

Introduction to Geographic information systems (GIS)

I.845: The terrestrial carbon cycle and
ecosystem ecology

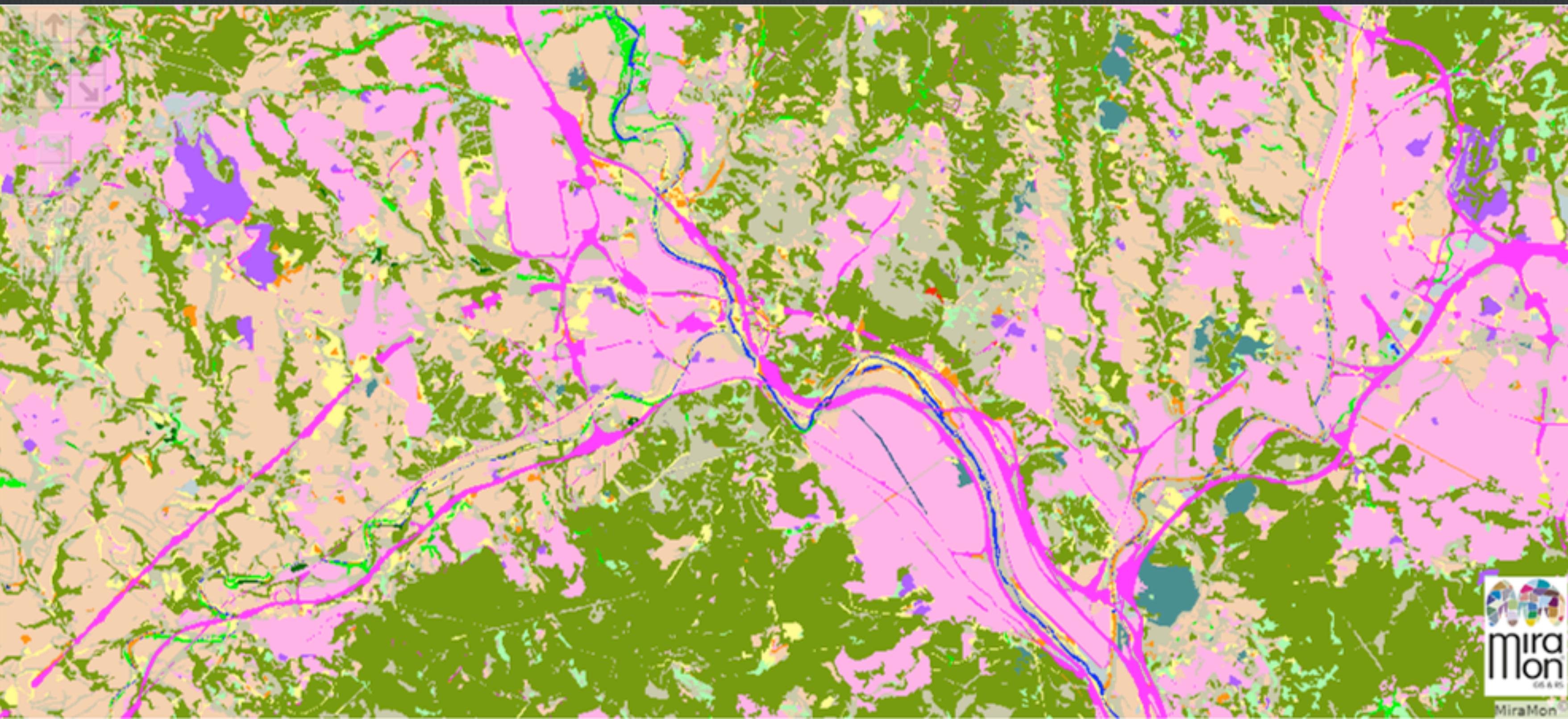


Civil and
Environmental
Engineering

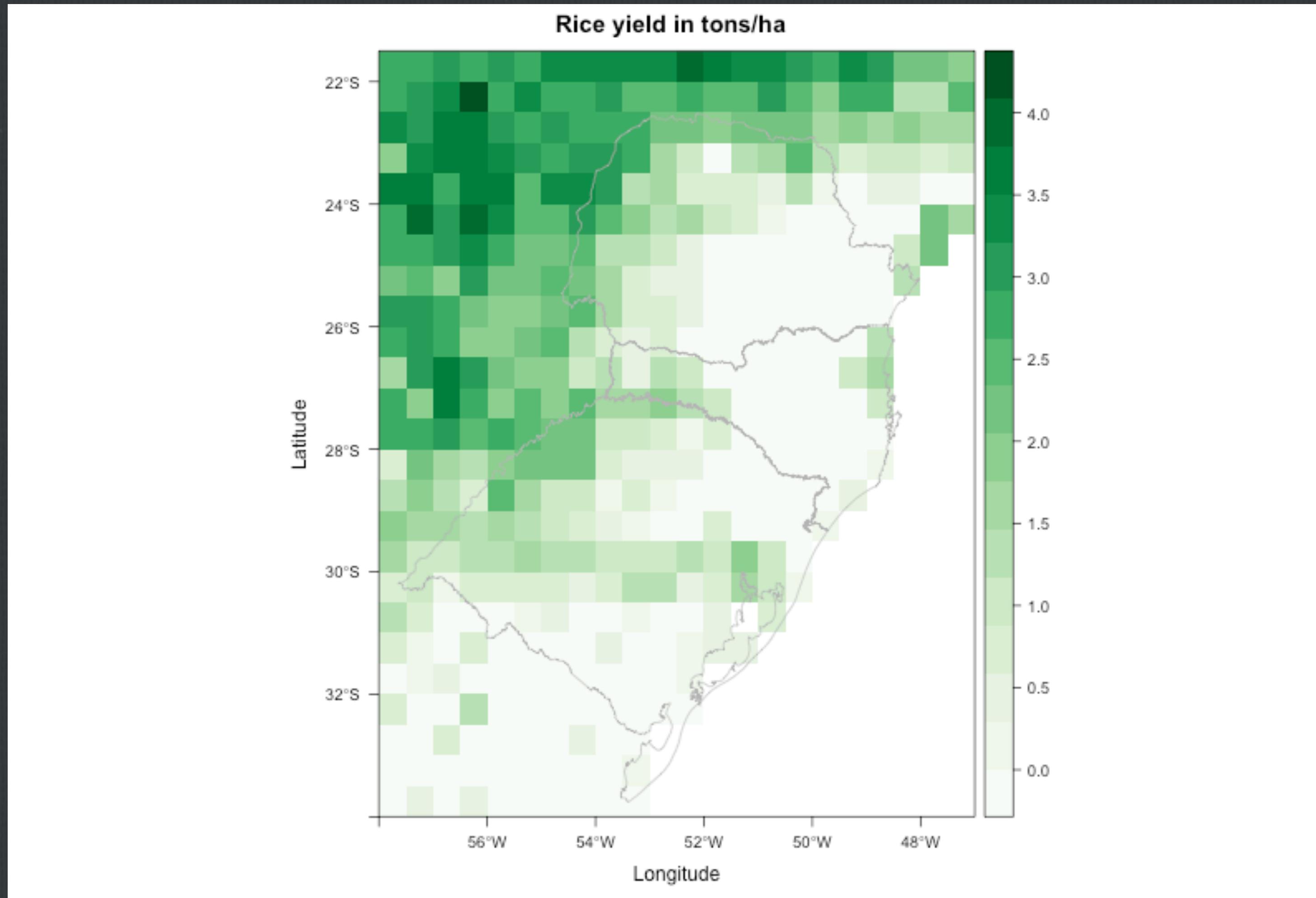
What are you going to learn?

- Be familiarized with the concept of:
 - Vectorial vs Raster map
 - Projection
 - Resolution
 - Satellite maps vs upscaled maps
- Be able to obtain map information using R (change resolution, projection, and map type)

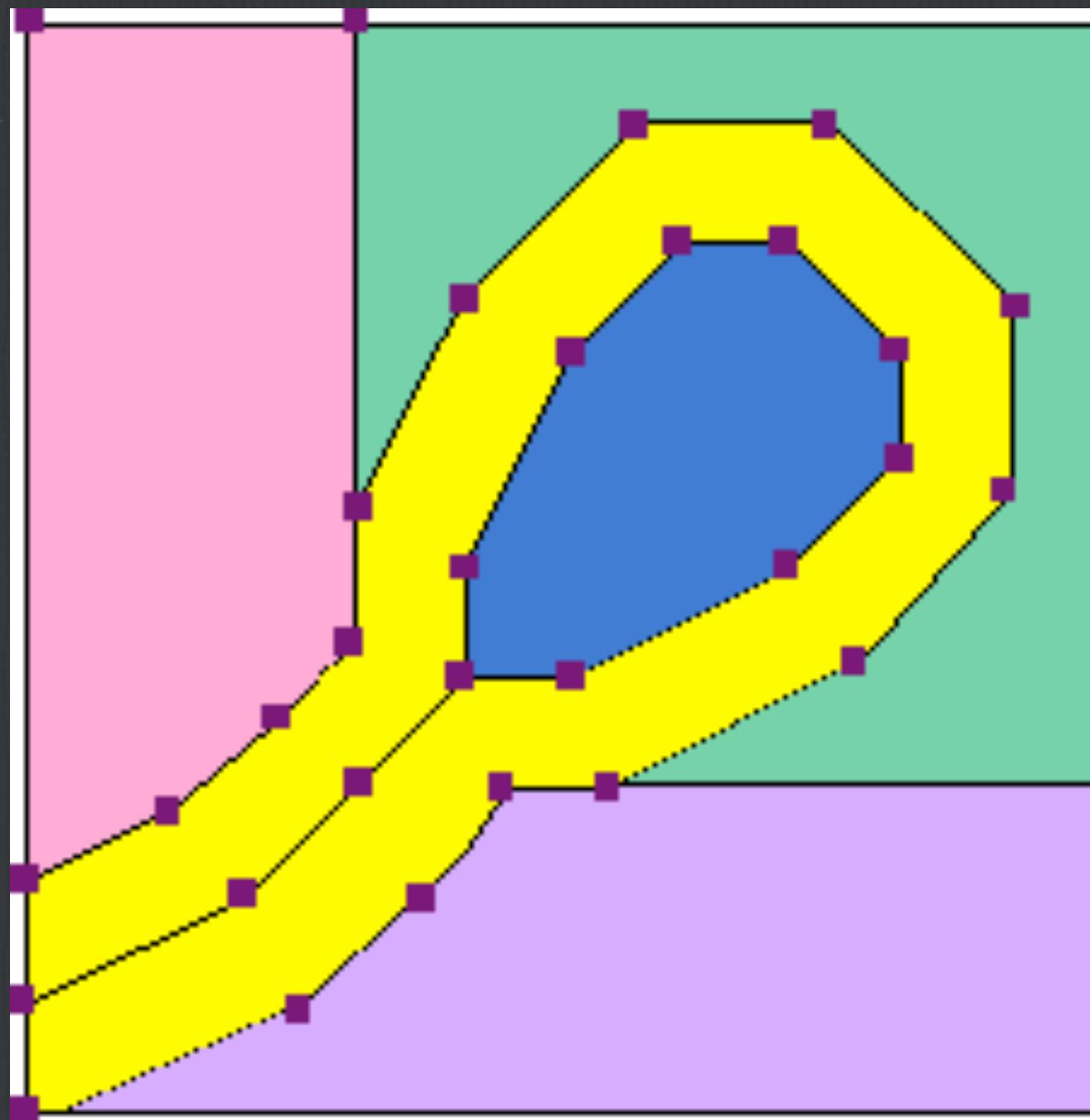
Map types: vectorial



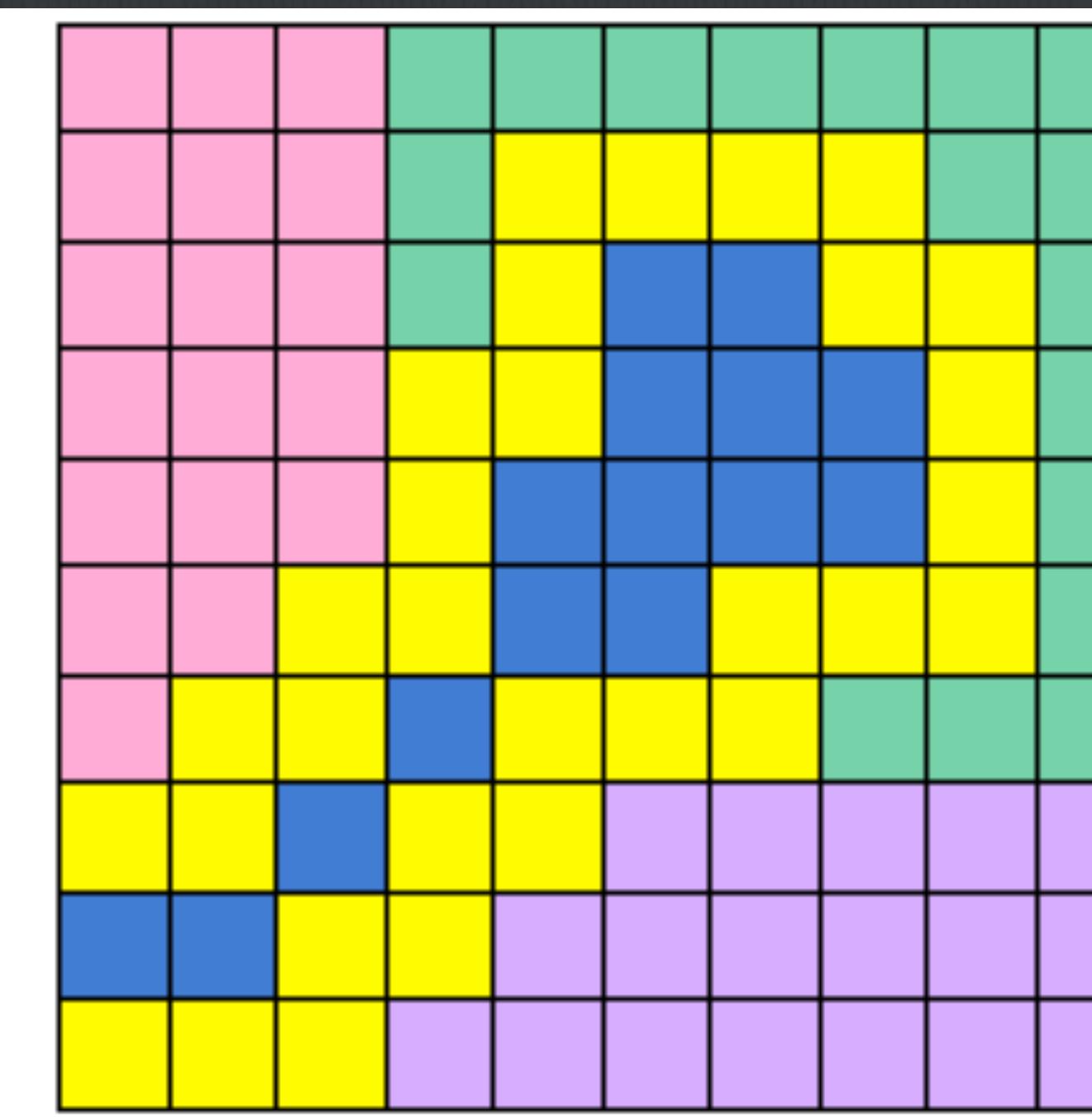
Map types: raster



Map types: comparison

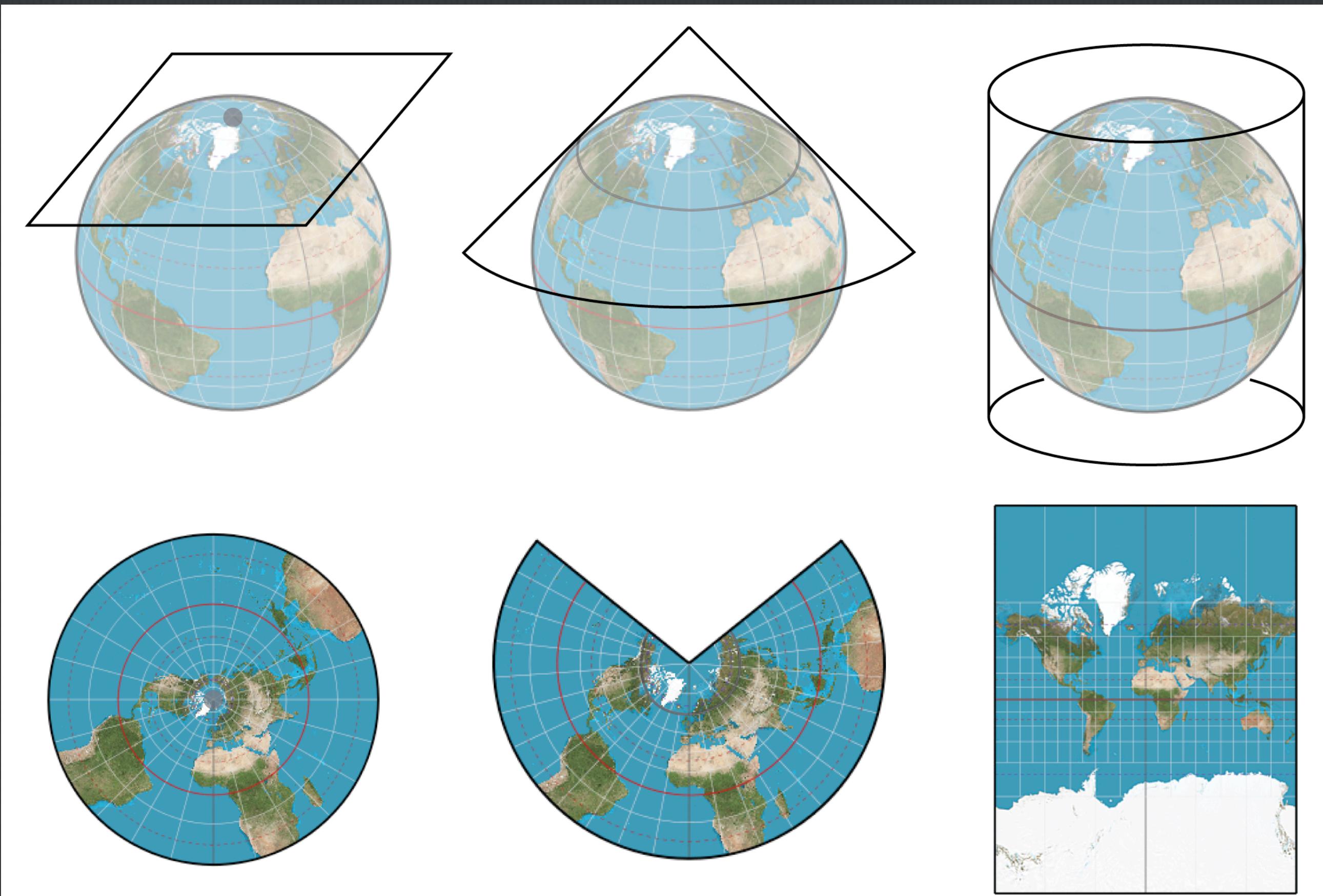


Vector

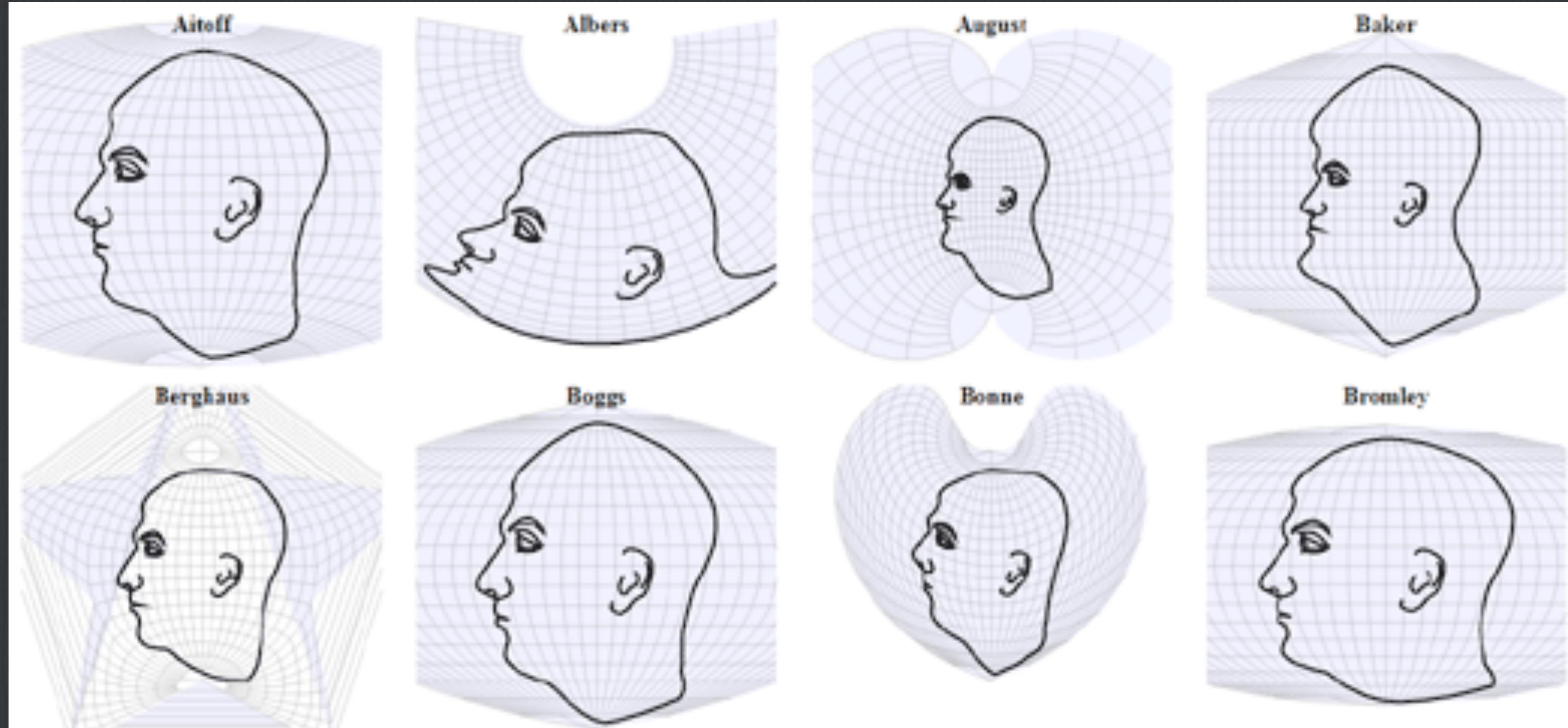


Raster

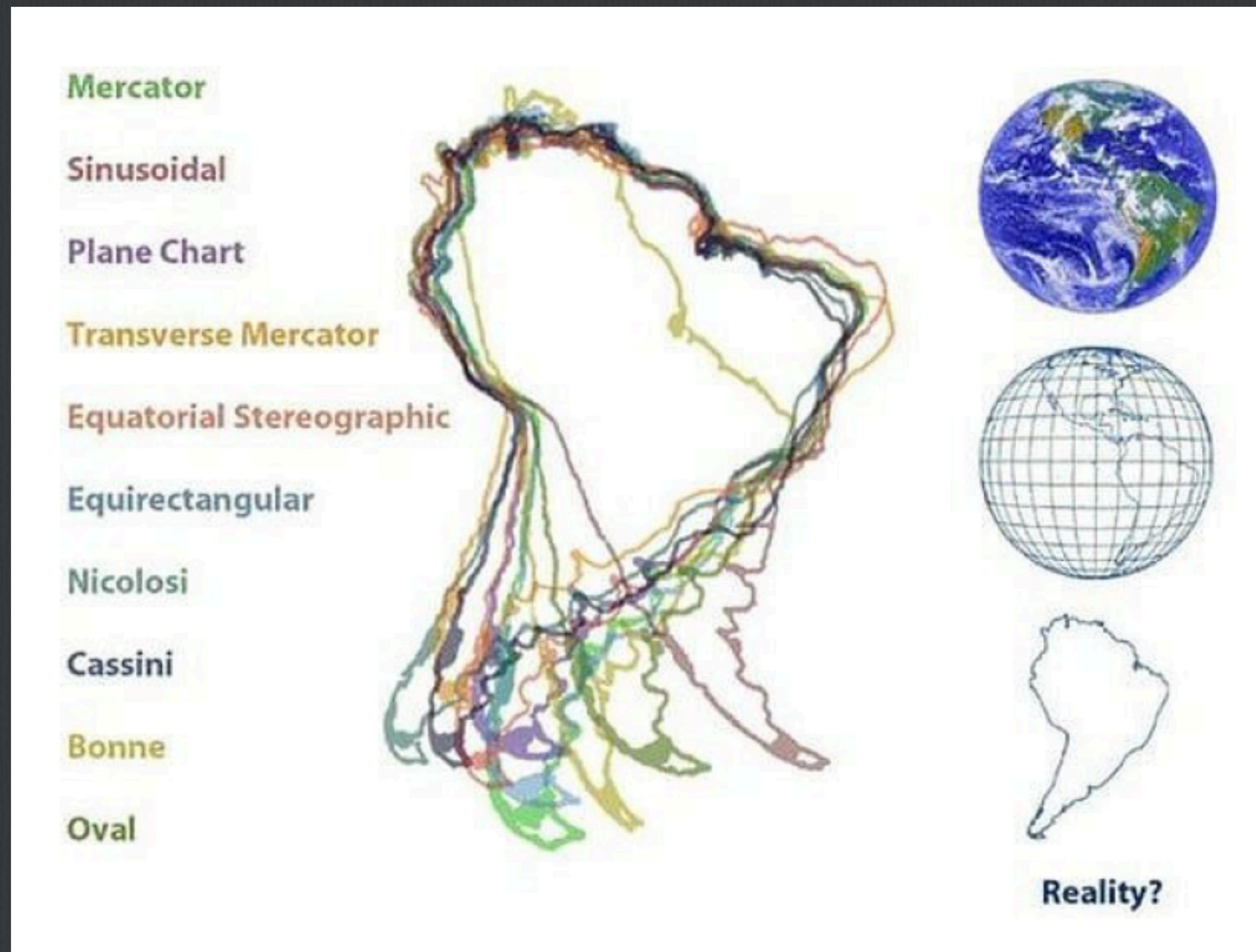
Projection



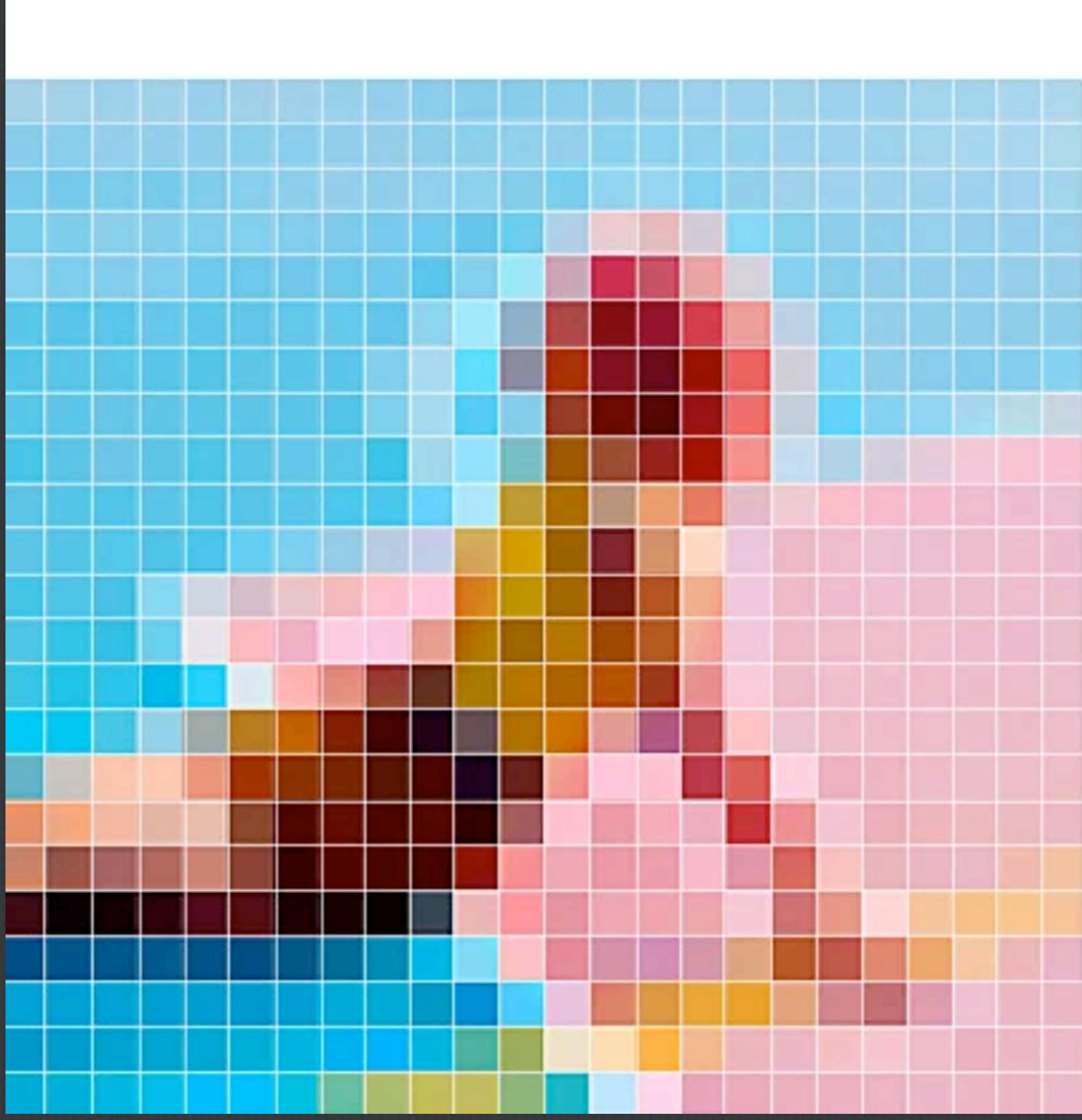
Projection



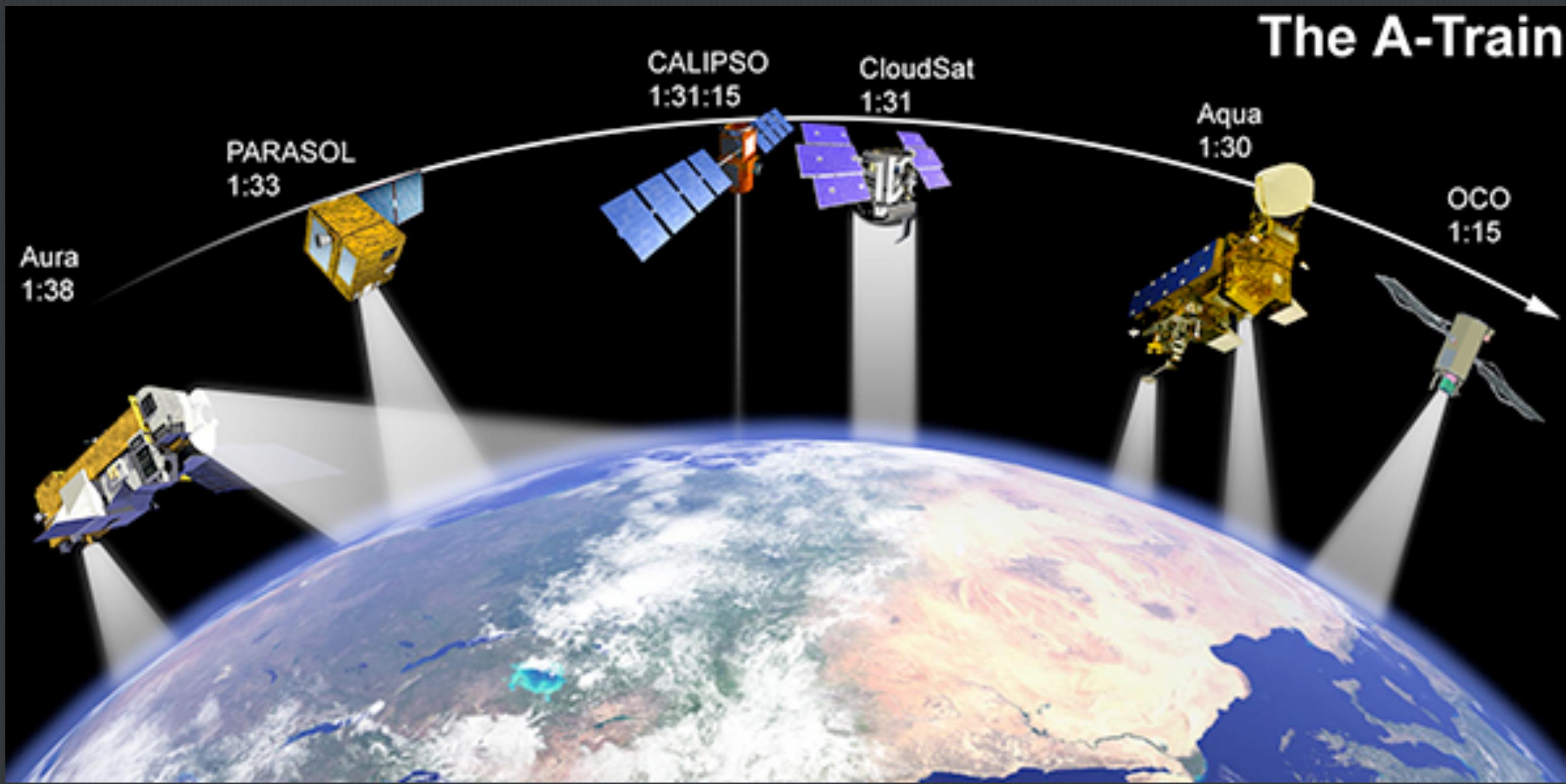
Projection



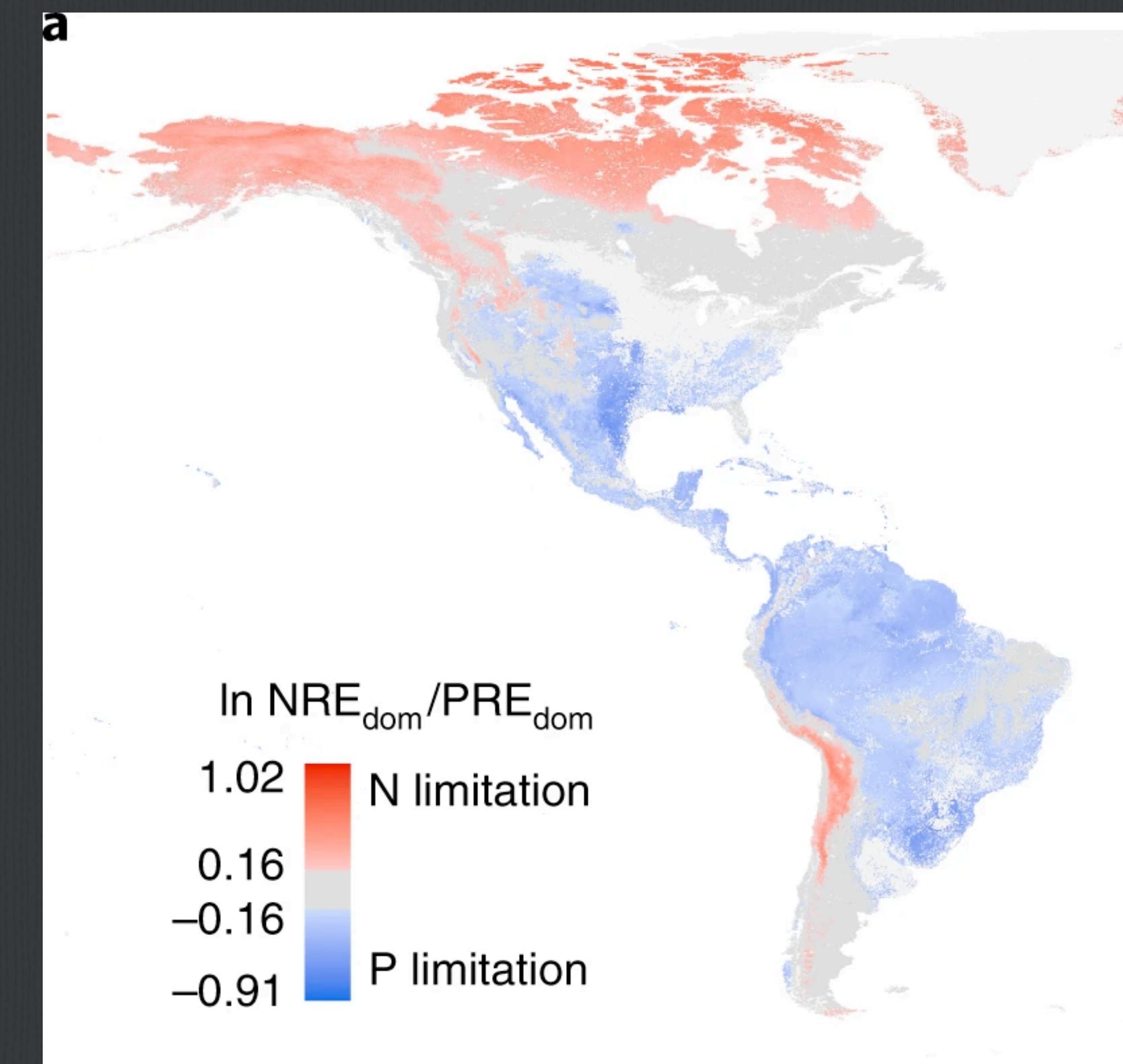
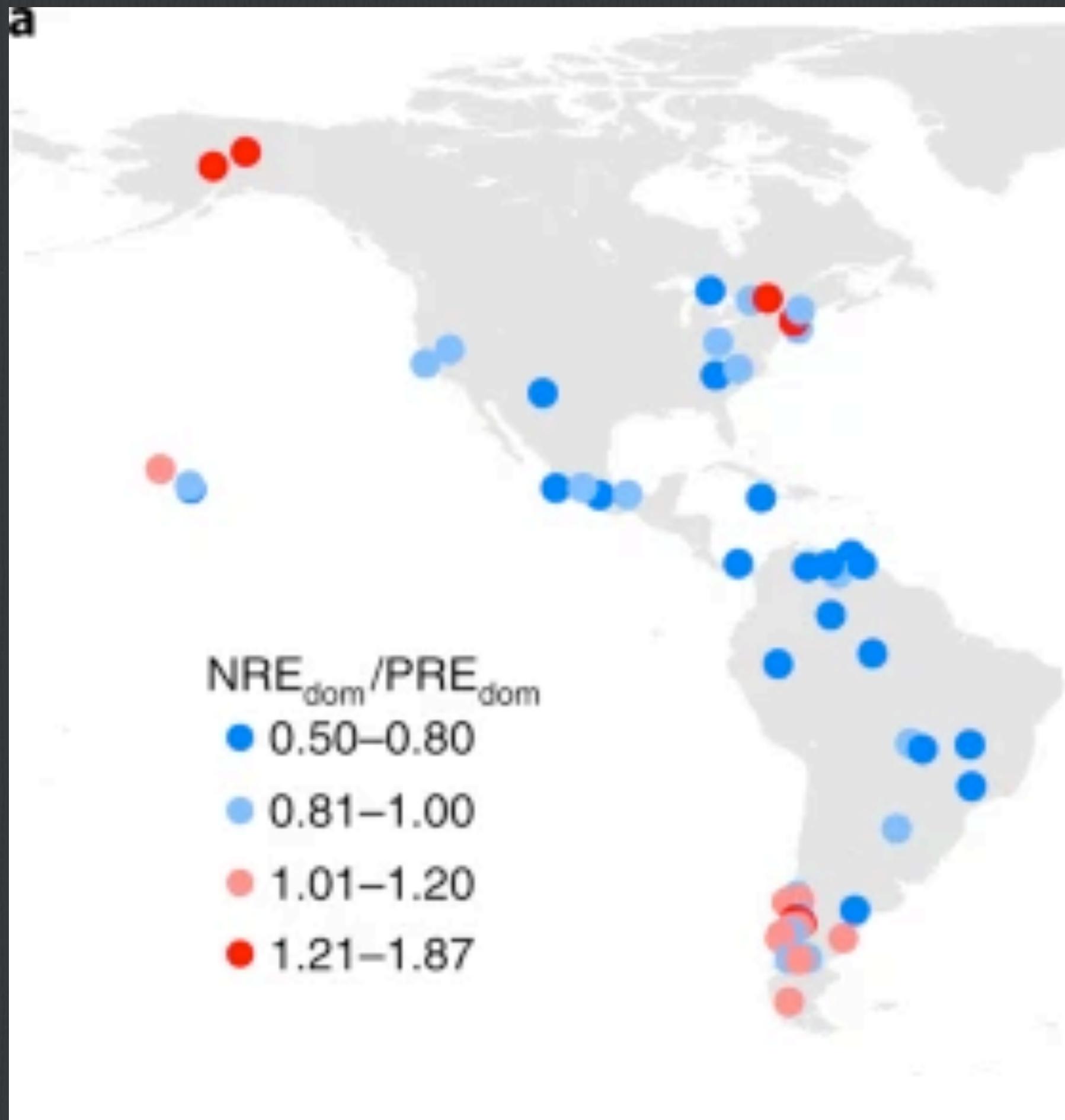
Resolution



Satellites



Upscaling



Available maps

World Clim

<https://www.worldclim.org/>

Soil Grids

<https://www.isric.org/explore/soilgrids>