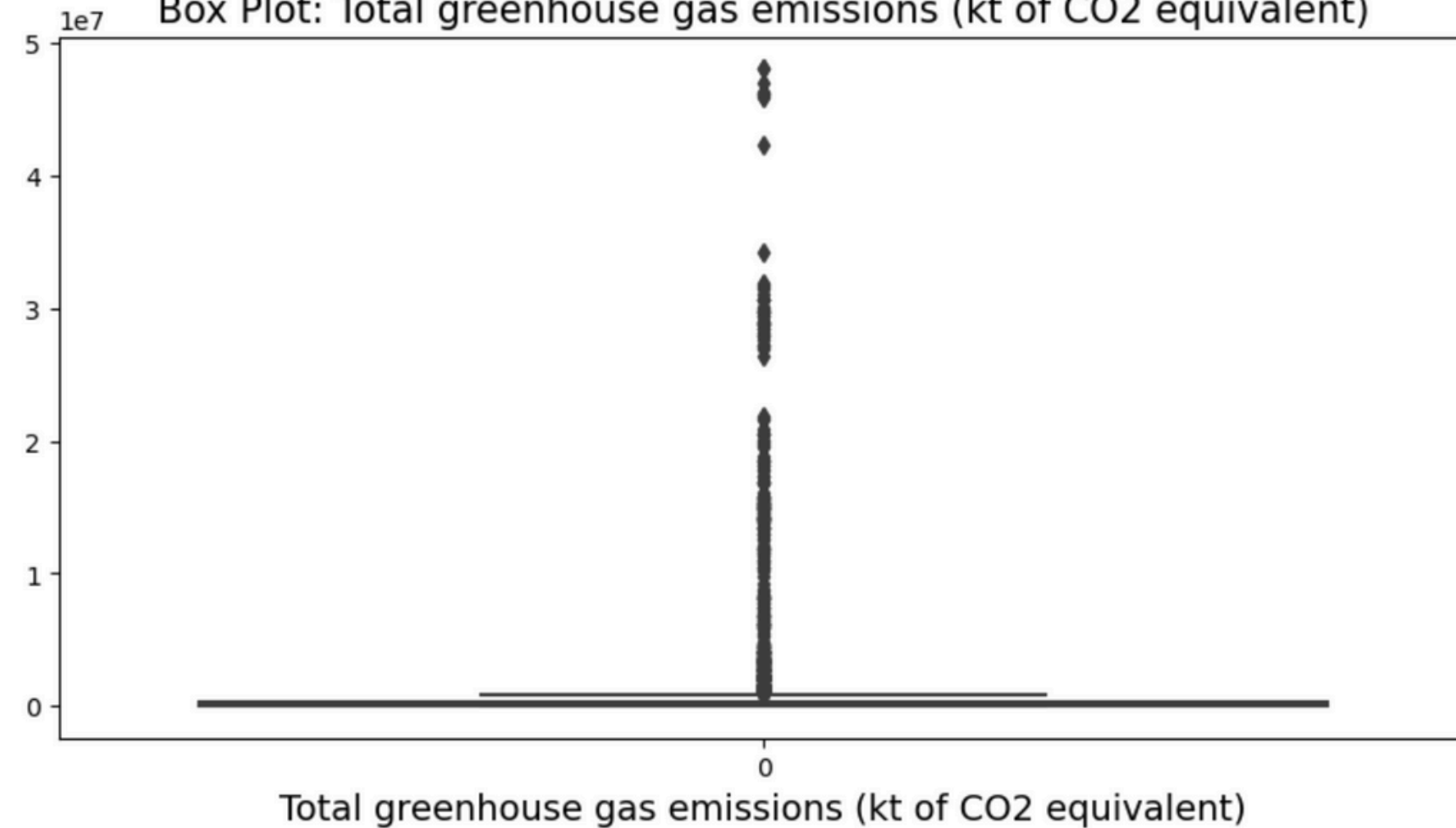https://www.naturalearthdata.com/downloads/

DATA PREPARATION

▶ Missing values

▶ Mislabelled Data

▶ Outliers

▶ EDA

Box Plot: CO2 emissions (metric tons per capita)
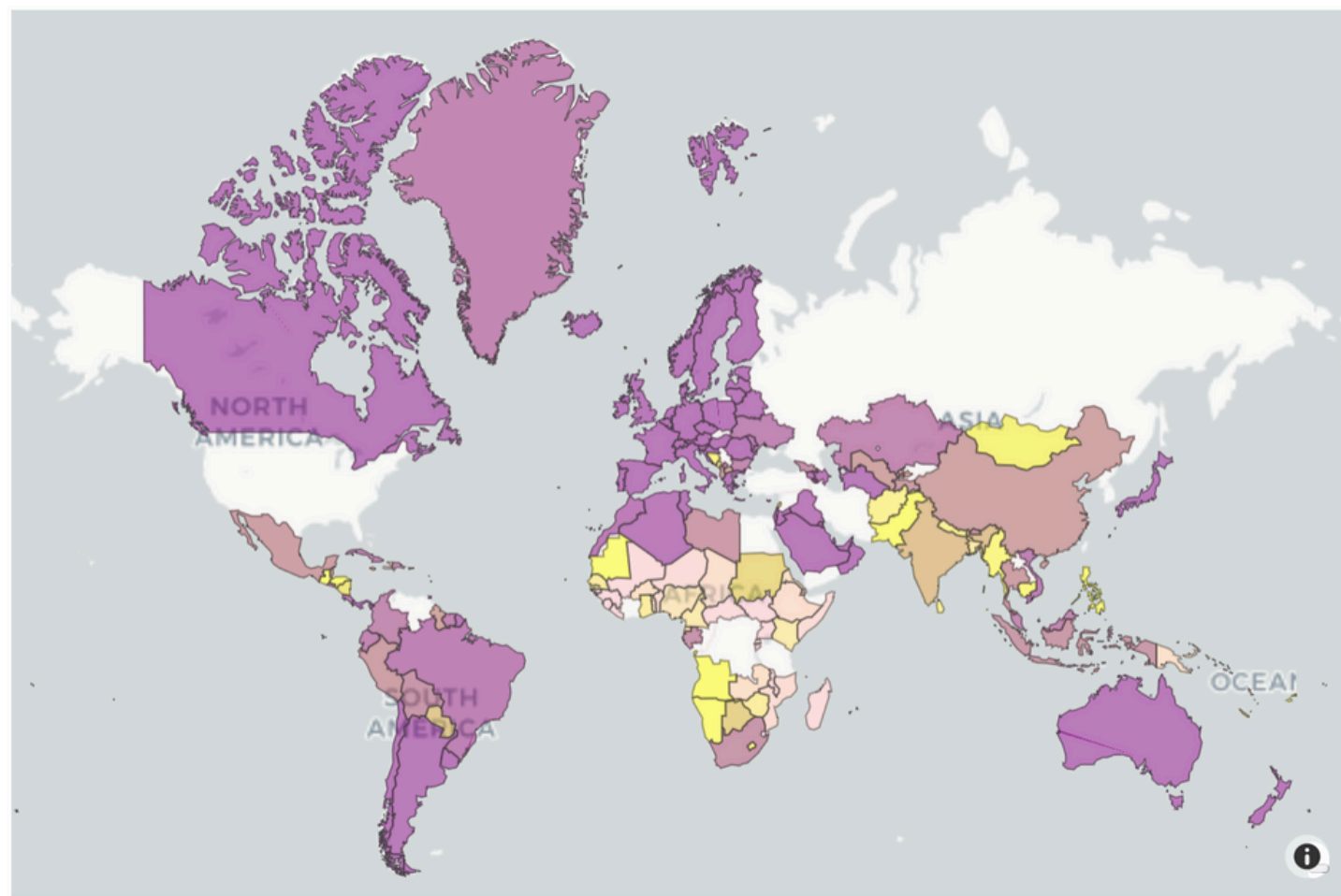

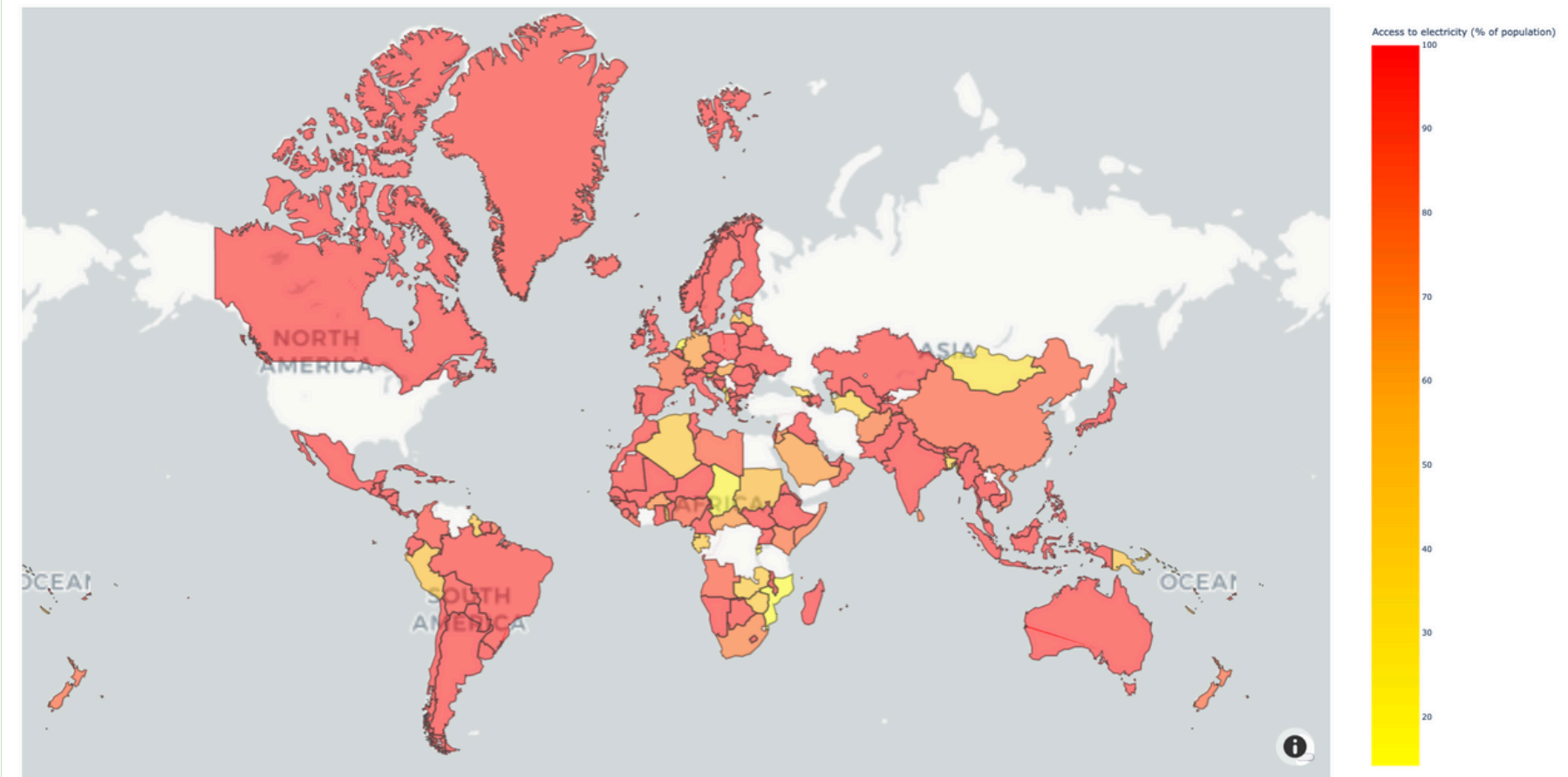Box Plot: Total greenhouse gas emissions (kt of CO2 equivalent)

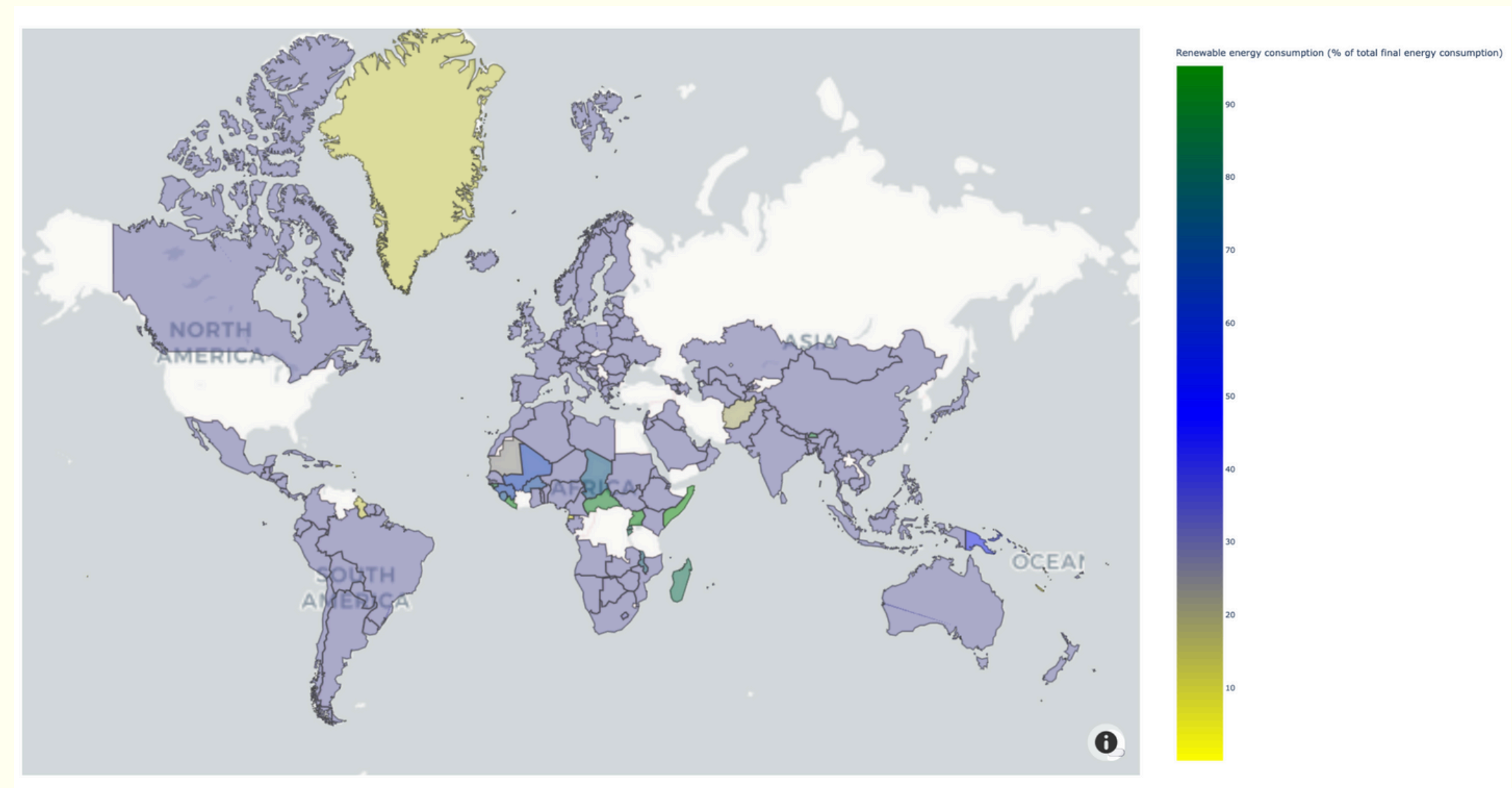1. Is there an energy disparity between developed and developing countries?

Access to clean fuels and technologies for cooking, in 2021

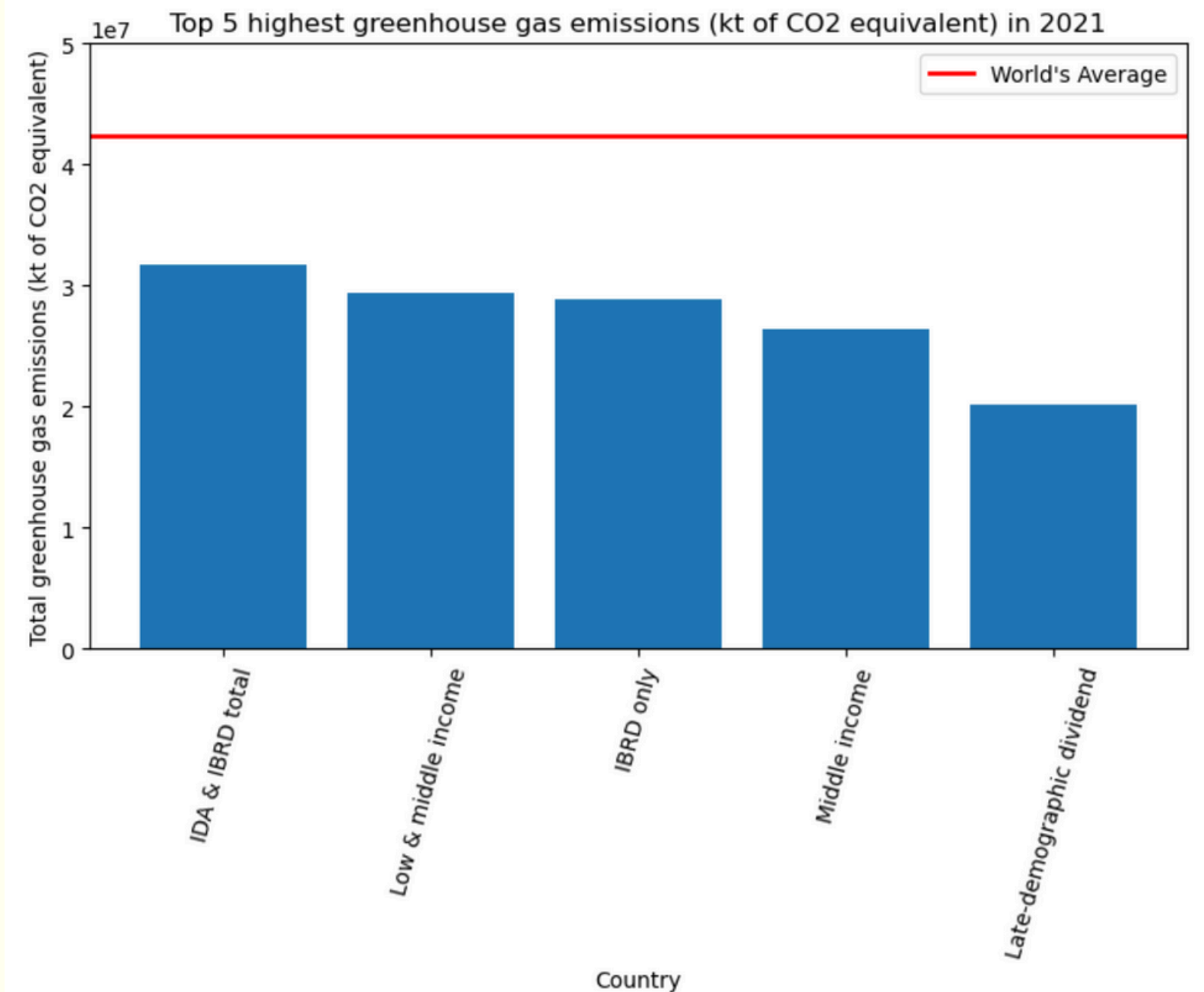**Access to electricity (% of population) in 2021**

VISUALISATION

05

Renewable energy consumption, in 2021

2. Which countries require urgent environmental policy interventions for carbon footprints?

Top 5 highest CO2 emissions (kt) by country in 2021

Top 5 highest greenhouse gas emissions (kt of CO2 equivalent) in 2021

2. Which countries require urgent environmental policy interventions for carbon footprints?

Top 5 country with highest CO2 emissions (mt per capita) in 2021
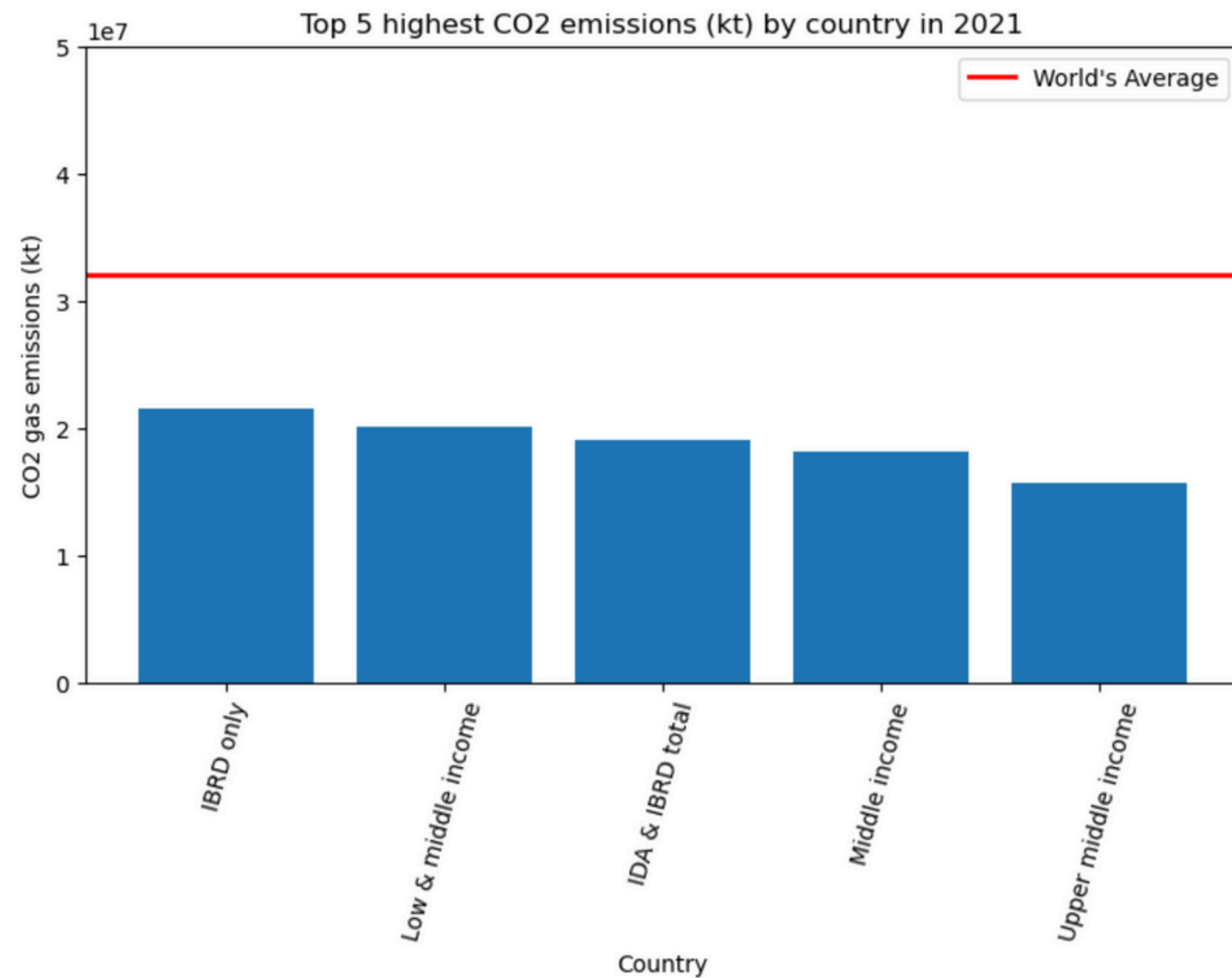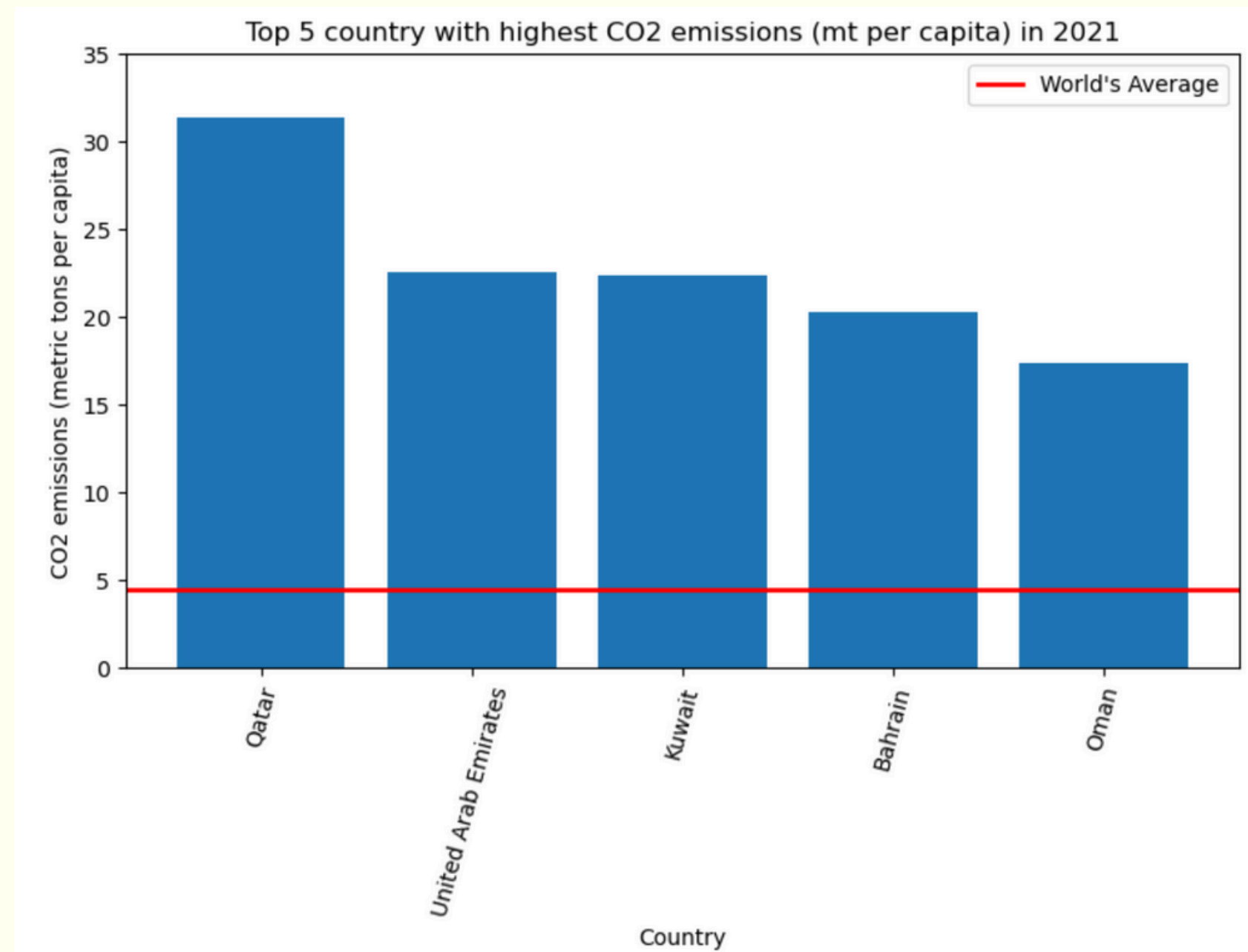
VISUALISATION

3.Is there a disparity between rural and urban population electricity access?
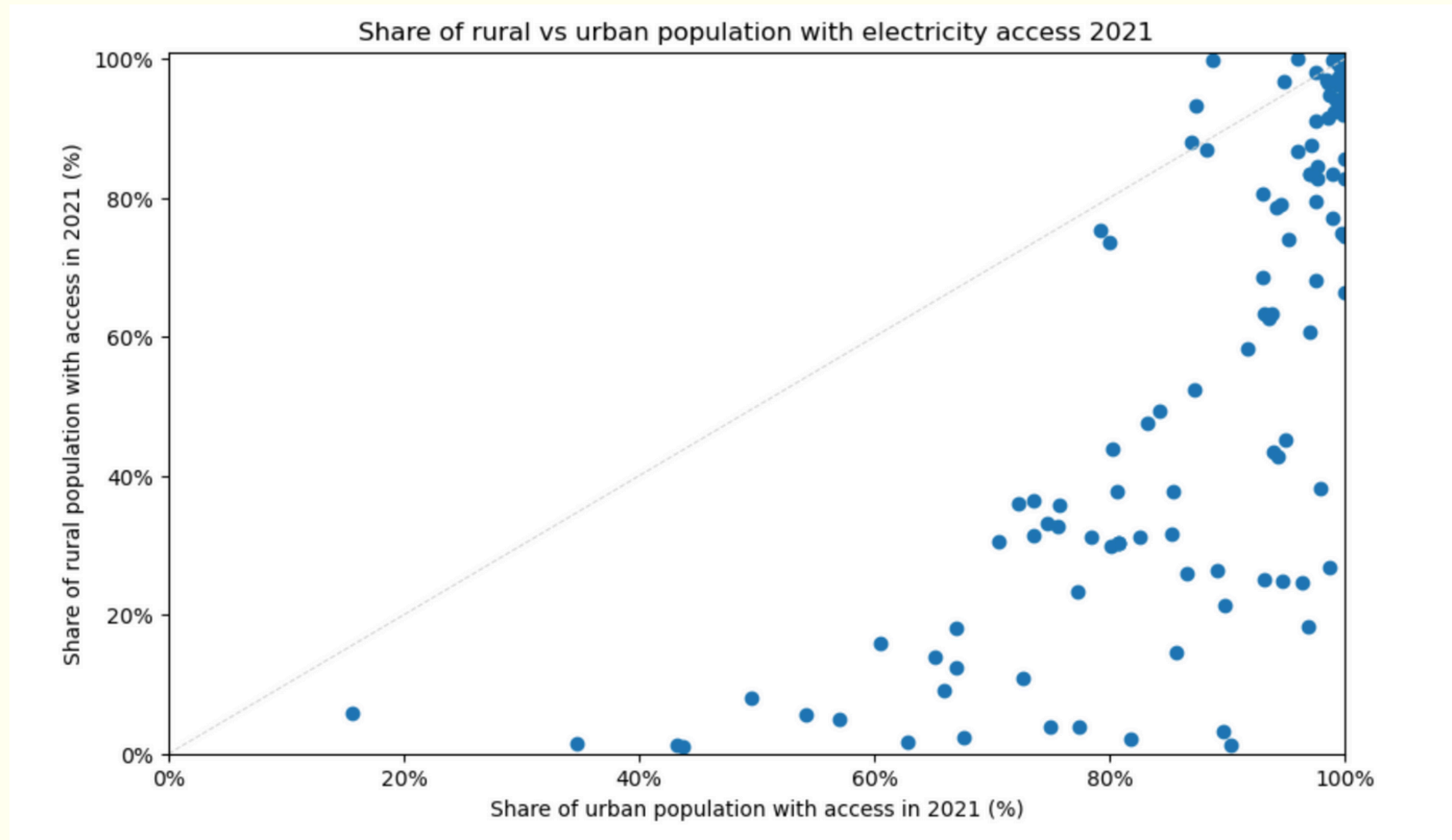
4.Is electricity efficiency and its infrastructure development related to the different levels of income of a country's population?

Electricity inefficiency in Low, Middle & High income countries in 2021

POLICY RECOMMENDATIONS

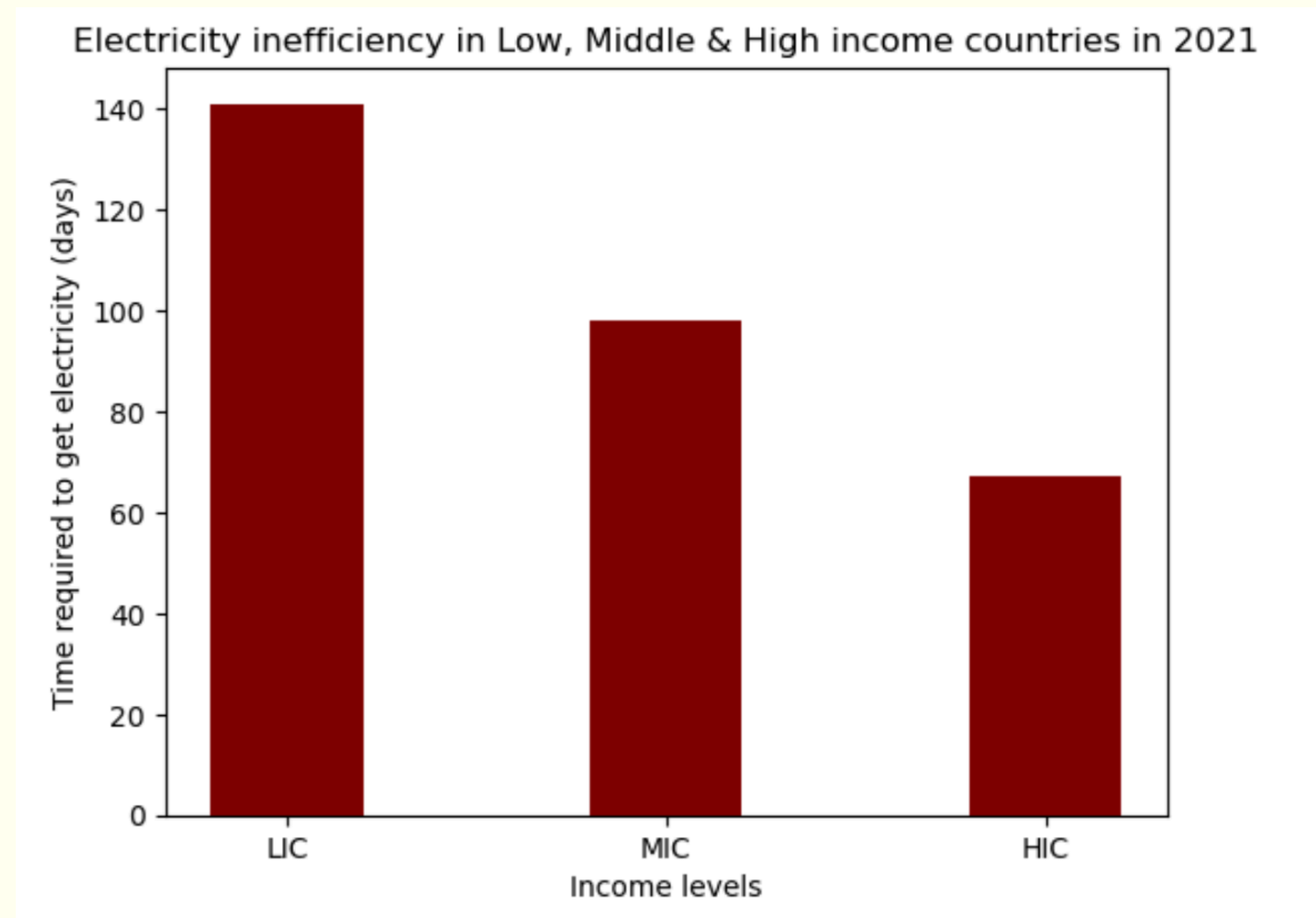Focus on developing rural areas in countries with low population income

'Address cost effective deep renovations which lead to a refurbishment that reduces both the delivered and the final energy consumption of a building by a significant percentage compared with the pre-renovation levels leading to a very high energy performance' (EC, 2012).

Focus on Middle-east countries that have a huge oil sector activity

As world oil demand rises, the Middle East must find another way to produce energy.
-Diversify and find sustainable substitutes to current energy generation methods.
-Monitor and fix target objectives
-Penalize with fines if the short-terms targets/ plans are not met.

LIMITATIONS

Data:

- **Is the data accurate?**

Need to cross-check it with another similar database.

- **Variable dictionary doesn't mention which exact countries are included in 'Low income', 'Middle income' and 'High income'.**

Which makes it hard to identify target lower income countries to apply our policies.

LIMITATIONS

Analysis:

- **Do we need to remove outliers because they are representing false data?**

Need to compare with another dataset to make a better conclusion on outliers.

- **Does not consider all the variables that have an impact on emissions.**

THANK YOU

For further inquiries or collaborations, feel free to reach out. Your ideas and enthusiasm drive positive change.