

RS and GIS

Lab. 3

Masking the NDVI image

This process is very important to separate vegetation and non-vegetation areas. Follow these steps to perform it:

- First of all, we should open the **NDVI image**
- Then open **Spatial Analyst Tools > Map Algebra> Raster Calculator**
- Now, we are about to **isolate** the vegetation cover from non-vegetation cover
- Write the following formula to **isolation** using the conditional expression:

$$\text{Con}(\text{NDVI} > 0, \text{NDVI})$$

- Now, the new raster has been saved with all pixel values more than **zero**
- To complete the process, you have to find the **threshold value**, which is the value that separates between vegetation and non-vegetation pixel
- To find the **threshold value** using the NDVI image and composite bands image

- Make a composite image with **false-color** composition as follow:

R=B5, G=B4, B=B4

- Try to find the sparse vegetation cover area in the composite image and **COMPARE IT** with the NDVI image
- The idea is: which pixel values in the NDVI image appear as vegetation and in the reality, **it is not**
- Identify the pixel value around the vegetation area in the NDVI image and isolate them using the following conditional formula (ex: using 0.09 as a threshold value):

Con(NDVI > 0.09, NDVI)

- A new raster image now has been created with a **real vegetation cover**

Clipping an area of interest (AOI) in the NDVI image OR in any image

- Bring the Draw toolbar
- Select any shape from the toolbar and start to draw the area of interest (AOI)
- R-click on the NDVI image and go to export then select export data

- From data export window select in the Extent **choose Selected Graphics (Clipping)**
- Choose the output folder and name then click Save

Homework: find the vegetative area for AOI using the NDVI image