

# How close are we to extinction? How will global CO2 emissions change in the future?

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## Background

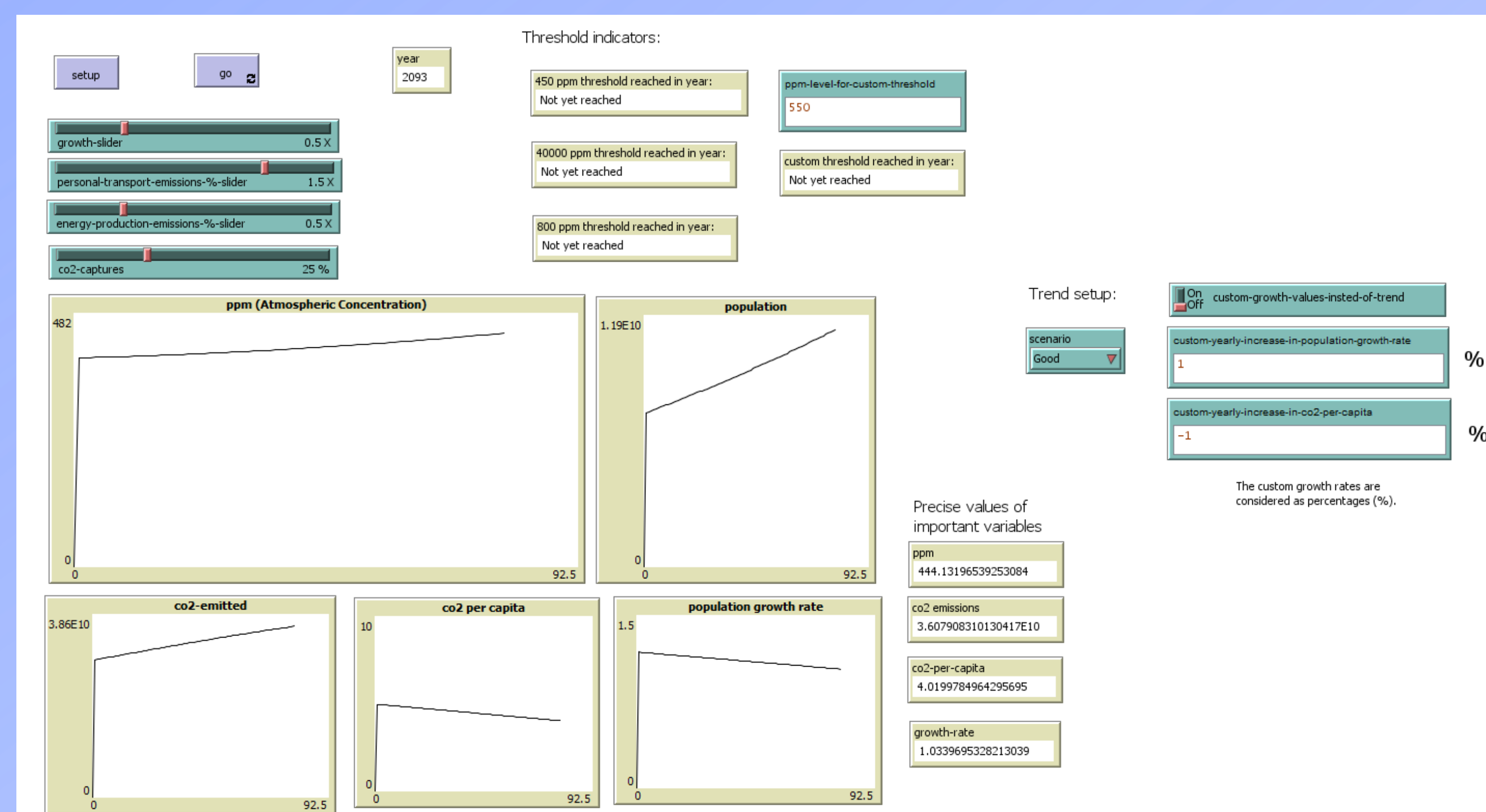
Global warming is a very controversial topic today, with evidence showing that we will soon reach a point of no return. Many argue that we should do everything in our hands to tackle this problem, while others do not see much of a threat. CO2 is the most emitted greenhouse gas in the world. This greenhouse gas has caused more warming than any other gas. The greenhouse effect causes our planet to warm, which can easily disturb the lifestyle and habitats of many animals and humans.

The purpose of this project is to research the most important factors contributing to CO2 emissions and developing an intuitive online tool, to analyze the effects of these factors.

## Online tool

As part of the project, we have developed a toll, which allows users, to see how ill the global CO2 emissons change depending on different factors, like the use of electric cars, and the population growth. All of these factors can be manipulated by the user.

You can access the tool yourself on any device by scanning the QR code to the right. You can also go directly to: <https://mateusz-alicante.github.io/CO2-Web/>



## Analisis of the factors affecting emissons:

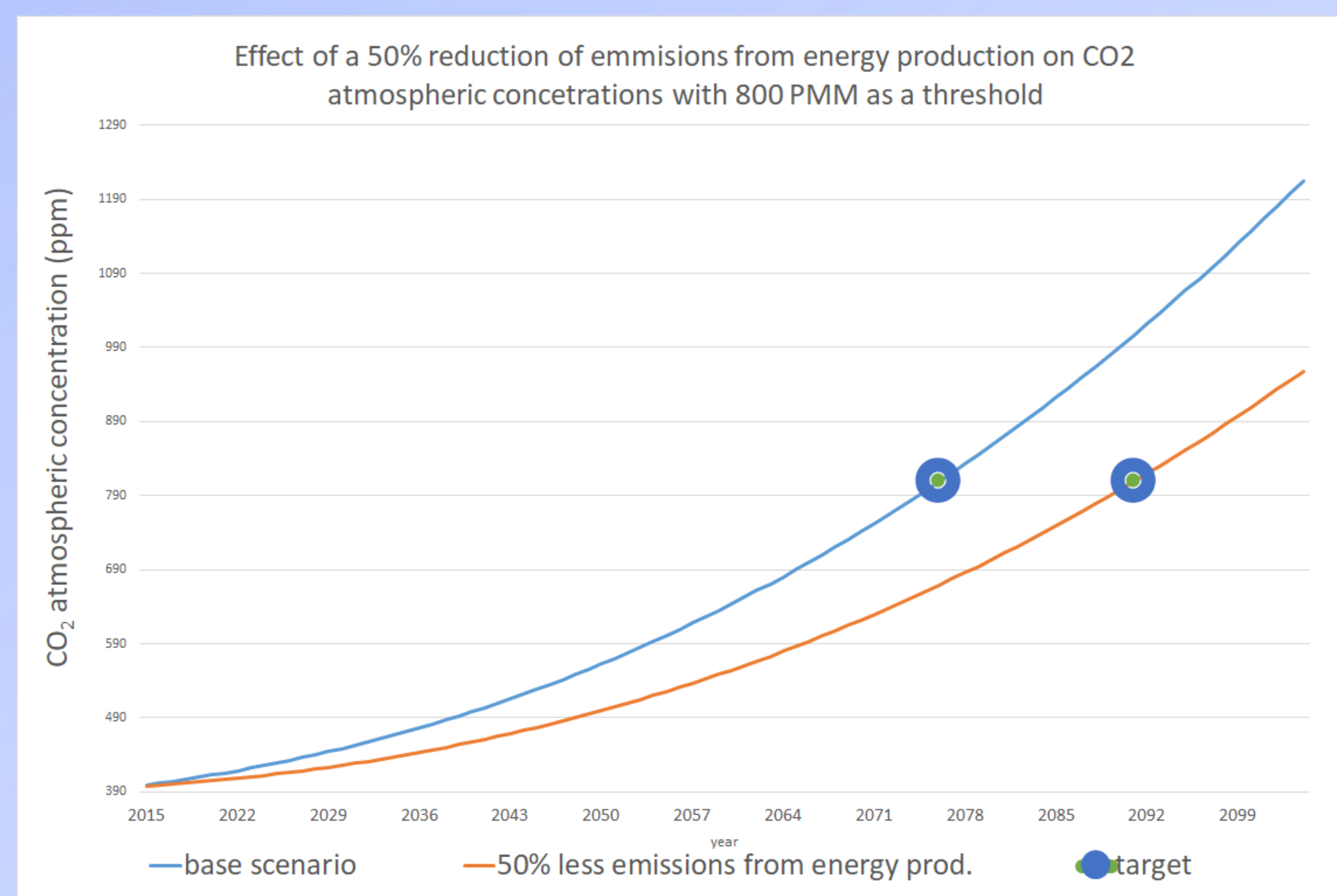
As part of the project, i have not only developed the online tool, but i have also performed a analisis of the output of the model, which allowed me to come to various interesting conclusions. Here are some of these conclusions:

►A complete shift to electric cars does not have a significant impact on CO2 atmospheric concentrations both in the short and long term.

►Technological advances in the environmental field, like more modern ways to reduce emissions from energy production, and technologies to capture CO2 have the best efficiency when reducing CO2 atmospheric concentration from the factors we have studied.

►A decrease in population growth is not significant in the short term but has a bigger impact on CO2 atmospheric concentrations in the long-term.

In the graph below we explore how would the global CO2 emissons be affected, if we reduce to half our emissions from energy production. One way this could be achieved is utilizing renewable enrgies. We found this factor to be one of the most important ones, delaying by 15 years the time, in which our planet will warm by 4 degrees C following an average scenario. This is a critical threshold according to many experts.



## Bibliography:

- Our World in Data, Hannah Ritchie and Max Roser. 2017.
- Financial Times. 2020.
- OECD. 2011
- Wilensky, U. (1999). NetLogo
- The World Bank Data

## Acknowledgements:

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