The Effect of Cyclones on Climate Awareness and Happiness (WIP)

Group 12

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Abstract

Ideas: How does a cyclone hitting a country affect the climate awareness and overall happiness.

Introduction

In this report, we are going to delve into the correlation between cyclones, climate awareness and the way in which happiness levels fluctuate based on the occurrences of cyclones. To establish a sense of importance on these topics, let's dive into the history of Hurricane Katrina. Making its mark in American history, there is empirical evidence that reveals how Hurricane Katrina has dictated happiness levels, while promoting the significance of climate awareness.

Moreover, we are applying exploratory techniques by visualizing the graphical representations of these data sets in order to conduct an effective comparison between the information sets.

Ultimately, our findings will depict how cyclones/hurricanes will play a role in determining happiness levels and the rates of climate awareness, which will convey the analysis of causation.

Data Description

Cyclones Data

The data comes from NOAA Cyclone/Hurricane Data contains record of tropical storms over the past 173 years.

In order to clean/tidy the data, we separated each different type of data entry into a unique column, filtered out irrelevant data entries, converted the location data to a readable format, and classified the storms.

Climate Awareness Data

The data come from 2022 Climate Change Opinion Survey and detail climate change opinion records how aware the population of various countries are about climate change, going forward this data set will be referred to as 'climate awareness'.

In order to clean the data, we type of data entry into a unique column, filtered out irrelevant data entries, and removed outdated entries.

Happiness Data

The data come from World Happiness Report Score (from 2023 report) and records various statistics about countries that are believed to impact the overall happiness of a country and gives them an overall happiness score, going forward this data set will be referred to as 'happiness'.

In order to clean/tidy the data, we separated each different removed repeated data, filtered out countries without a lifeladder score, and filtered out the outdated entries.

Combining the Data

Explain how any combinations of data were performed. Explain what kind of join was needed, whether columns had to be modified (for example, matching "country" names.)

Exploratory Data Analysis

To achieve our goals, we explored the data by...

We explored many aspects of the data, but will demonstrate three. These are the how many hurricane observations are made in each continent, and the correlation between the happiness of a country and how aware its people are of climate change.

The first aspect that we found interesting is shown in The correlation between how aware people are of climate change and how happy they are. The insight should be specific to the data shown, not a general statement beyond the data (leave that for the conclusion).

The next insight that we found is shown in Hurricane Observations Count by Continent.

Finally, The correlation between how aware of climate change the people of a country are and how happy those people are shows ...

This insight is supported by the summary statistics in table summary_stats.

Country	Continent	Aware Rating	Life Ladder
Albania	Europe	0.470	0.544
Algeria	Africa	0.409	0.554
Angola	Africa	0.411	0.379
Argentina	South America	0.515	0.639
Armenia	Asia	0.458	0.568
Australia	Oceania	0.648	0.702
Austria	Europe	0.706	0.664
Azerbaijan	Asia	0.514	0.521
Bangladesh	Asia	0.418	0.411
Belgium	Europe	0.616	0.694

Benin	Africa	0.338	0.442
Bolivia	South America	0.435	0.586
Bosnia and Herzegovina	Europe	0.608	0.601
Botswana	Africa	0.467	0.333
Brazil	South America	0.574	0.655
Bulgaria	Europe	0.592	0.559
Burkina Faso	Africa	0.389	0.446
Cambodia	Asia	0.338	0.422
Cameroon	Africa	0.364	0.495
Canada	North America	0.649	0.684
Chile	South America	0.534	0.623
Colombia	South America	0.412	0.590
Costa Rica	North America	0.527	0.738
Croatia	Europe	0.689	0.596
Cyprus	Europe	0.541	0.607
Czechia	Europe	0.488	0.683
Denmark	Europe	0.649	0.750
Dominican Republic	North America	0.397	0.592
Ecuador	South America	0.477	0.585
El Salvador	North America	0.391	0.648
Finland	Europe	0.760	0.770
France	Europe	0.653	0.656
Germany	Europe	0.719	0.679
Ghana	Africa	0.320	0.430
Greece	Europe	0.615	0.580
Guatemala	North America	0.337	0.642
Haiti	North America	0.293	0.361
Honduras	North America	0.375	0.586
Hungary	Europe	0.753	0.597
India	Asia	0.461	0.468
Indonesia	Asia	0.417	0.569
Iraq	Asia	0.397	0.548
Ireland	Europe	0.626	0.682
Israel	Asia	0.538	0.678
Italy	Europe	0.596	0.625
Jamaica	North America	0.407	0.587
Japan	Asia	0.595	0.591
Jordan	Asia	0.429	0.429
Kenya	Africa	0.414	0.450
Kosovo	Europe	0.379	0.688
Kuwait	Asia	0.384	0.713
Lebanon	Asia	0.424	0.359
Libya	Africa	0.391	0.597
Lithuania	Europe	0.669	0.655
Malawi	Africa	0.535	0.327
Malaysia	Asia	0.400	0.587
Mexico	North America	0.494	0.701
Morocco	Africa	0.434	0.449
Mozambique	Africa	0.345	0.570
Nepal	Asia	0.438	0.539

Netherlands	Europe	0.613	0.725
New Zealand	Oceania	0.583	0.698
Nicaragua	North America	0.405	0.636
Nigeria	Africa	0.330	0.487
North Macedonia	Europe	0.580	0.540
Norway	Europe	0.633	0.725
Oman	Asia	0.424	0.685
Pakistan	Asia	0.389	0.455
Panama	North America	0.442	0.654
Paraguay	South America	0.386	0.621
Peru	South America	0.493	0.594
Philippines	Asia	0.536	0.618
Poland	Europe	0.600	0.668
Portugal	Europe	0.596	0.595
Qatar	Asia	0.418	0.637
Romania	Europe	0.568	0.649
Saudi Arabia	Asia	0.439	0.695
Senegal	Africa	0.453	0.509
Serbia	Europe	0.632	0.644
Singapore	Asia	0.544	0.665
South Africa	Africa	0.470	0.508
Spain	Europe	0.536	0.646
Sri Lanka	Asia	0.512	0.360
Sweden	Europe	0.606	0.716
Switzerland	Europe	0.675	0.697
Tanzania	Africa	0.416	0.404
Thailand	Asia	0.422	0.628
Trinidad and Tobago	North America	0.489	0.619
Tunisia	Africa	0.422	0.451
United Arab Emirates	Asia	0.461	0.673
United Kingdom	Europe	0.635	0.666
United States	North America	0.639	0.652
Uruguay	South America	0.517	0.666
Uzbekistan	Asia	0.459	0.639
Zambia	Africa	0.479	0.369

Conclusion and Future Work

Overall, we found .

A second paragraph about our findings.

The next steps in this analysis are...

The limitations of this analysis are as follows. (Do not simply list potential issues with sampling, but relate them to your analysis and how they affect your conclusions. An honest and complete acknowledgement of the limitations makes the analysis more trustworthy.)

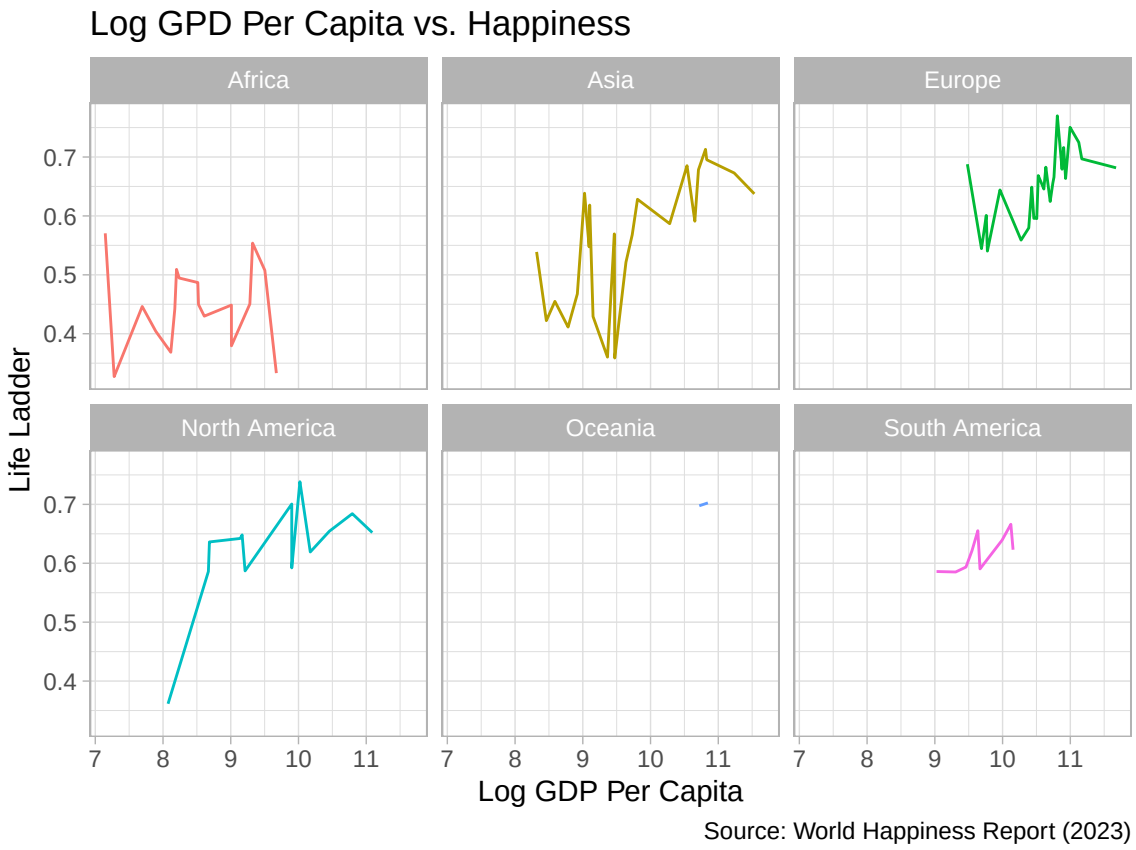

Figure 1: The correlation between how aware people are of climate change and how happy they are

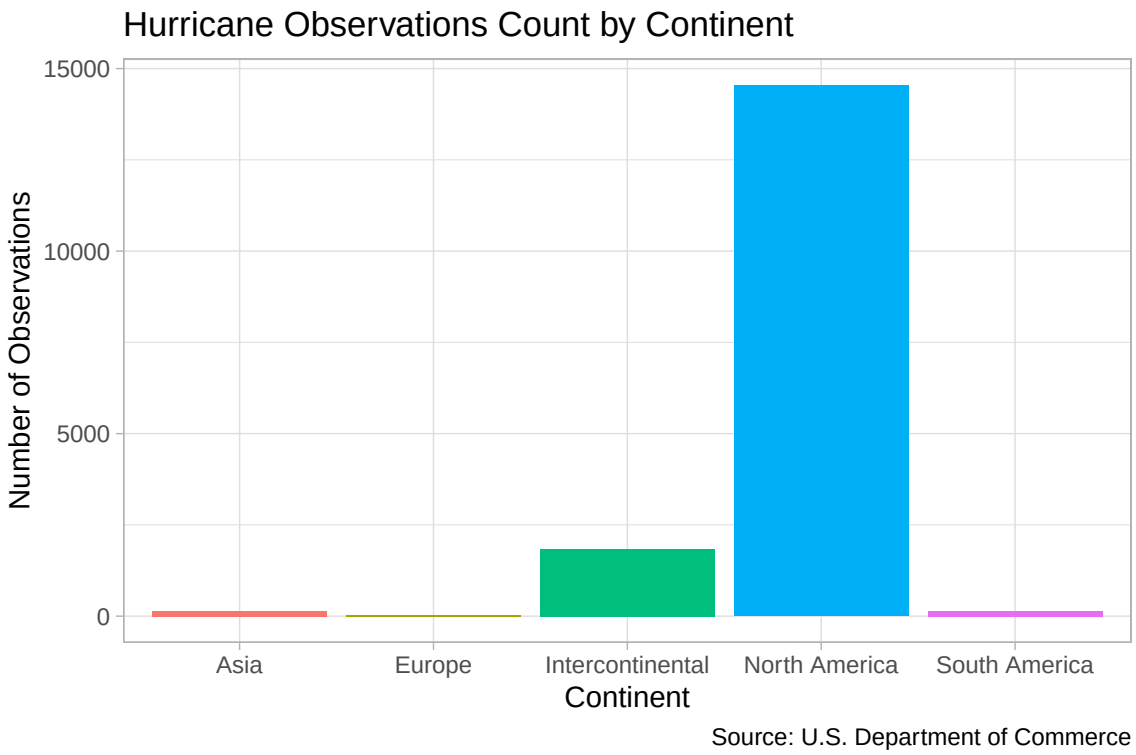

Figure 2: Number of Hurricane Observations by Continent

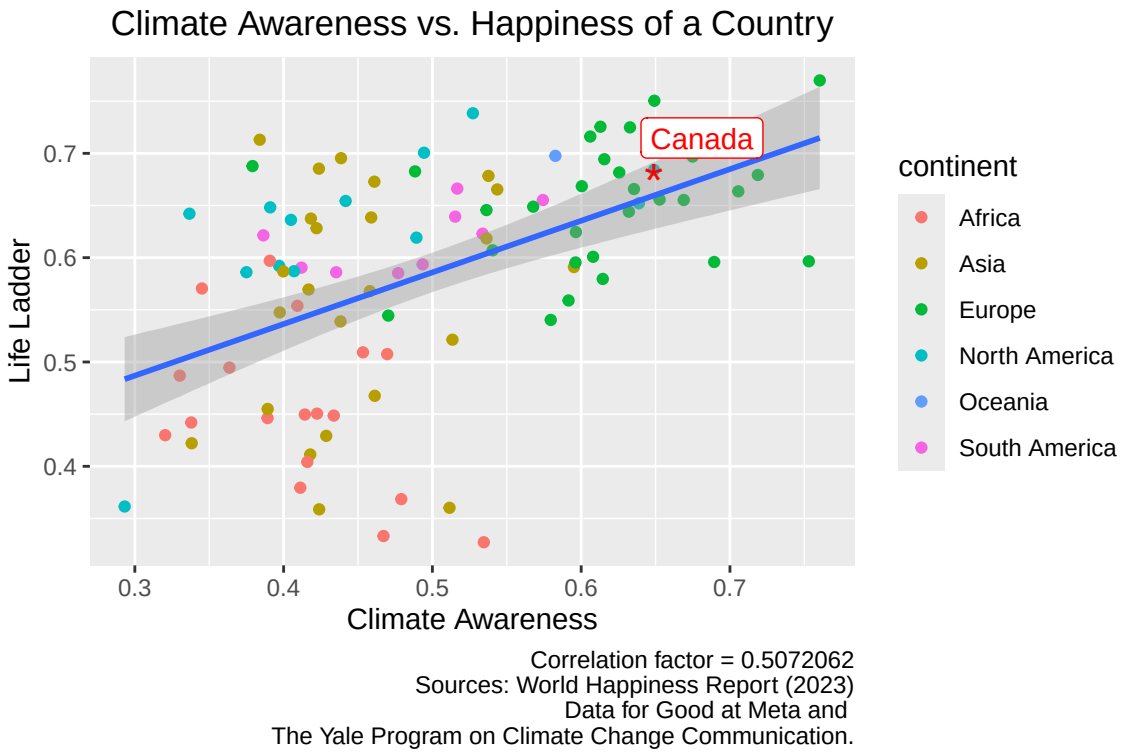

Figure 3: The correlation between how aware of climate change the people of a country are and how happy those people are

References

I am not strict about MLA or APA style or anything like that. For this report, I would much rather have your citations be easy to match to your insights.

The easiest way is to use Rmd's footnote syntax. This will put a number beside the word where the footnote appears, and the full text of the footnote at the bottom of the page (pdf) or end of the document (html). The syntax is:[1], where I suggest that you put in something like this[2] to make references for this assignment.

Alternatively, you could make a list of citations with their main arguments and why they're relevent to your insights, methods, etc.

The link above also references "bibtex" files. These are also extremely convenient, but have a steep learning curve and they make it difficult to tie them to an insight. If you use bibtext, then make sure that you provide a sentence to describe the source and it's relevance when you cite it - don't just add citations to the end of a sentence (this is common practice in academia, but I want to know that your citations are directly relevant for this assignmnet).

[1] See the source view to see this footnote

[2] The relevance to the insight is ... . From <>, published on <>, url: <> test