Preregistration

Reproducibility mini project: Alberta trees

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Data collection

Yes, this mini reproducibility project was built using rescued data by Amelia Hesketh, Jenna Loesberg, Ellen Bledsoe, Justine Karst,and Ellen Macdonald in 2021 from an Alberta legacy dataset spanning four decades (1980-2015).

Hypothesis

A very simple model is explored in this reproducibility project: Does species richness varies along the soil temperature?

Dependent variable

To answer the main question following a reproducible workflow, I use two variables. Vascular species richness and soil temperature en Celsius.

Conditions

These data cames from a long-term survay analyzing changes in seasonal dynamics and succession within boreal forest communities. It serves as

a baseline for comparison with future forest conditions in unmanaged, managed, and reclaimed forests.

Analyses

I use reproducibility workflow in ecology and evolution. I used open access data, which is available in Boreales (see references below). This data was rescued by Hesketh et al., 2021. This mini project was created with the open-source software R, OSF and GitHub. Linear regression and a comparison with non-linear regression were used as part of the analyses.

Outliers and exclusions

The data used in this mini project does not considere discarding outliers.

Sample size

I use two different datasets: 1) Hondo Vascular Cover (1980-2015) and 2) Hondo Soil Temperature (1980-2010). Each dataset presents 11289 observations.

Other

All code used in this project is available on GitHub https://github.com/CIEE-Living-Data-Project/Rolando_Trejo_Reproducibility_LDP_2022.

Study type

- Class project or assignment: Productibity and Reproducibility in Ecology and Evolution.

References

Hesketh, A., Loesberg, J., Bledsoe, E., Karst, J., & Macdonald, E. (2021). Seasonal and annual dynamics of western Canadian boreal forest plant communities: A legacy dataset spanning four decades [Data set]. Scholars Portal Dataverse. https://doi.org/10.5683/SP3/PZCAVE
