

# What is ArcGIS?

## Geographic Information System (GIS)

*"lets us visualize, question, analyze, and interpret data to understand relationships, patterns, and trends."*

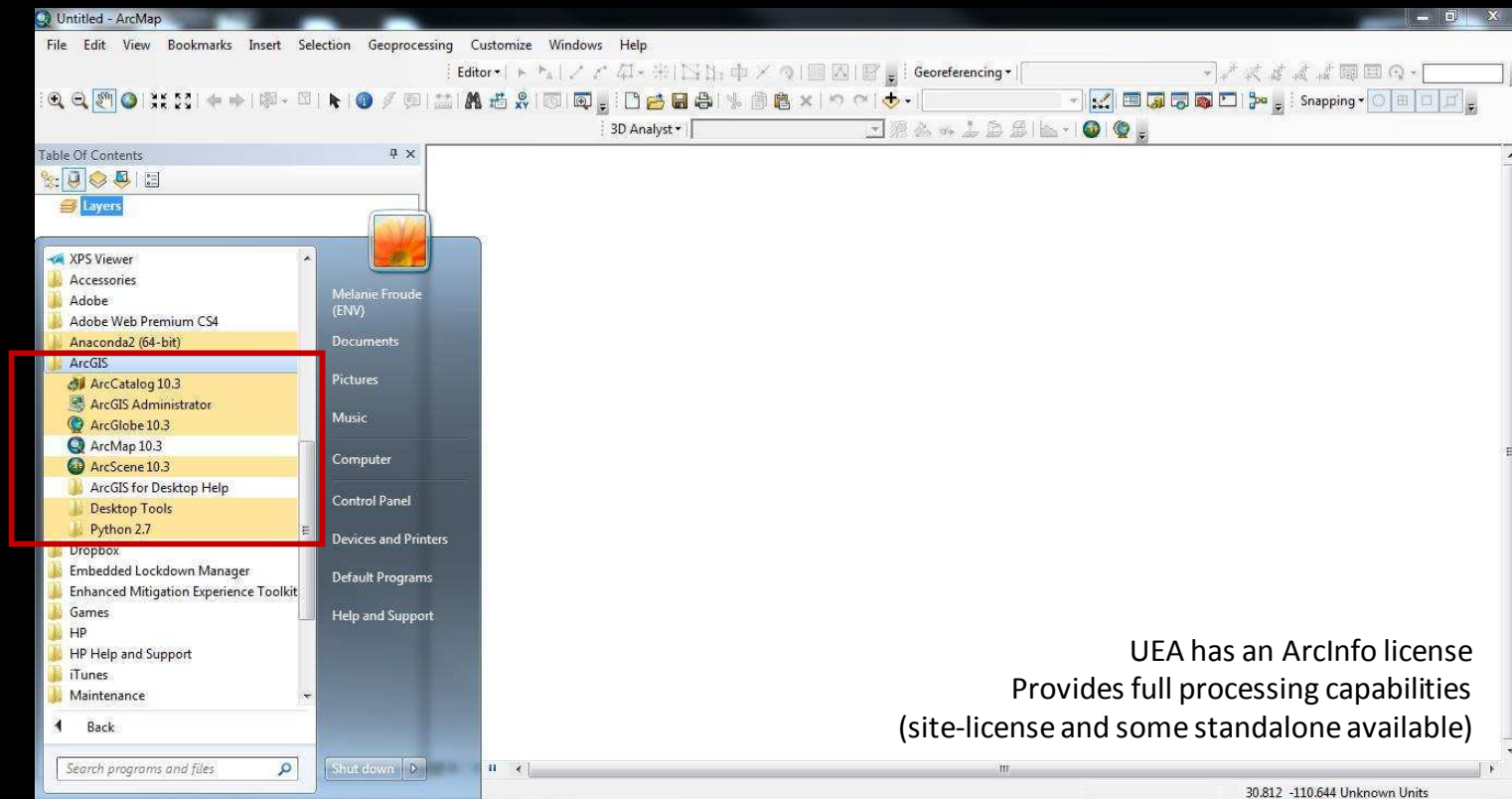
Open source and proprietary GIS options relevant to Python users

- ESRI ArcGIS (proprietary)
- GRASS (open source)



### Software modules

- ArcCatalog
- ArcGlobe
- ArcMap
- ArcScene

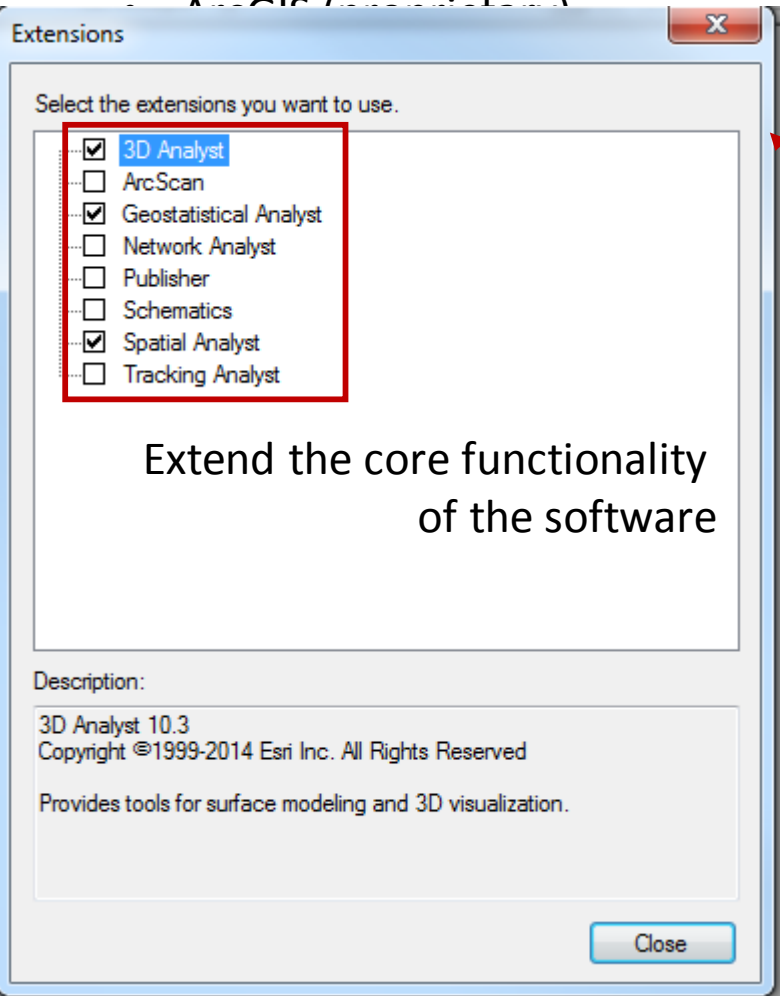


# What is ArcGIS?

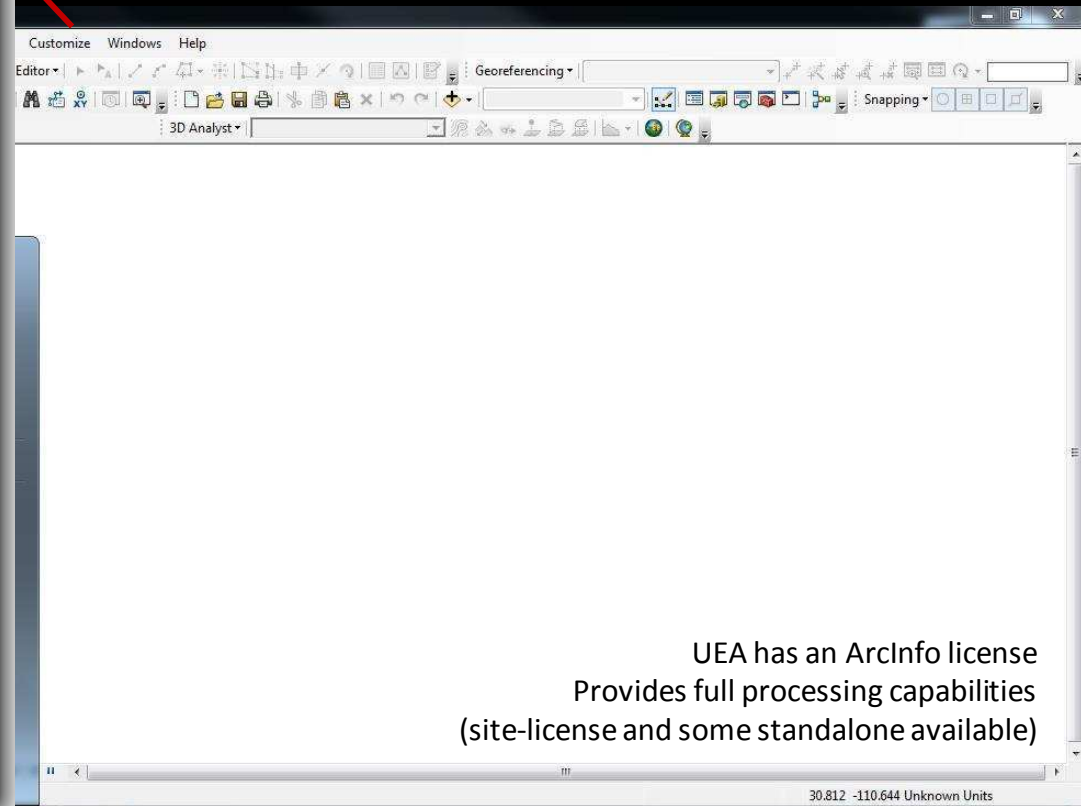
## Geographic Information System (GIS)

*"lets us visualize, question, analyze, and interpret data to understand relationships, patterns, and trends."*

Open source and proprietary GIS options relevant to Python users



Extend the core functionality  
of the software



UEA has an ArcInfo license  
Provides full processing capabilities  
(site-license and some standalone available)

**Interactive display  
navigation tools**

**Toolbars**  
(can be moved  
and docked)

**Add data**

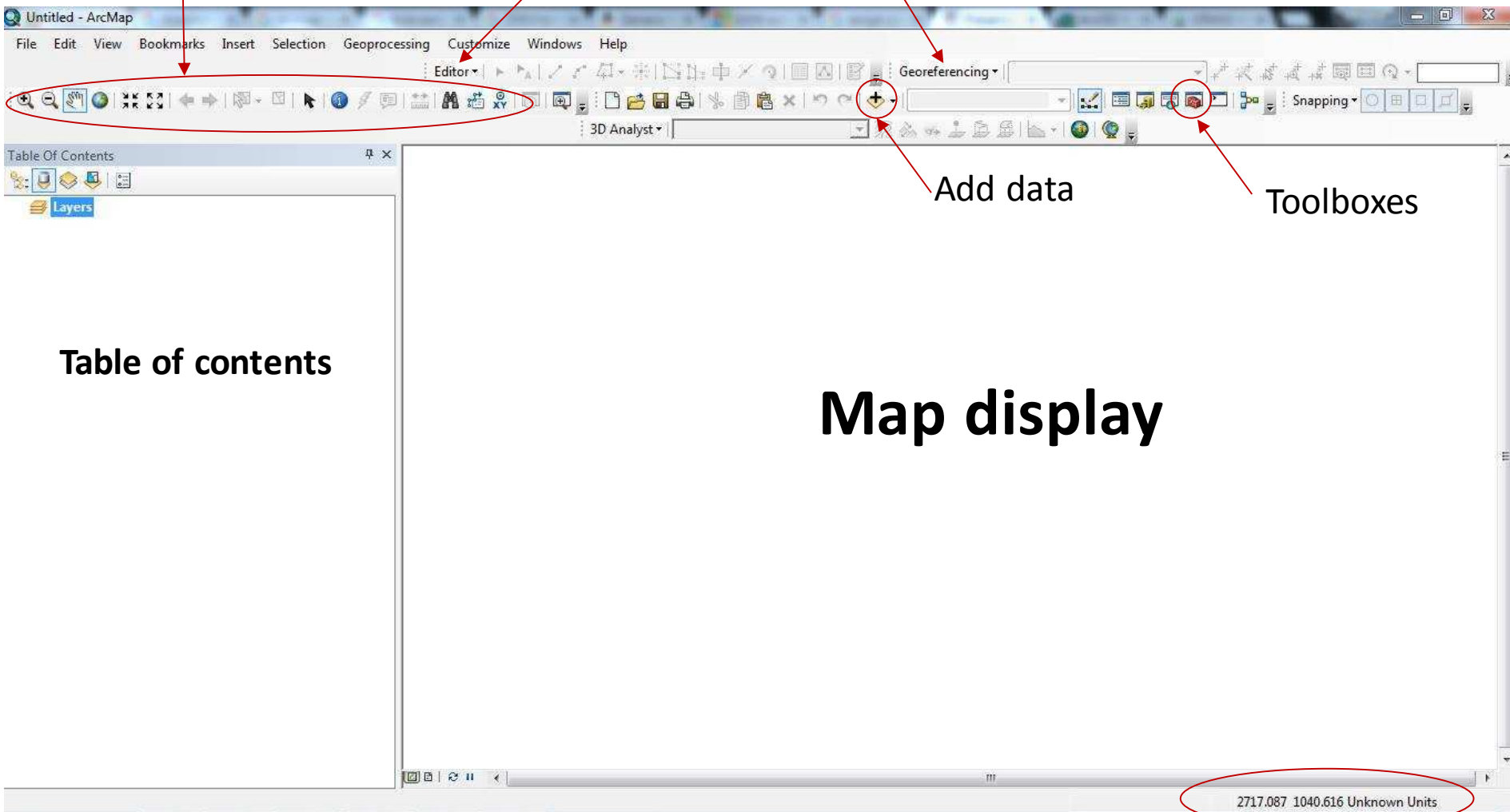
**Toolboxes**

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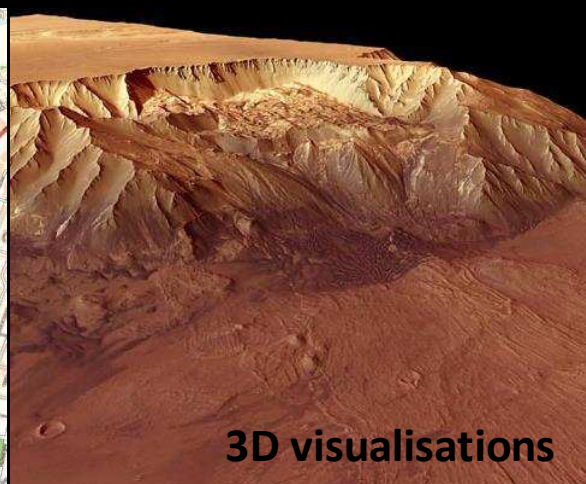
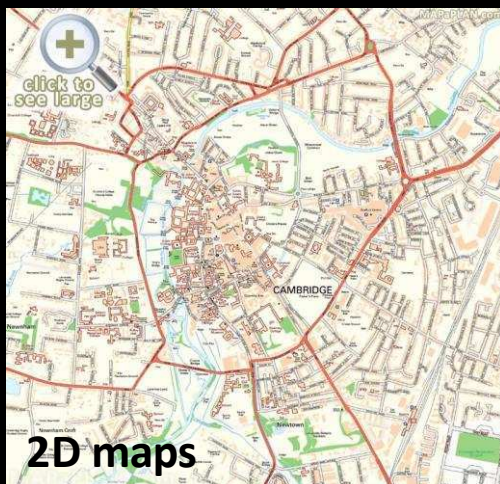
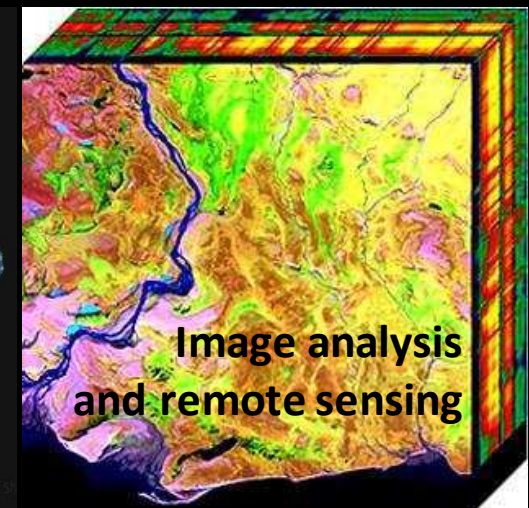
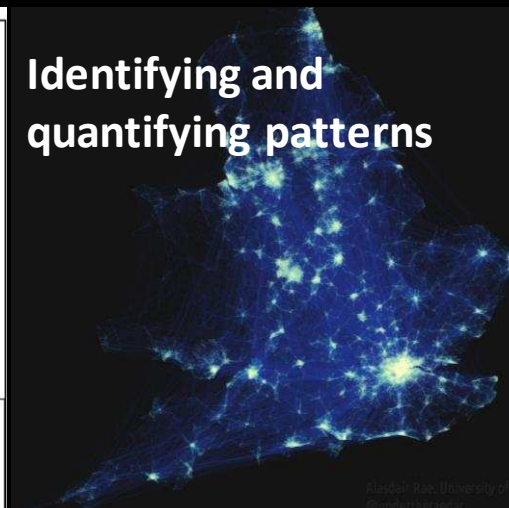
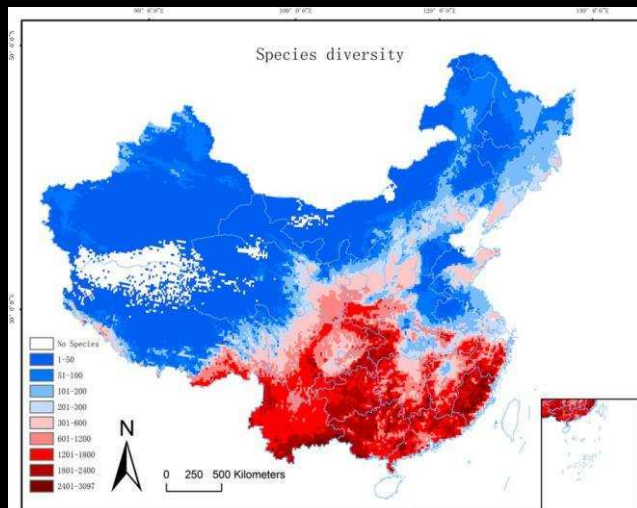
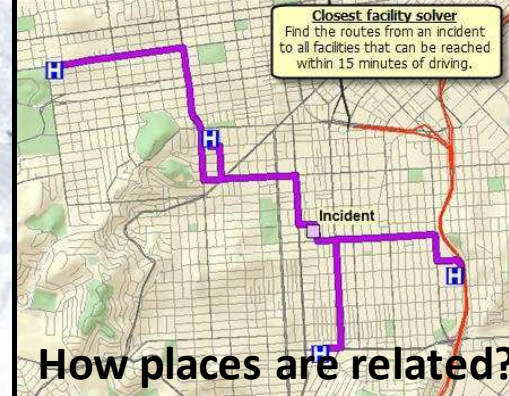
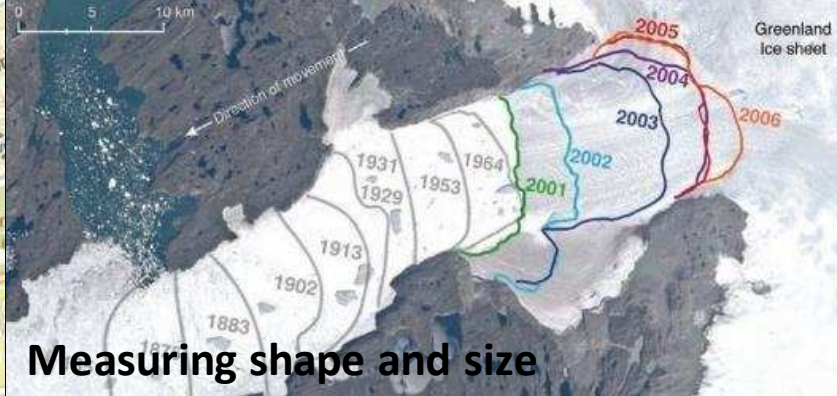
**Map display**

2717.087 1040.616 Unknown Units

**Status bar: coordinates and units**





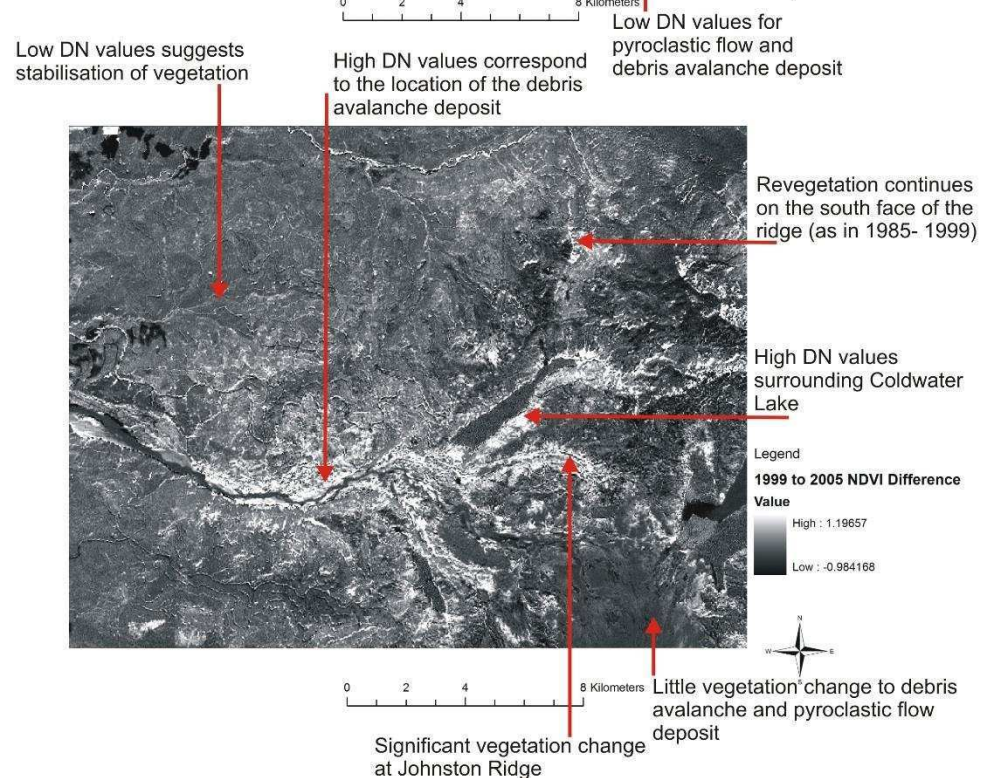
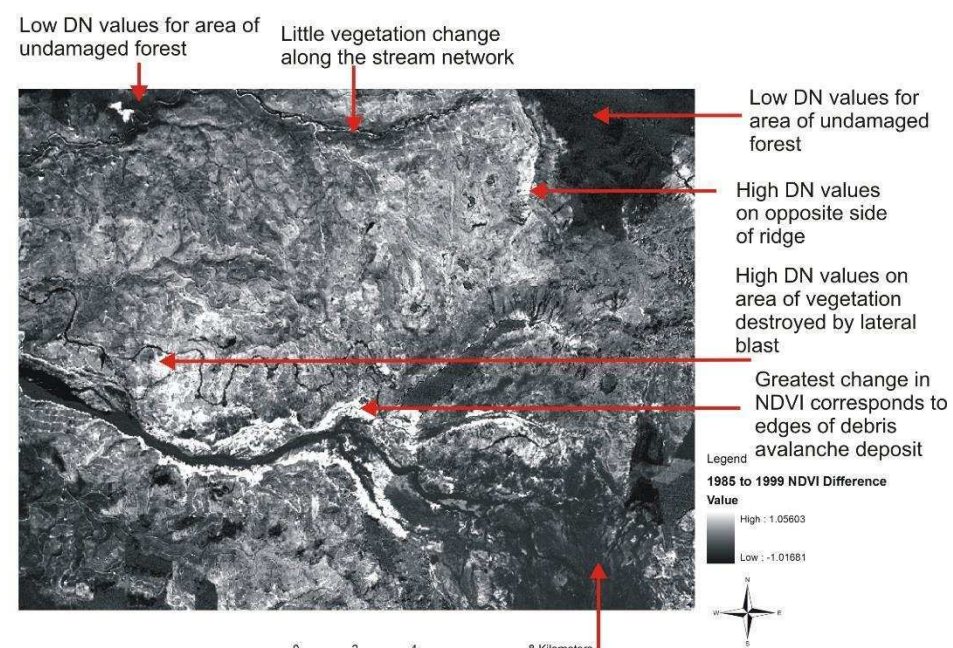




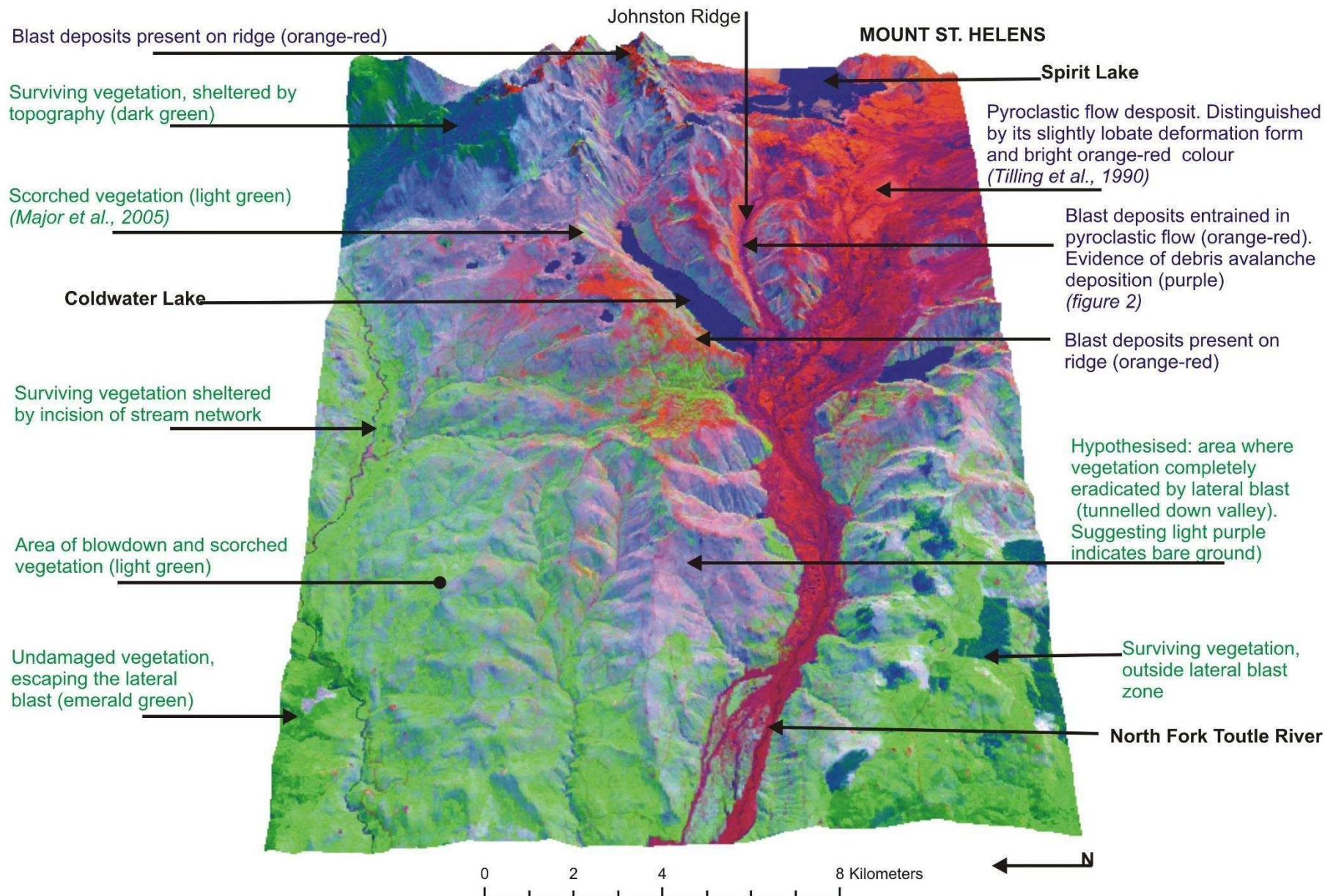
## DEMO 1: Analysis of vegetation regrowth after a volcanic eruption : Mount St Helens

### Normalised Difference Vegetation Index

$$NDVI = (NIR - R) / (NIR + R)$$







## DEMO 3: ArcScene: 3D terrain

