Proposal Group 12: The Impact of Individuals' Happiness on Global Ecological Footprints

Problem: Do countries with happier citizens tend to have lower ecological footprints.
Datasets: We combine the following:

- **Global Ecological Footprint dataset**
  contains data on countries, general region, population, development index, and footprints in cropland, grazing land, forest coverage, fishing, and carbon output, along with metrics like total biocapacity and the number of Earths required for any particular country to exist sustainably.
- **Happiness Dataset**
  The happiness scores and rankings use data from the Gallup World Poll. The scores are based on answers to the main life evaluation question asked in the poll. Contains country, region, happiness rank, happiness score, lower confidence interval, upper confidence interval, economy, family, life expectancy, freedom.

Proposed solution and Real World Application:
Currently, we only use a few metrics to discuss a country's ecological footprint (i.e. GDP, HDI). We believe this limits our understanding of ecological footprints to explanations driven by money and economic output.

Following the idea of altruism, we propose that countries with happier citizens are more likely to produce lower ecological footprints. We will test this hypothesis by first, controlling for variables such as GDP, size, proximity to types of environments such as ocean, farmland, and rain, and then, analyzing the distributions of ecological footprints of countries with high, medium, and low happiness index scores. If we can show that a country with happier citizens is more likely to have a lower ecological footprint, then we could motivate research towards non-economic mechanisms for reducing global ecological footprint, slowing climate change, and saving the world.

Step	Estimated Completion Time	Person(s) in Charge
1) Create and clean dataset	One week	Roumen, Jimmy
2) Investigate correlations and variables to control for	One week	All
3) Plot distributions of footprints based on happiness and controlled variables	One week	Varun
4) Distill the most meaningful data relationships for visualization	3 days	All (discuss)
5) Compose visualizations	4 days	Mia