



# Module Phenology - Session 2

Geoprocessing III - 2025

Spatio-temporal applications in ecology using R

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2025-05-22

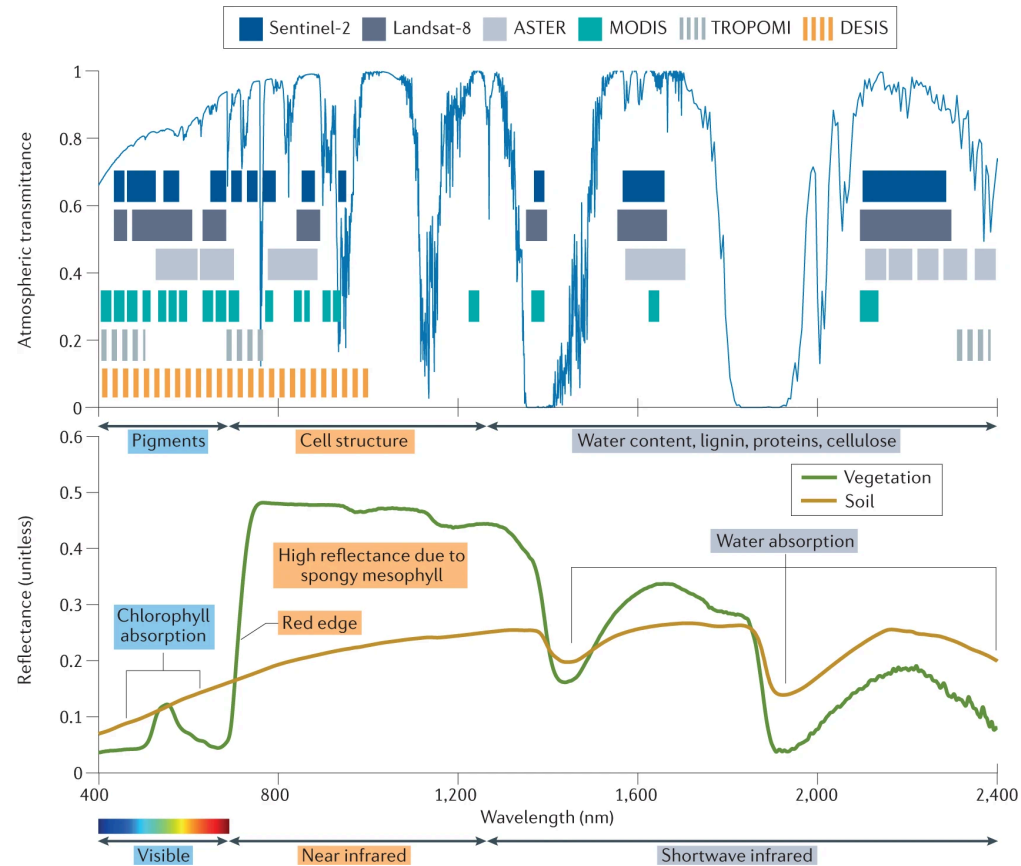
# Recap

- questions?
- issues?

# Recap

- each time you render a \*.Rmd, all cells are run
- `install.packages("...")`: do this only once, not in \*.Rmd
- `library(...)`: do this in each \*.Rmd or \*.R you need that package
- Use the Tab button to complete function-, column-, or path-names
- Use `?<fct>` or `??<fct>`, e.g `??mutate` to learn about what a function does and how to use it.  
(What are the names of the arguments?)

# Multi-spectral data

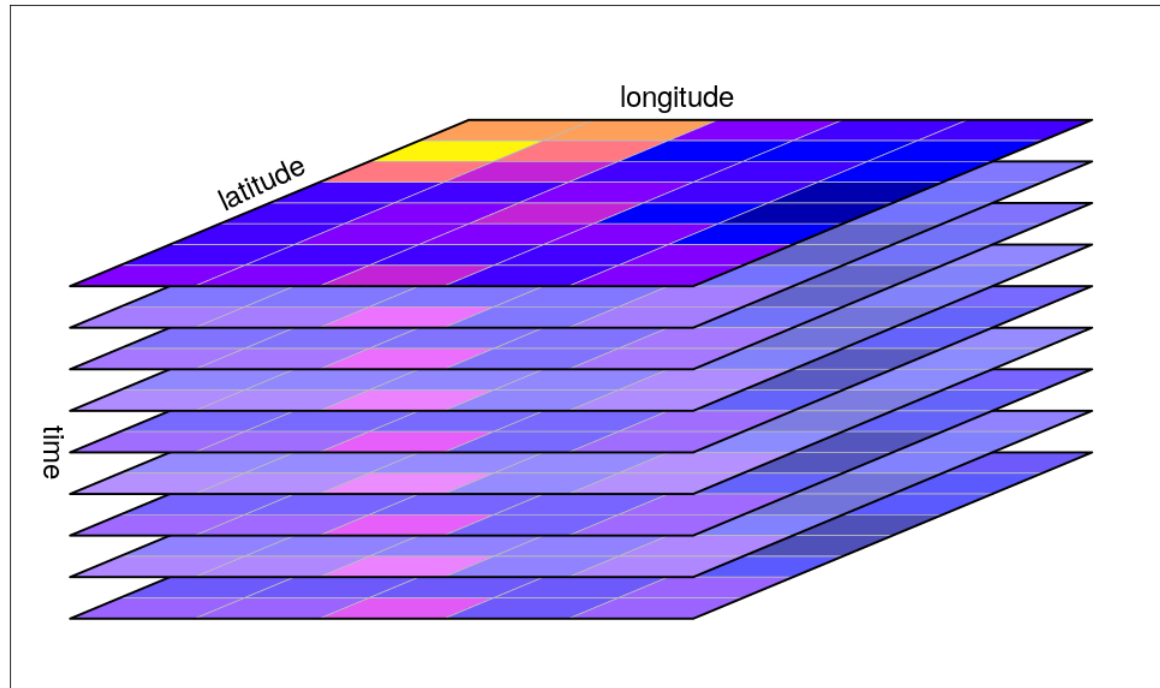


Zeng et al. 2022

# Vegetation indices

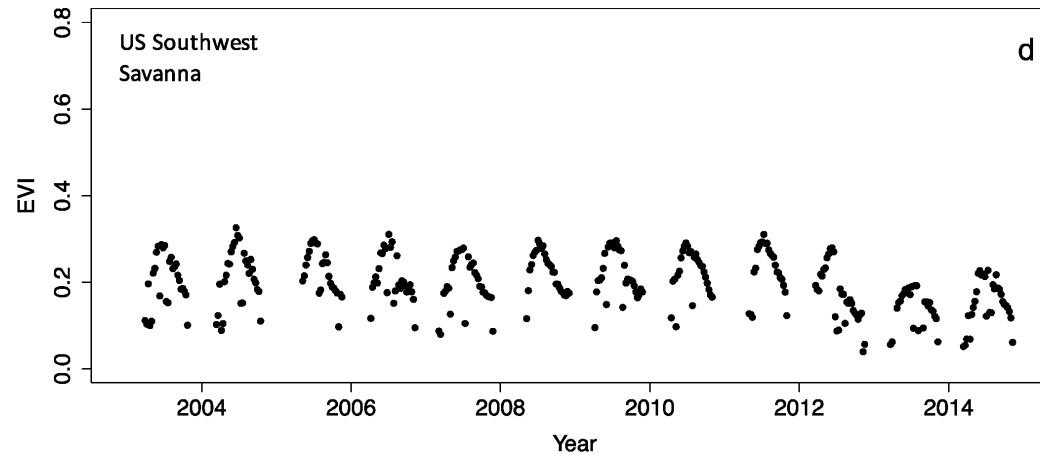
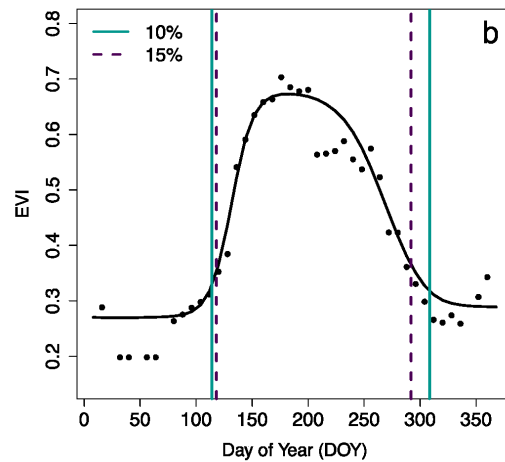
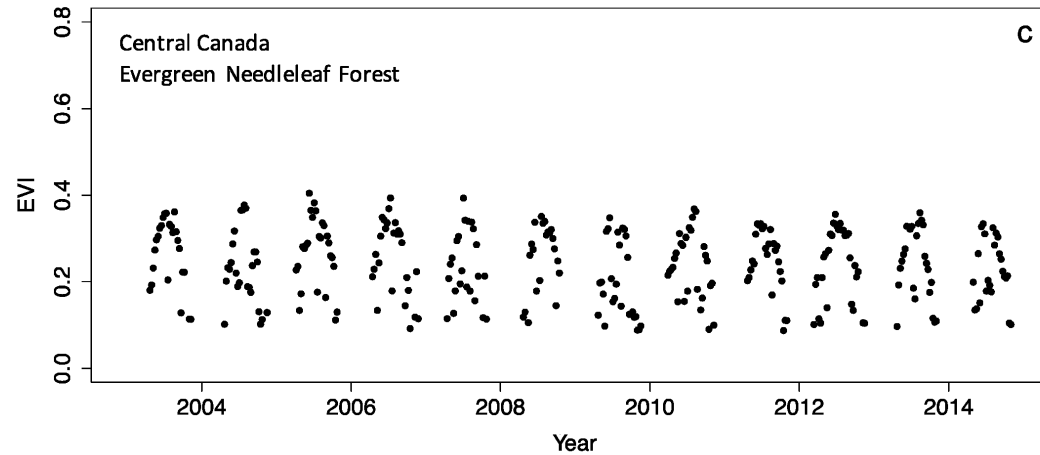
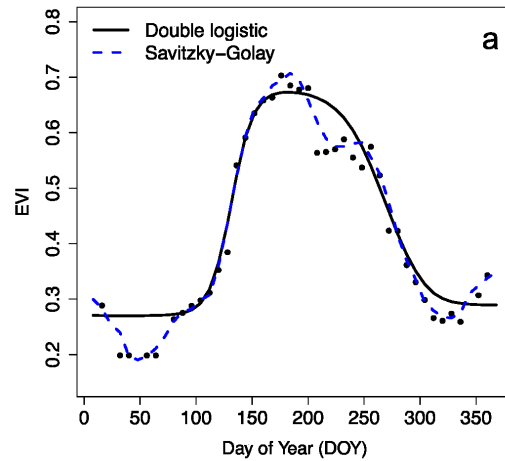
- NDVI (normalized difference vegetation index)
- EVI (enhanced vegetation index)
- LAI (leaf area index)

# Multi-band / temporal data

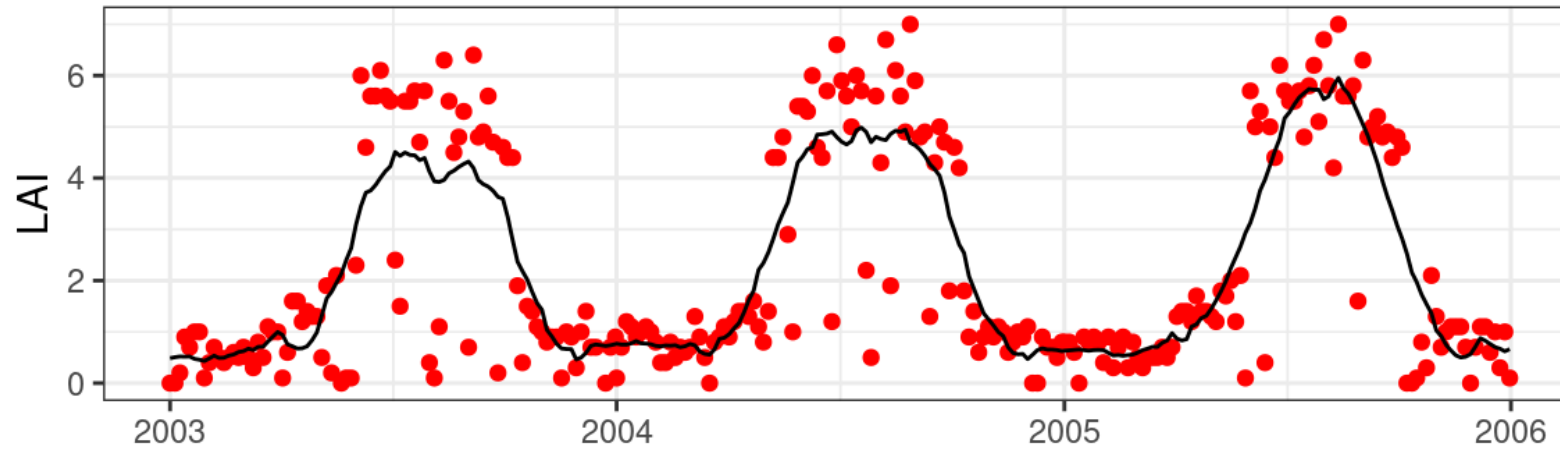


by Edzer Pebesma

# Multi-band / temporal data



# Multi-band / temporal data





# Finalizing

- Thank you for your participation!
- Hand-in of zipped project folder through ILIAS by June 05th
  - Exercises 7.1.1 and 7.1.2. (7.1.3 is not mandatory)
  - Contain (*.Rmd and .html*) in subfolder **vignette/**
  - Contain data in subfolder **data/**
- Looking for a Master thesis?  
<https://geco-group.org/joinus/>