

ARCGIS DEM assignment:

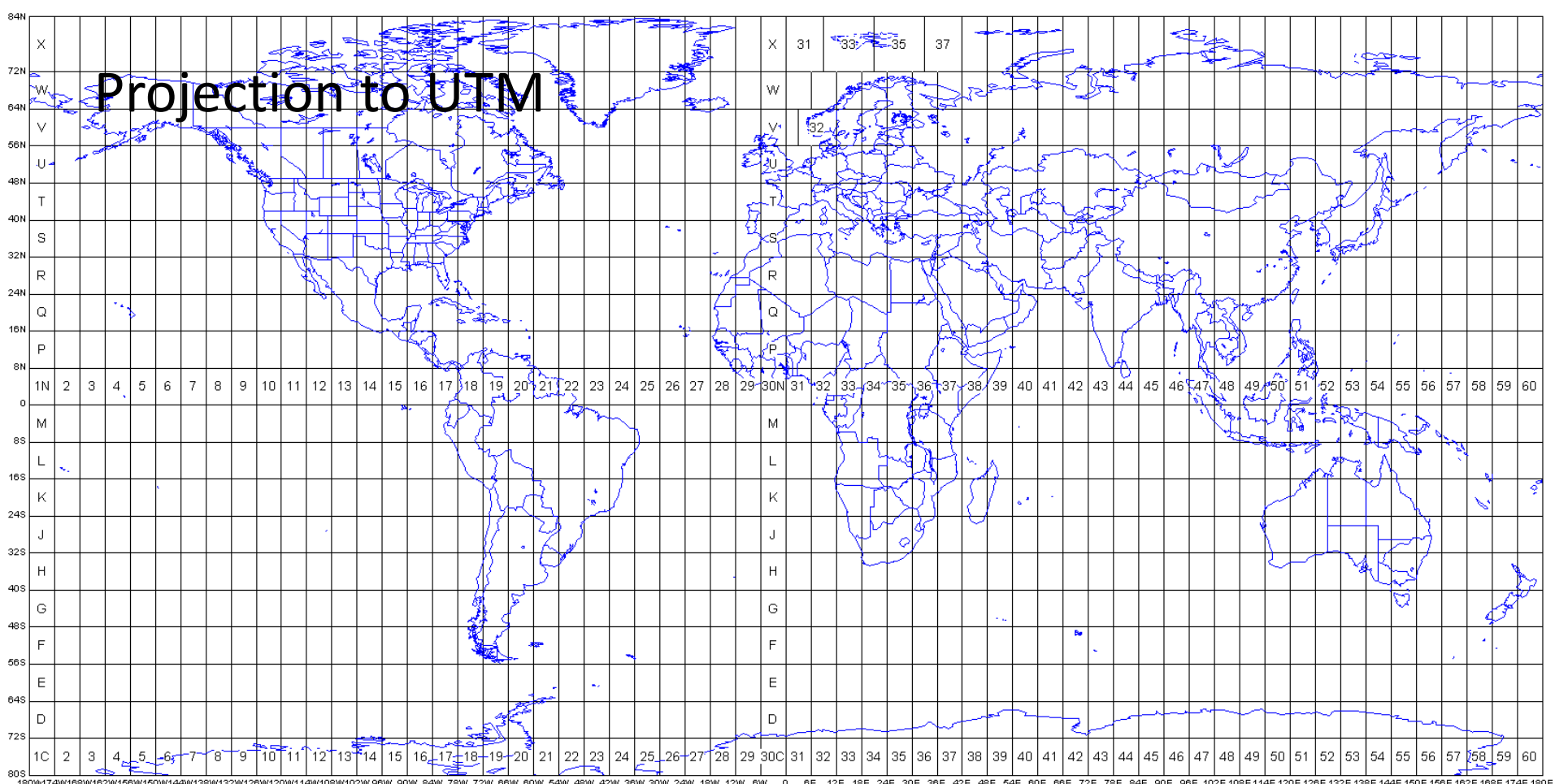
- 1) Apply for a MyOpenTopo account on opentopography
- 2) Download DEMS for area of interest from OpenTopography
- 3) In ArcMap:
 - 1) Build a project with DEM, hillshade, and slope maps
 - 2) Draw topographic profiles across the map
- 4) Download **ALOS World 3D - 30m** and SRTM for the area and compute their difference

Selection



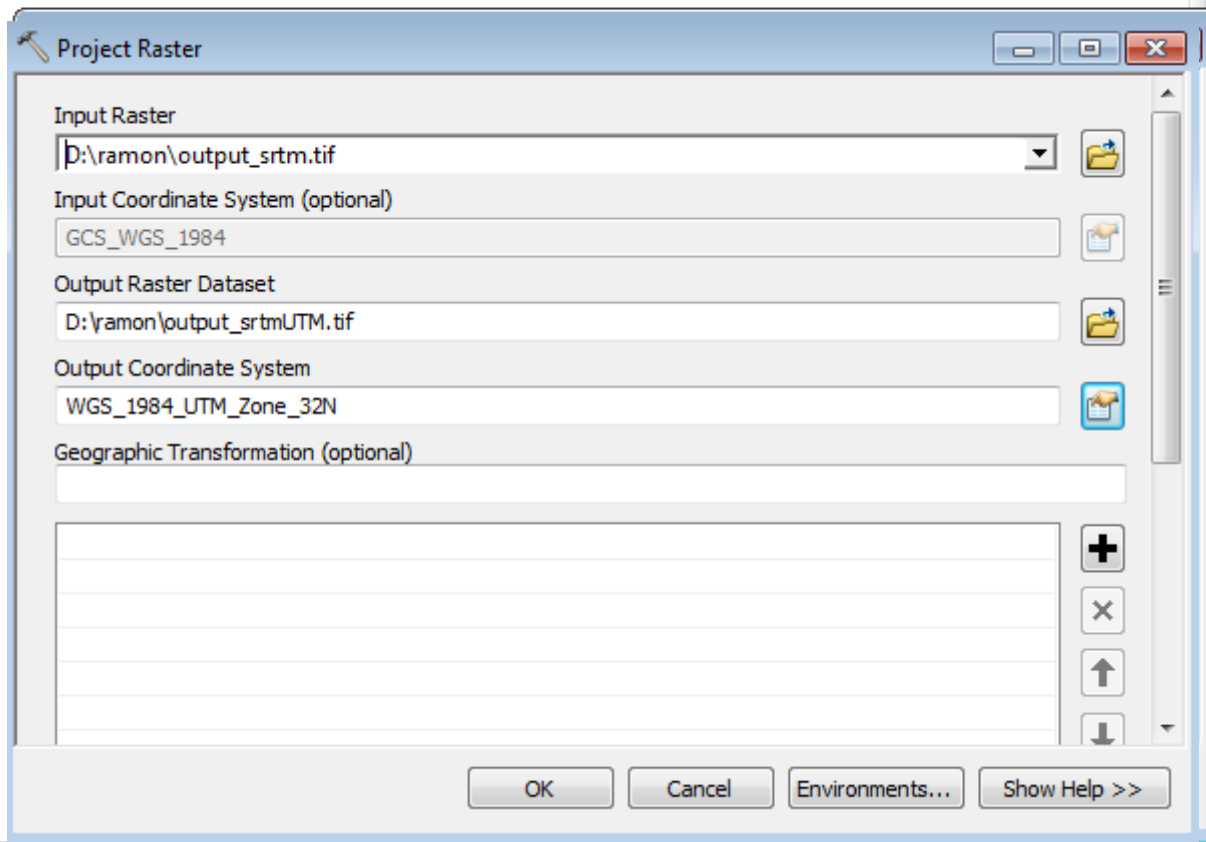
Advancing understanding of geomorphology with topographic analysis
emphasizing high resolution topography
June 12-15, 2017

Projection to UTM



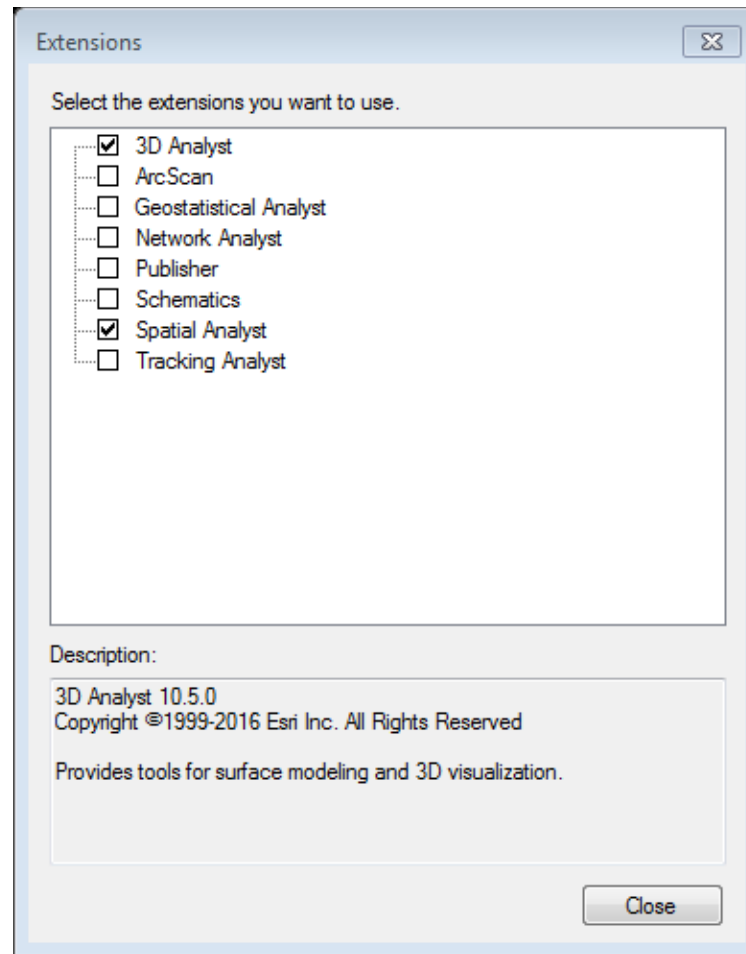
<http://www.dmap.co.uk/utmworld.htm>

Projection to UTM



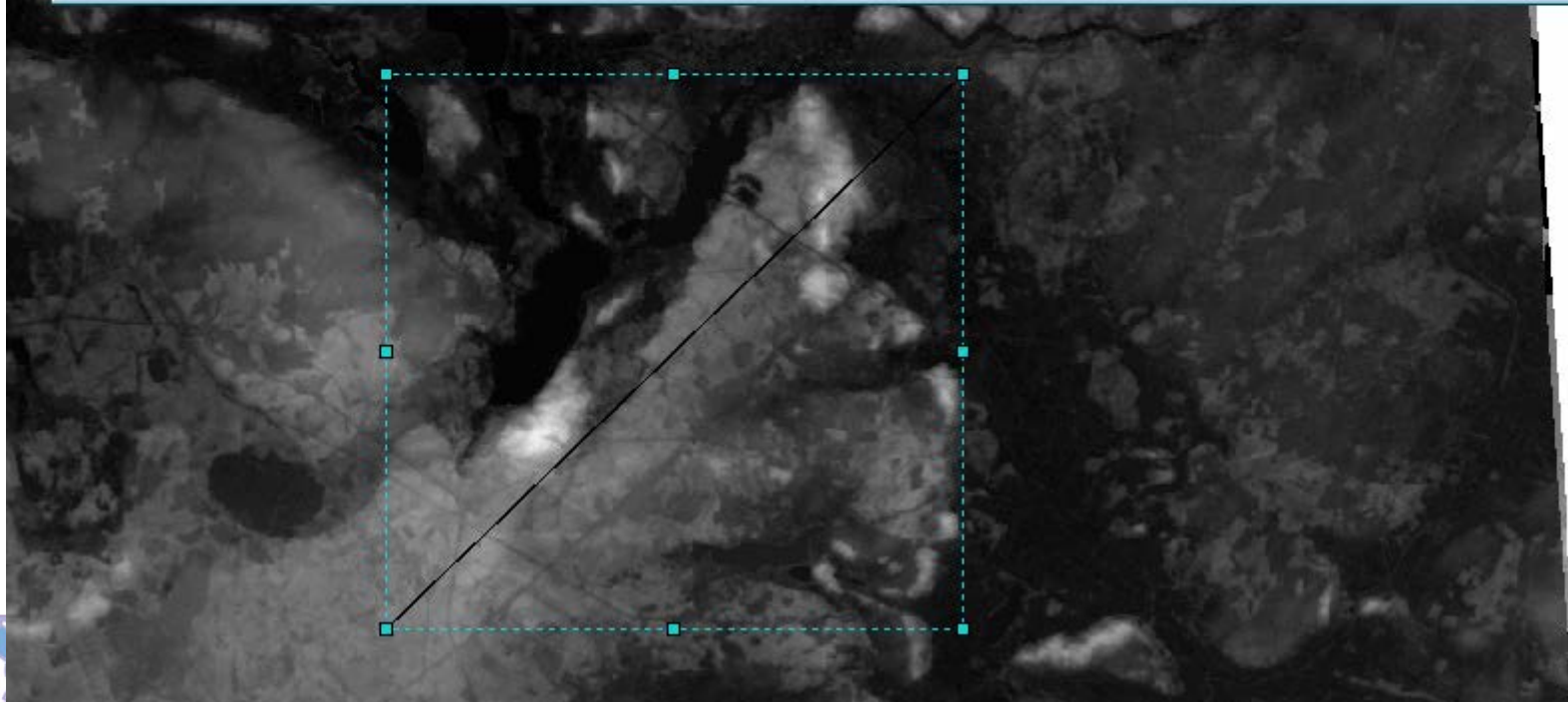
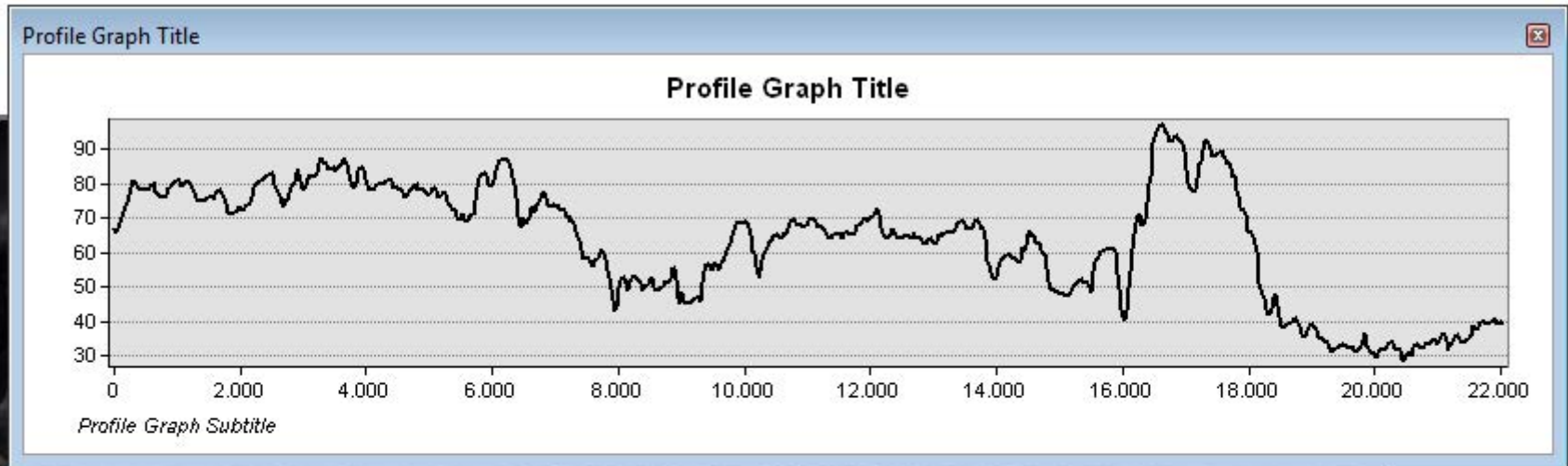
- [-] Data Management Tools
 - [+] Archiving
 - [+] Attachments
 - [+] Data Comparison
 - [+] Distributed Geodatabase
 - [+] Domains
 - [+] Feature Class
 - [+] Features
 - [+] Fields
 - [+] File Geodatabase
 - [+] General
 - [+] Generalization
 - [+] Geodatabase Administration
 - [+] Geometric Network
 - [+] Graph
 - [+] Indexes
 - [+] Joins
 - [+] LAS Dataset
 - [+] Layers and Table Views
 - [+] Package
 - [+] Photos
 - [-] Projections and Transformations
 - [-] Raster
 - [+] Flip
 - [+] Mirror
 - [+] Project Raster
 - [+] Register Raster
 - [+] Rescale
 - [+] Rotate
 - [+] Shift
 - [+] Warp
 - [+] Warp From File
 - [+] Batch Project
 - [+] Convert Coordinate Notation

Turn the extension on and then add the 3D analyst toolbar



Topographic Profile

3D Analyst ▾ output_srtmUTM.tif





Raster Calculator

Map Algebra expression

Layers and variables

- output_srtmUTM.tif
- output_alosUTM.tif

| | | | | | | |
|---|---|---|---|----|----|---|
| 7 | 8 | 9 | / | == | != | & |
| 4 | 5 | 6 | * | > | >= | |
| 1 | 2 | 3 | - | < | <= | ^ |
| 0 | . | + | (|) | ~ | |

Cor

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Pick

SetNull

Math

Abs

Exp

Exp 10

"output_srtmUTM.tif" - "output_alosUTM.tif"

Output raster

D:\ramon\UTM-ALOS.tif



OK Cancel Environments... Show Help >>

- Spatial Analyst Tools
 - Conditional
 - Density
 - Distance
 - Extraction
 - Generalization
 - Groundwater
 - Hydrology
 - Interpolation
 - Local
 - Map Algebra
 - Raster Calculator

Map Algebra expression

Layers and variables

- output_alosUTMnullv2.tif
- UTM-ALOS.tif
- output_srtmUTM.tif
- output_alosUTM.tif

| | | | | | | |
|---|---|---|---|----|----|---|
| 7 | 8 | 9 | / | == | != | & |
| 4 | 5 | 6 | * | > | >= | |
| 1 | 2 | 3 | - | < | <= | ^ |
| 0 | . | + | (|) | ~ | |

Conc

Con

Pick

SetNull

Math

Abs

Exp

Exp 10

```
SetNull("output_alosUTM.tif" <= -9999, "output_alosUTM.tif")
```

Output raster

D:\ramon\output_alosUTMnullv3.tif



OK

Cancel

Environments...

Show Help >>

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Do the difference again and you will see the SRTM - ALOS

