

THE ROLE OF GLOBAL URBANIZATION IN CLIMATE CHANGE

Arsheya Jaishiva, Amanda Eng, Emma Jee, Chloe Ling

WHAT IS URBANIZATION?

Definition

The increase in the proportion of people living in towns and cities

Causes

- economic: employment opportunity
- social: modernization, welfare
- environmental: rural degradation



BACKGROUND



Economic

The bottom line

Cash Flows



Social

Equity, human rights, access to education and health care



Environment

Conservation of resources and ecosystem

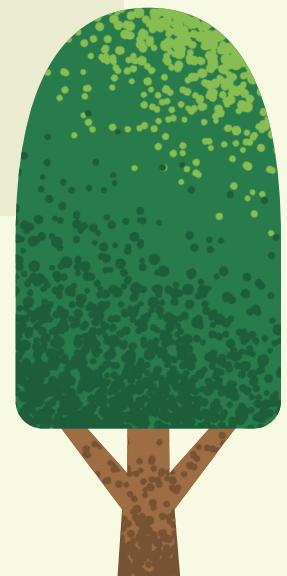
OUR HYPOTHESES

Correlation

Urbanization and climate change are positively correlated

Aspects of Urbanization

- Urban population
- Access to and use of the internet



TWO DATASETS



**Climate
Warming
Trends**

Visualize climate change trends from 2000 to 2022



**Global
Urbanization**

Visualize growth in population and GDP from 2000 to 2022



Source: Kaggle (provided on original list of datasets)

6 COUNTRIES



Australia



India



United States of America



Germany

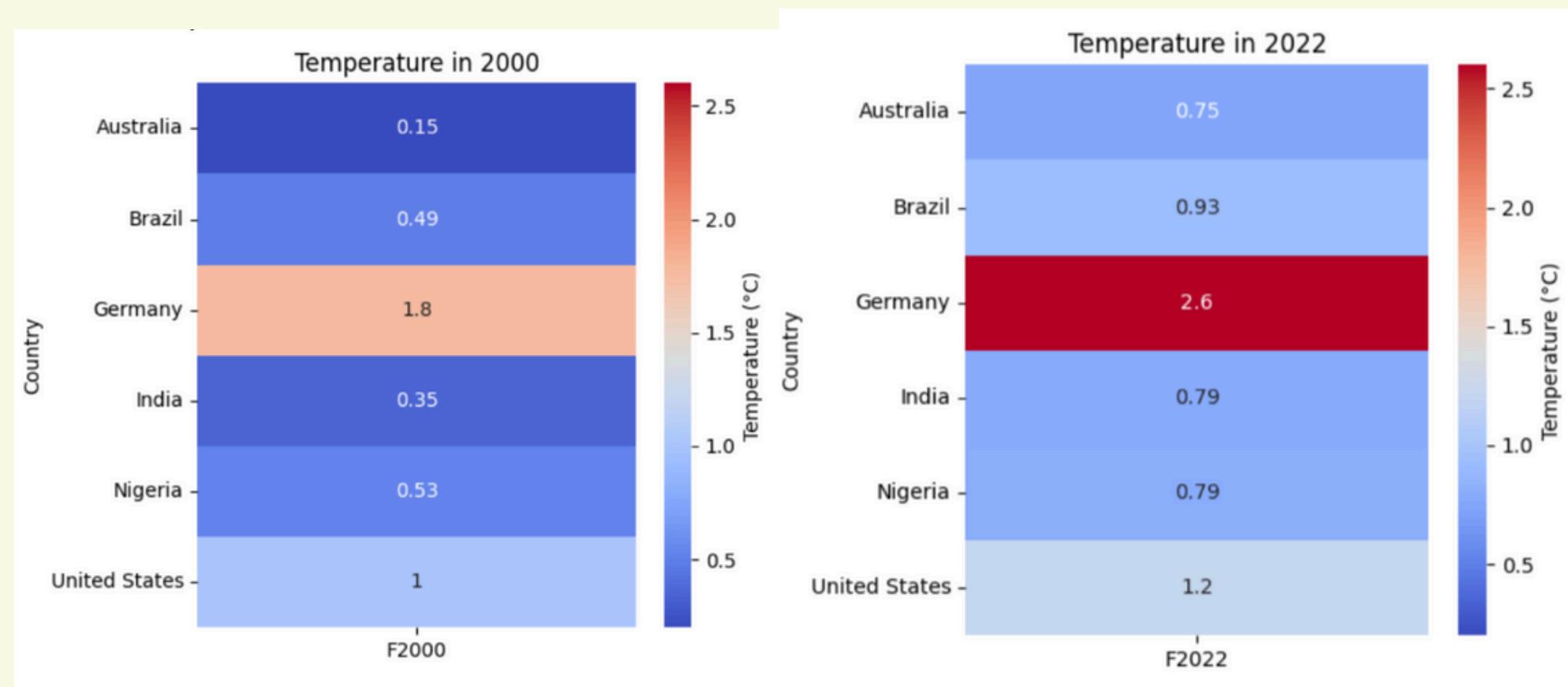


Brazil

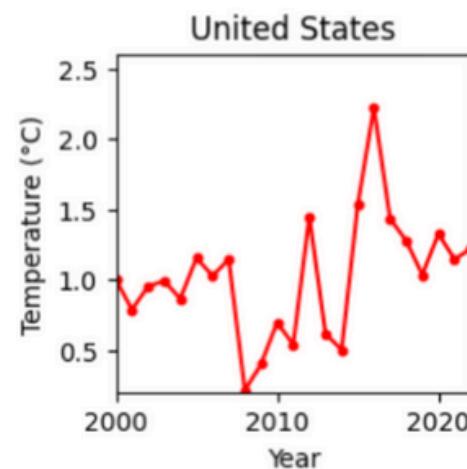
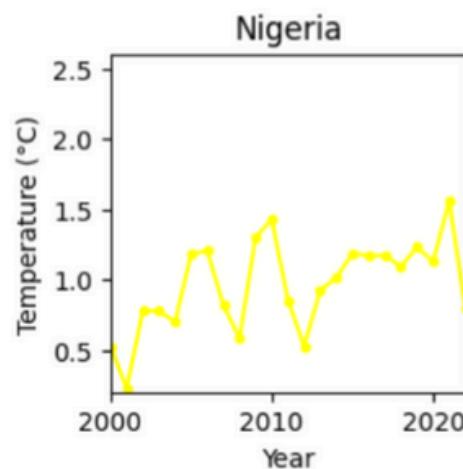
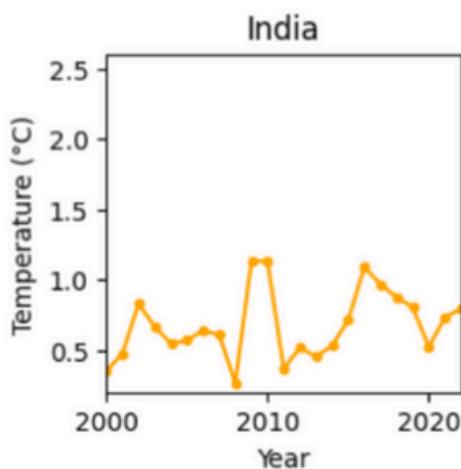
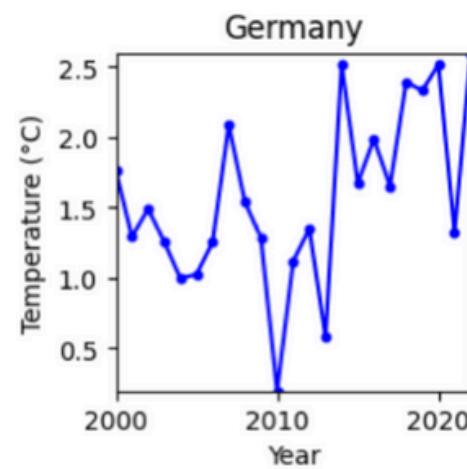
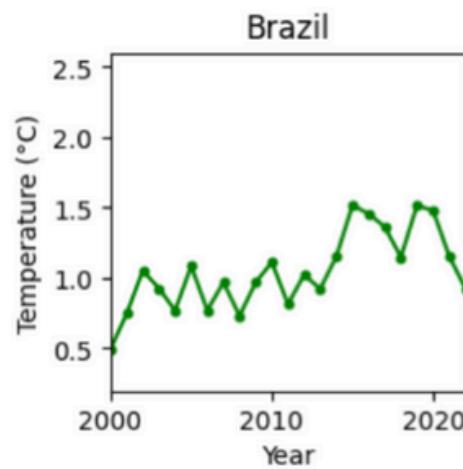
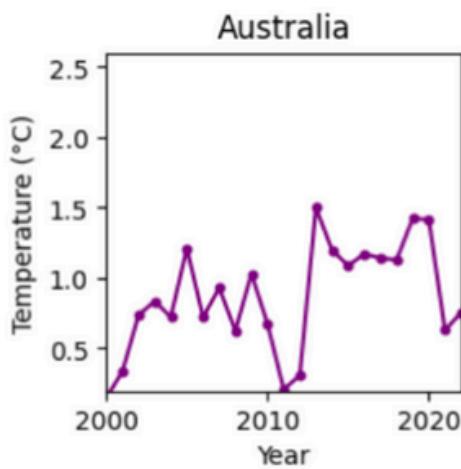


Nigeria

CLIMATE WARMING TRENDS



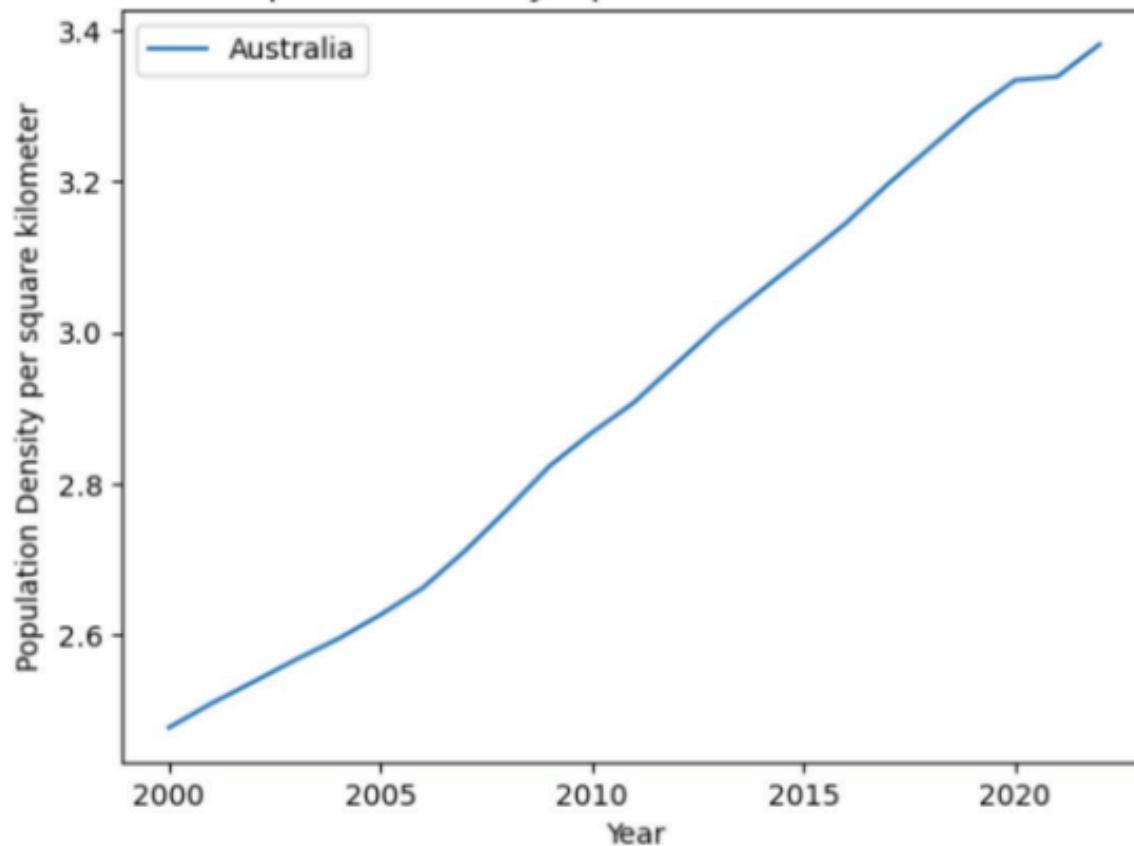
CLIMATE WARMING TRENDS



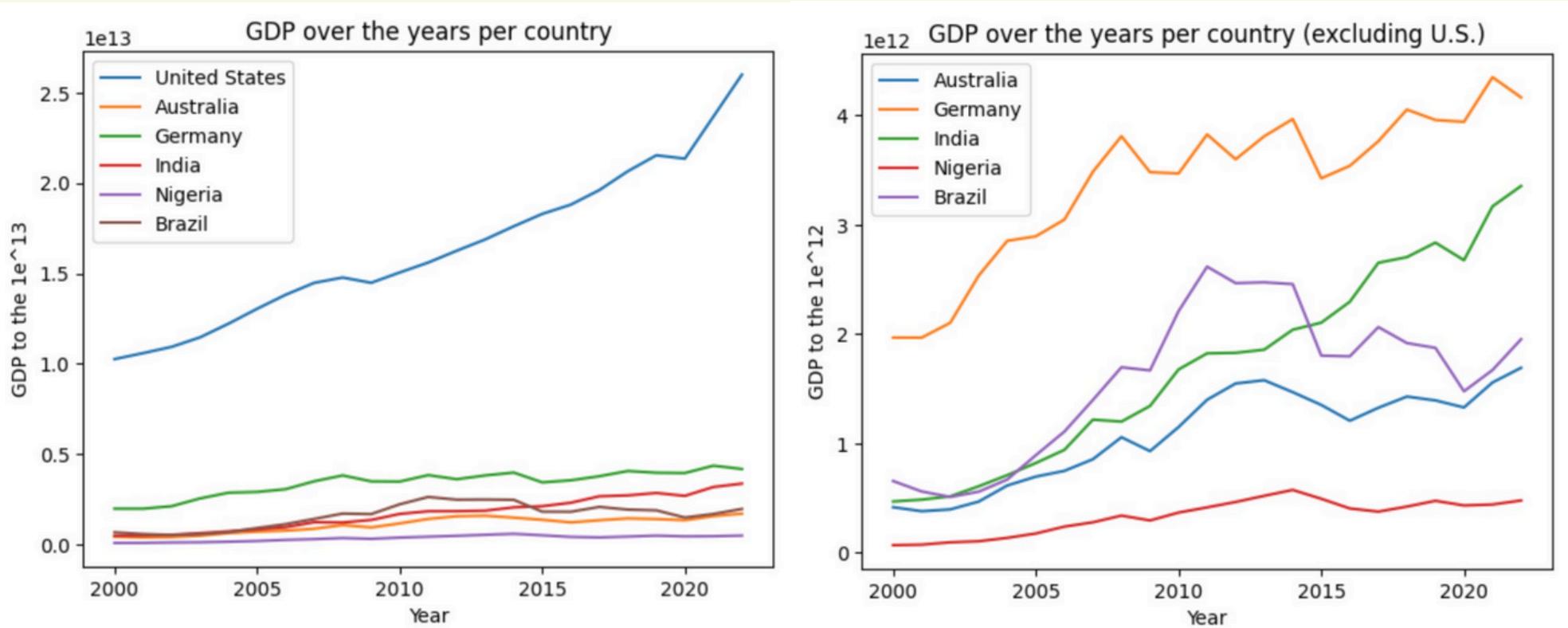
GLOBAL URBANIZATION

Difference between population density per sq. km. from 2022 - 2011: 0.90503156293981

Population Density/square km. from 2000-2022



GLOBAL URBANIZATION



DIRECT COMPARISON

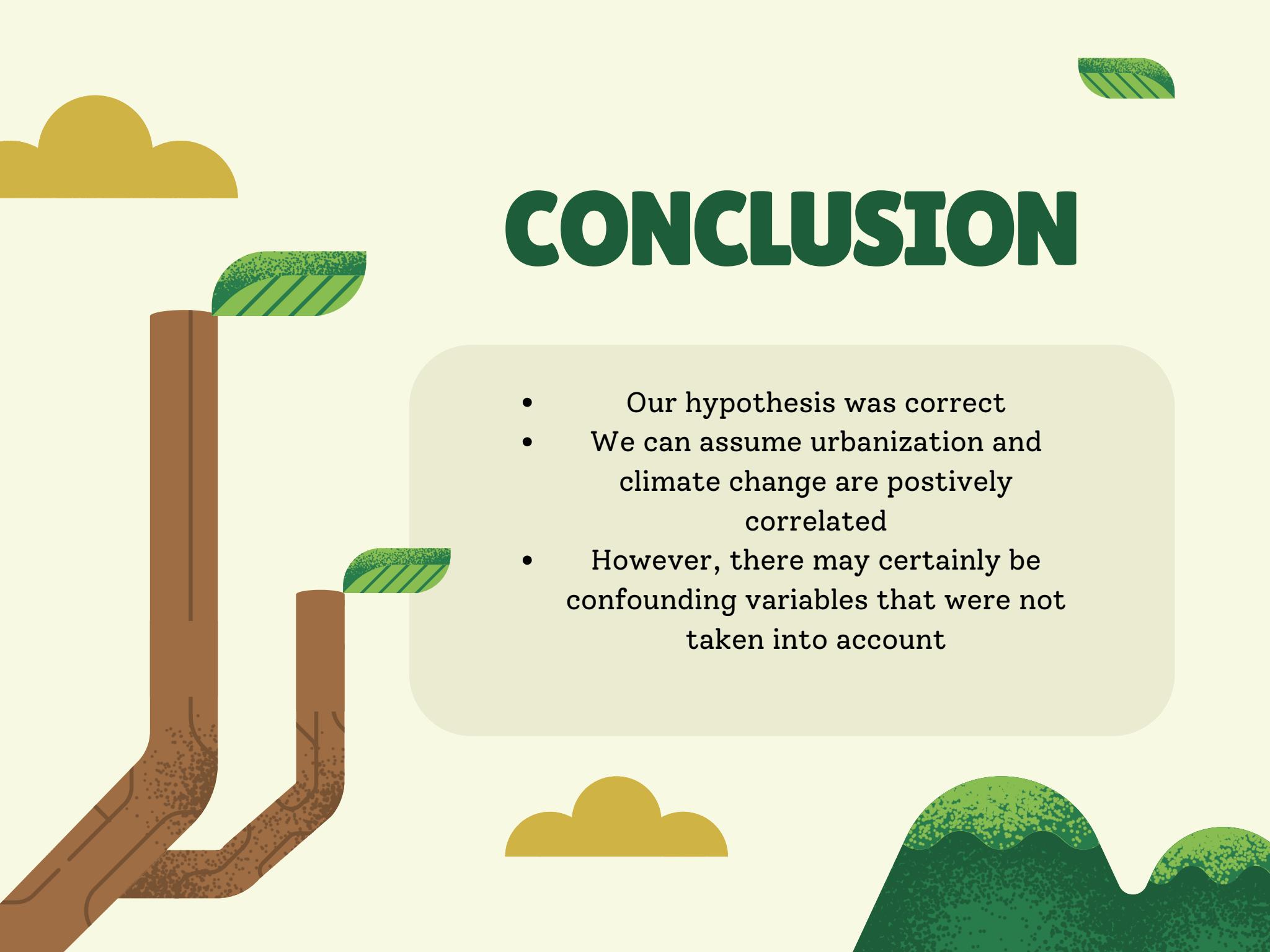


Urbanization Increases

Factors of urbanization such as GDP and population increase at a steady rate

Climate Increases

Steady increase in temperature across all countries, some more drastically than others



CONCLUSION

- Our hypothesis was correct
- We can assume urbanization and climate change are positively correlated
- However, there may certainly be confounding variables that were not taken into account

CHALLENGES

Change of Plans

Biodiversity dataset
had synthetic data

Plotting Visualizations

Map that showed
dynamic change in
global CO2 emissions

SOURCES

<https://www.kaggle.com/datasets/bushraqurban/global-urbanization-and-climate-metrics>

<https://www.kaggle.com/datasets/jawadawan/global-warming-trends-1961-2022/data>

THANK YOU

