Handling spatial data in R

An introduction course

Gothenburg Global Biodiversity Centre - GGBC

Swedish LifeWatch

workshop material

Material available at

github.com/tobiashofmann88/workshops

--> spatial_r_workshop

--> click on Clone or Download button

tutorials

- tutorials on GitHub page

- click on link in README file

- start with tutorial_1

additional data

- additional data on google drive (link in README) or USB stick (circulating)

- required for section 3 of empirical data tutorial

- total storage requirement (GitHub data + additional data): ~ **1.5GB**

Using R studio

- Demo

vector vs. raster data

vector data

- consists of sets of coordinate pairs (x, y)
- points, lines and polygons
- **points**: coordinate pair and associated variables, multipoint structures
- **lines**: ordered sets of coordinates
- **polygons**: closed polyline geometry (last coordinate pair coincides with the first pair)

raster data

- spatially continuous phenomena (e.g. elevation)
- divides the world into a grid of equally sized rectangles (cell or pixel)
- each cell has one or more values associated

plotting spatial data

- a *map* is special type of plot (like a scatter plot, barplot, etc.)

- convention: order of coordinates is longitude, latitude