

Homework 1 - Climate Trends

ESM 237 Spring 2021

In this assignment, you will have the opportunity to discover trends in climate at any location you like. Think about what types of places might interest you: maybe somewhere you grew up, saw in the news, always wanted to go...

1. Describe your chosen location.
What is it like? Urban/rural, polar/tropical, forest/desert, etc.
What climate impacts might be important there?
2. Download historical climate data for your site (note: make sure you download both precipitation and temperature!)

You may use any data source you like, either using sources we discussed in class, your favorite data repository, or somewhere else.

Make sure you cite your data source in your final report.

3. Assess whether climate at your location has been changing with trend analysis
 - using 2 different metrics for averages
 - using 2 different metrics for extremes

Refer to your answer for part 1 when choosing your metrics; why are these metrics likely to be relevant, given the climate change impacts you expect at this location?

Also be creative in your analysis: use some good old T, rank-sum, or other statistical tests, and make sure to plot your results!

You may work either individually or in groups of 2-3; then summarize the results in a two-page report including an introduction, figures/tables, and discussion.