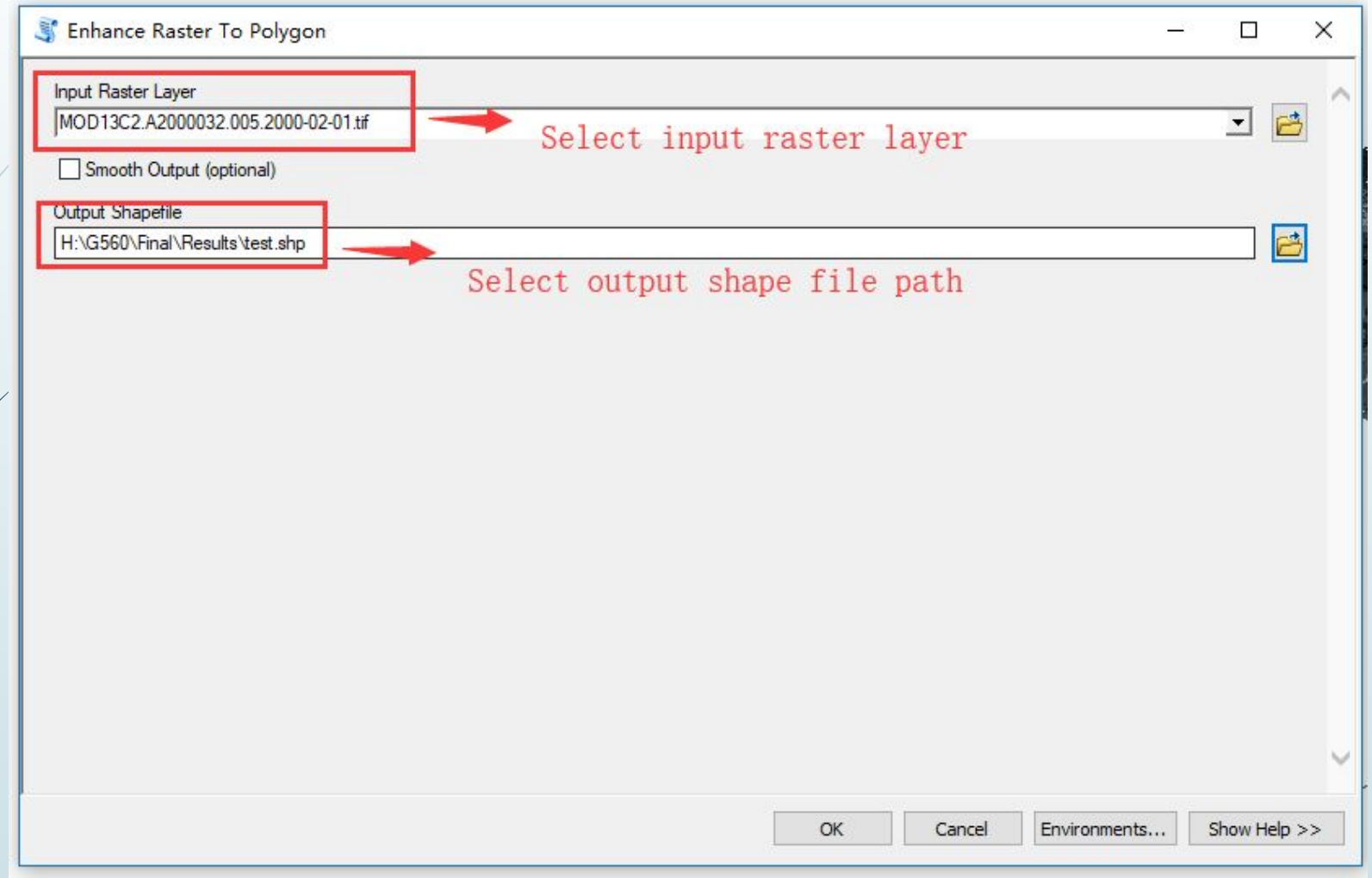
Dealing with Raster Datasets

Programming in GIS (GEOG-503A-01)

Instructor: Qiusheng Wu

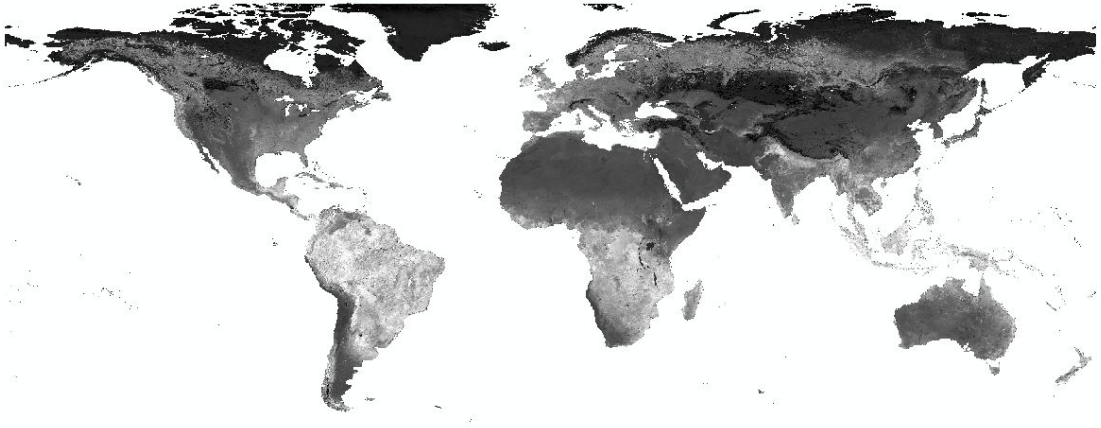
Yalin Yang

1. Enhance Raster to Polygon

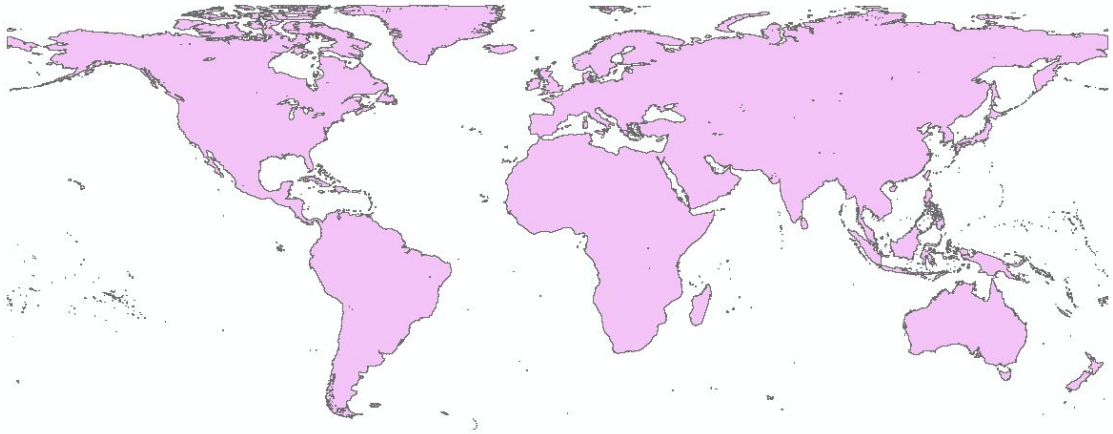


1. Enhance Raster to Polygon

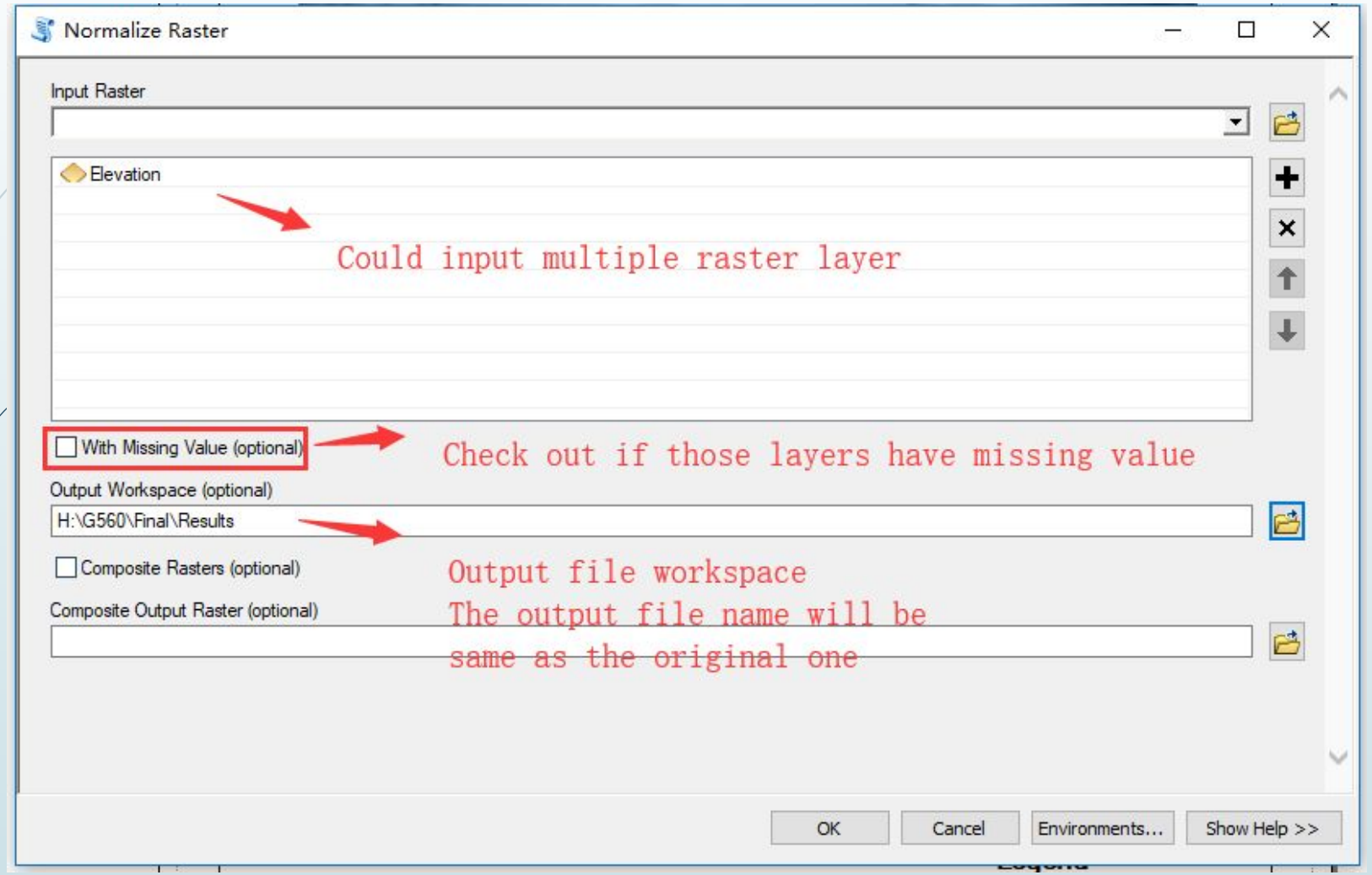
Input



Output



2. Normalize Raster



2. Normalize Raster

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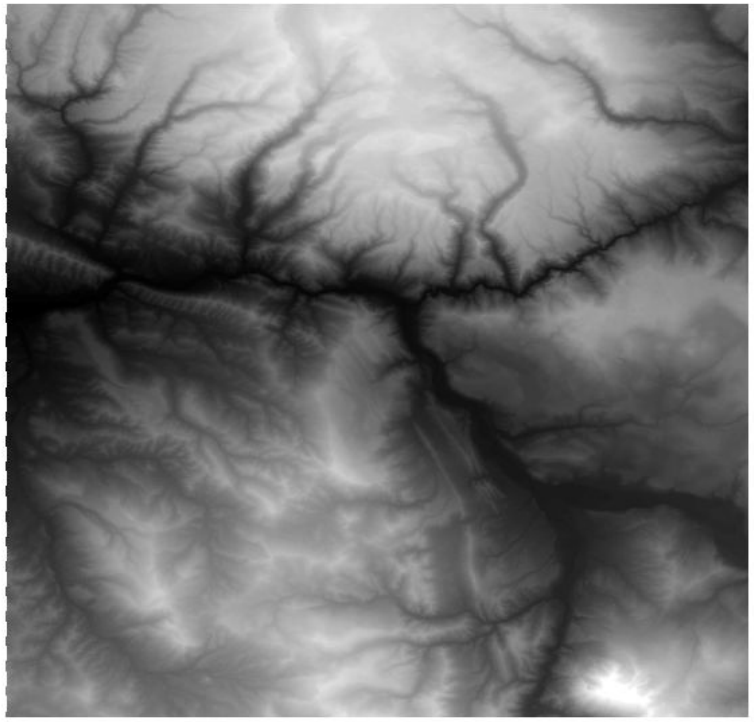
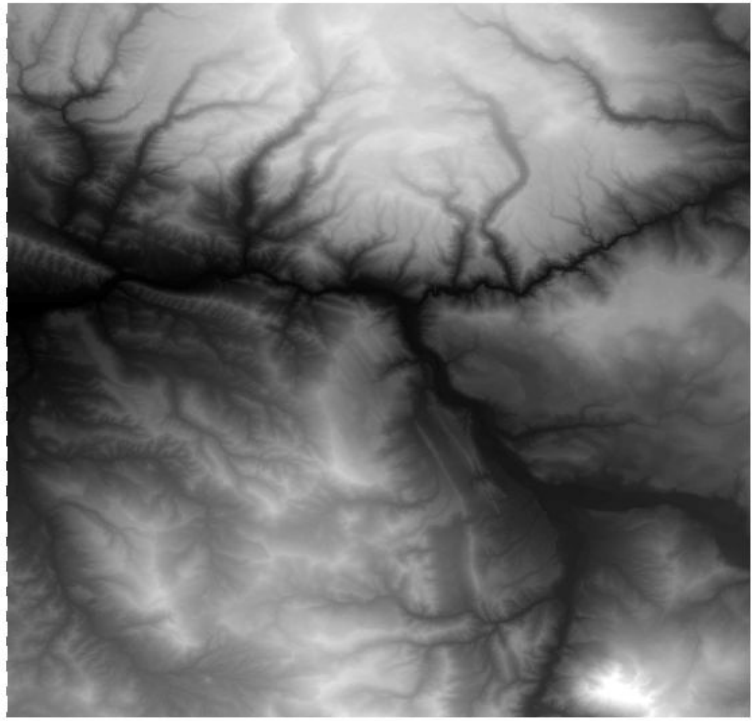


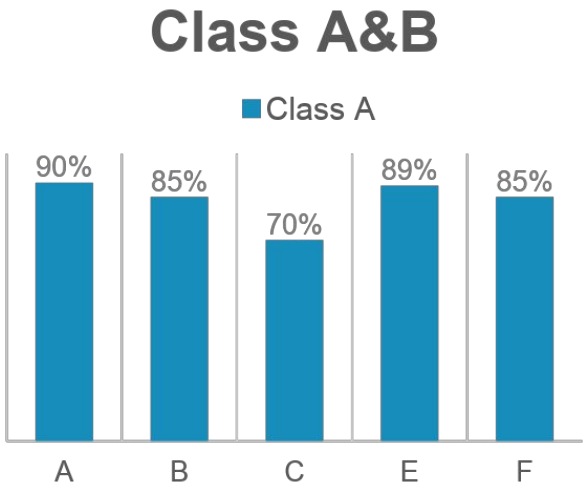
Output



2. Normalize Raster

Study Group

Normalize



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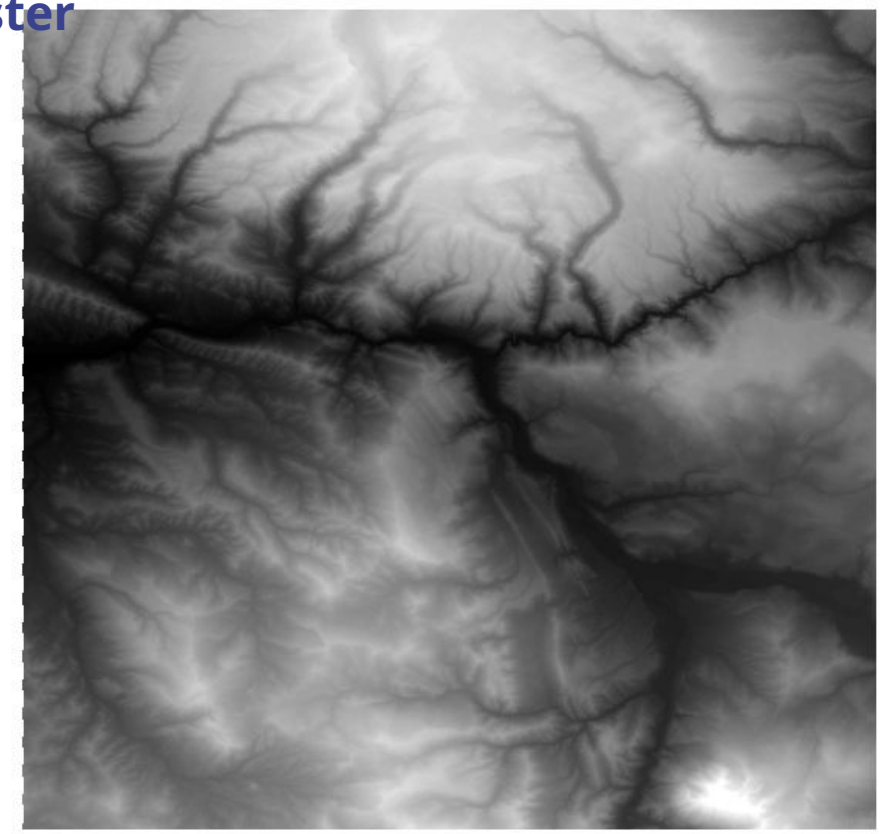
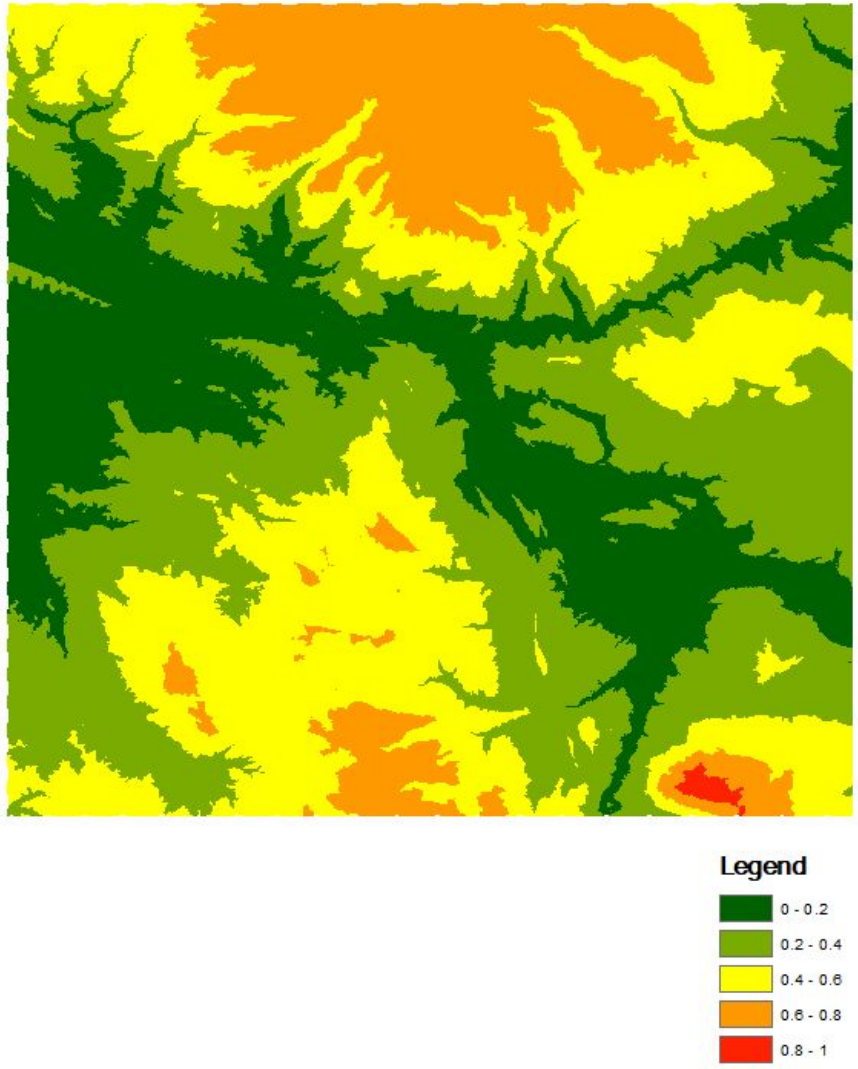




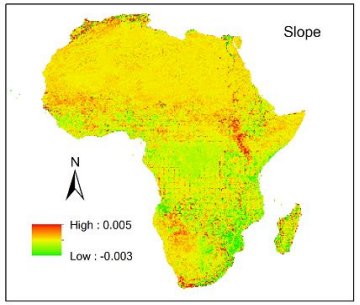
3. Raster Trend

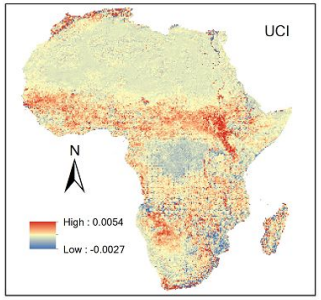
Input

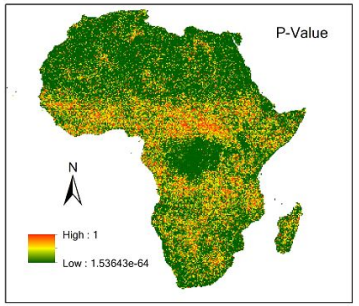
Long time range raster stack

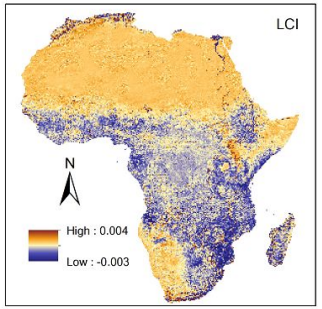
Output

Statistic data about the trend



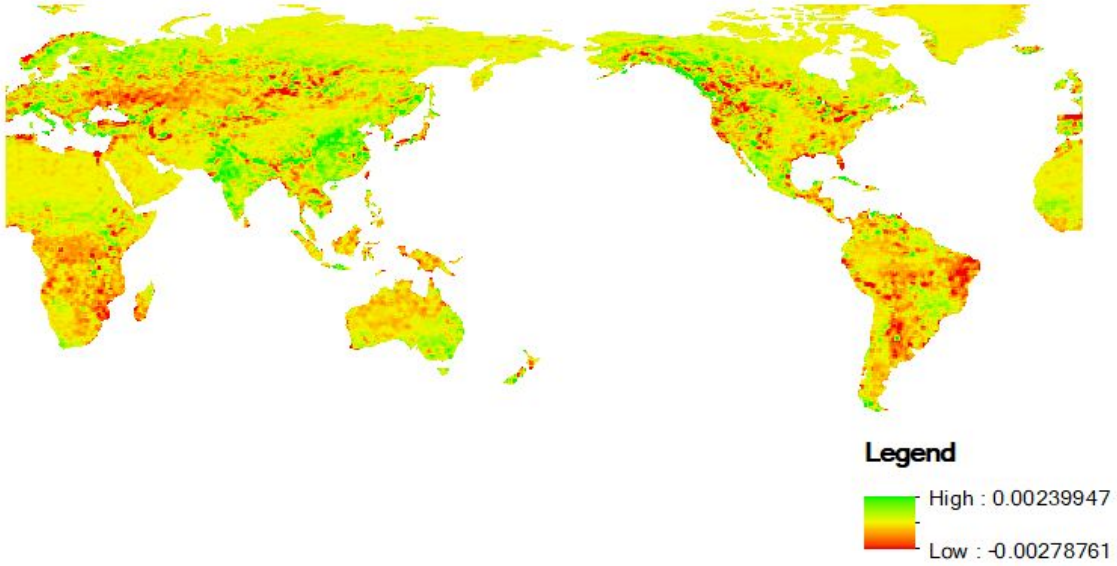




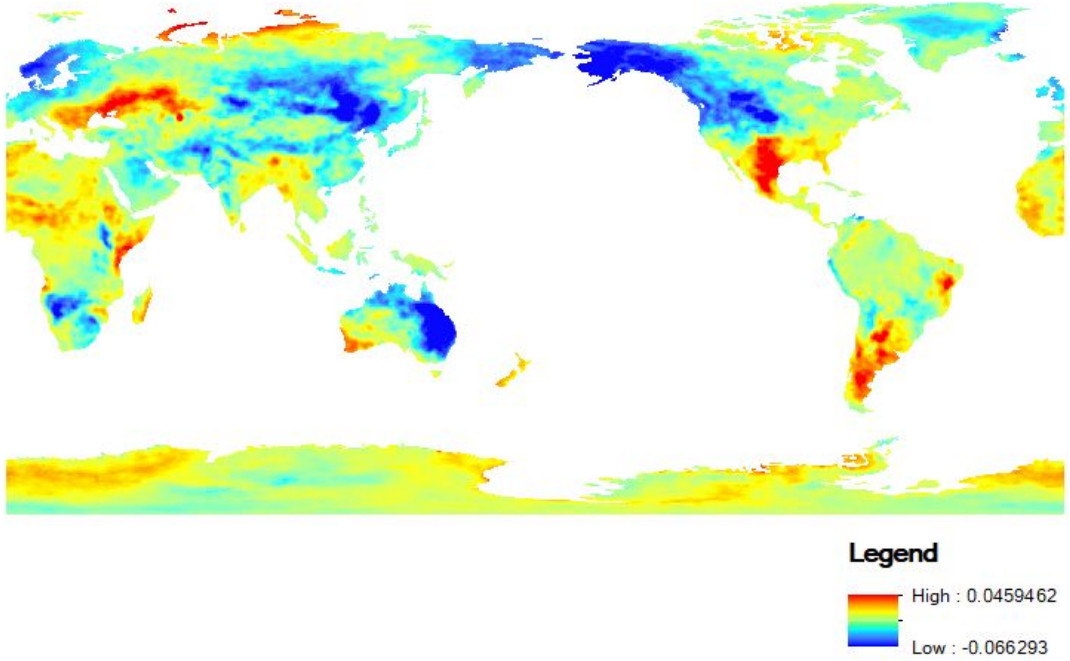


3. Raster Trend (Application)

2002 – 2018 Global NDVI Change Trend

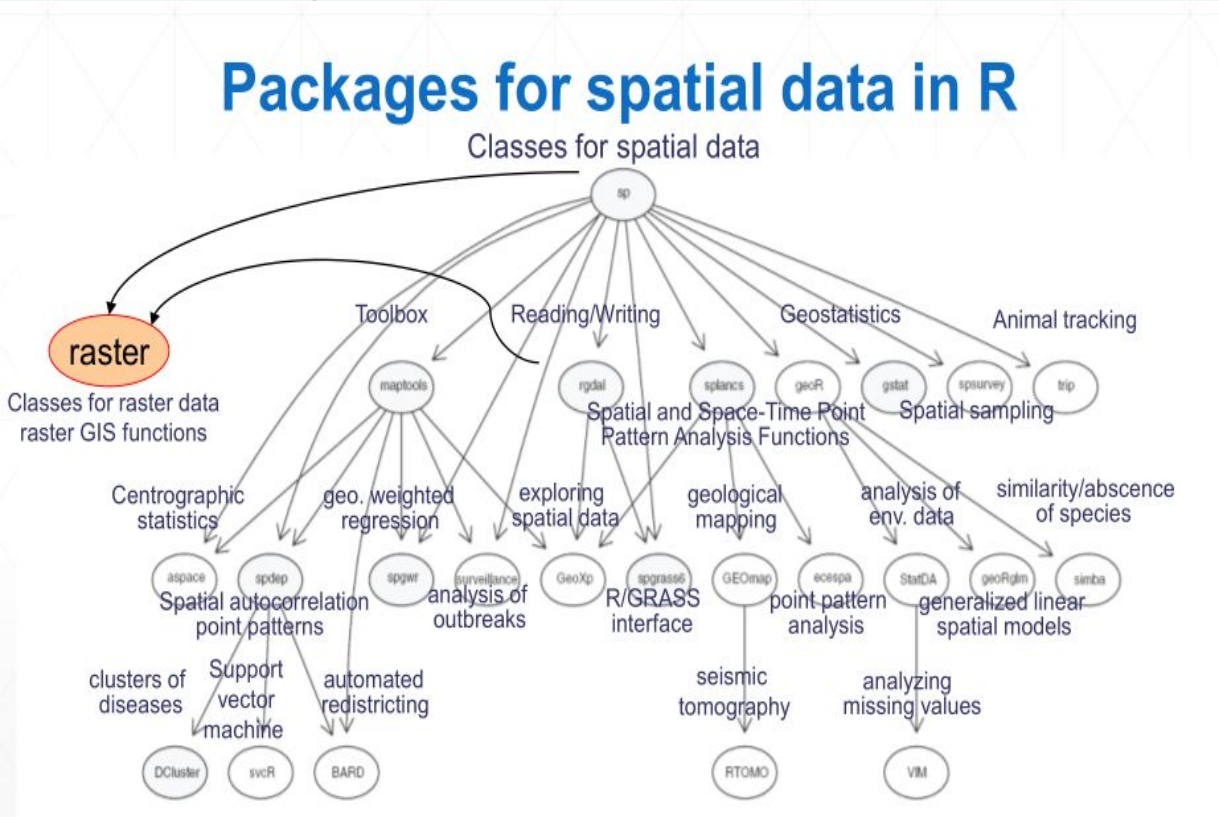


2002 – 2018 Global Land temperature Change Trend



Difference between R and Python

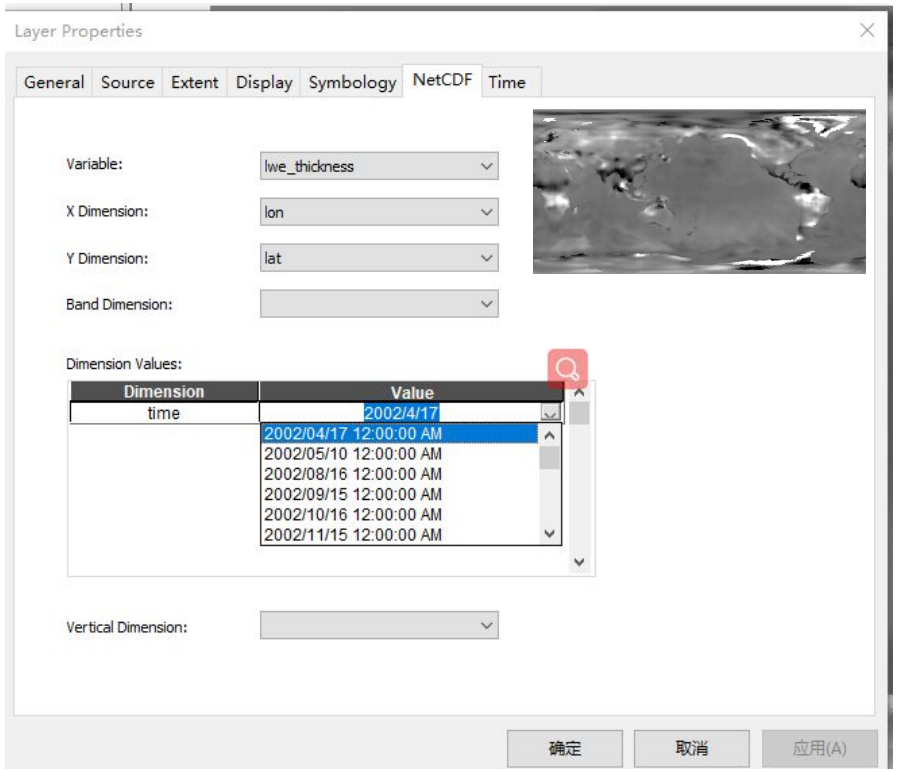
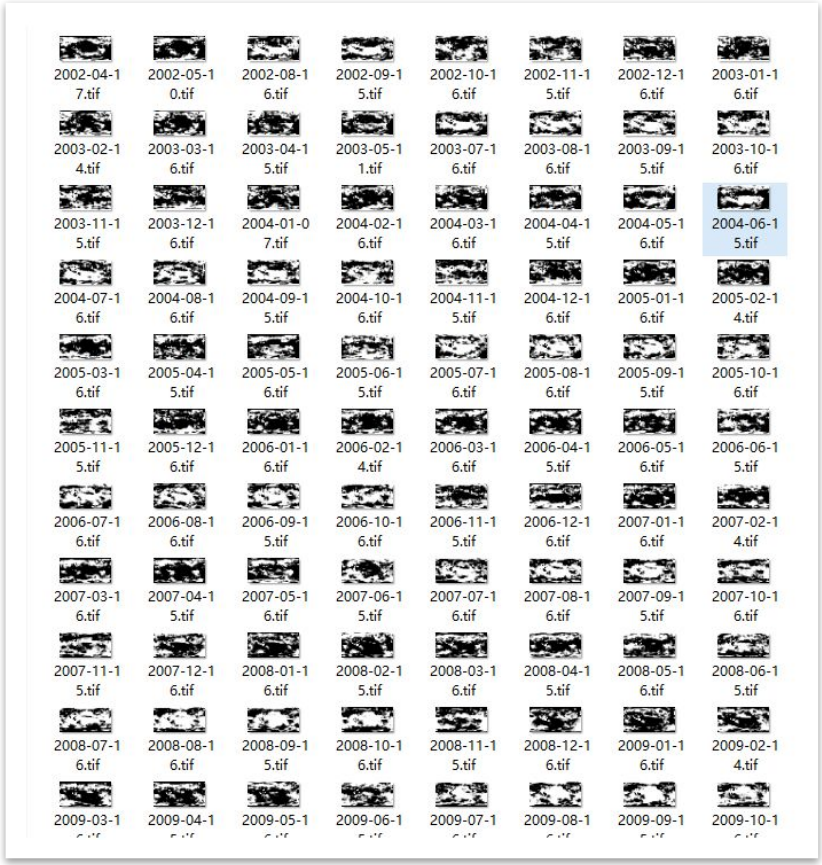
Multiple functions in Arcpy always require the output path, Sometimes we just need the output to stay in the memory.



Parameter	R	Python
Objective	Data analysis and statistics	Deployment and production
Primary Users	Scholar and R&D	Programmers and developers
Flexibility	Easy to use available library	Easy to construct new models from scratch. I.e., matrix computation and optimization
Learning curve	Difficult at the beginning	Linear and smooth

4. NetCDF to Raster

Input



Output