



National Ecological Footprint

CMPS 184

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Questions Explored

- What is the Ecological Footprint Consumption per Capita? Which countries have the highest EF consumption per capita?
- Is there enough biocapacity per capita to support a country's EF consumption per capita?
- How do the HDI (Human Development Index) relate to the EF consumption per capita?

Data Sources

- <https://www.kaggle.com/footprintnetwork/national-footprint-accounts-2018/version/8> (CSV File)
- <http://hdr.undp.org/en/data>(CSV File)

References

- Data Visualization:
<https://towardsdatascience.com/a-complete-guide-to-an-interactive-geographical-map-using-python-f4c5197e23e0>
- EF Consumption Per Capita:
<https://www.footprintnetwork.org/resources/data/?fbclid=IwAR1zhEJL-OedPVF1qkG-S-lxDpPMcnA57UCydeDmETC5zxb6uM-DWaB0JGg>

Final Results Obtained

- What is the Ecological Footprint Consumption per Capita? Which countries have the highest EF consumption per capita?
 - US, Australia, and Canada remains consistently high in EF consumption across the years between 1996-2014
 - Mongolia continuously increased their EF consumption starting at 5.695 EFC in 1994 to 9.5 EFC in 2014
- Is there enough biocapacity per capita to support a country's EF consumption per capita?
 - Most countries seem to have more natural resources than they are consuming except for:
 - US and the West side of Europe (France, Britain, etc)
 - Australia and Canada are interesting since they have relatively high EF consumptions that are on par with the US, but still manage to have a surplus of resources than a deficit. This is probably due to land size or population size.
- How do the HDI (Human Development Index) relate to the EF consumption per capita?
 - We wanted to see if quality of life (essentially HDI) is higher if the EF consumption per capita is also high. This is assuming that high consumption of resources correlates with higher quality of life
 - Looking at the results, we don't immediately see a correlation as the HDI levels remain relatively the same across the 4 countries we looked at (India, Armenia, Afghanistan, Zimbabwe) despite the difference in EF consumption

Libraries Used

1. Pandas
2. Numpy
3. Matplotlib
4. Bokeh
5. Geopandas

Data Wrangling/Viz/Analysis Tasks

- Plotting Choropleth Maps
- Cleaning Data sets to get correct years, countries etc. and removing unnecessary data
- Wrangling and Plotting ecological consumption and HDI data
- Understanding the results of the choropleth maps and finding correlations