



“HYDROHASARDS” PostGraduate Study Program

Remote Sensing Lab Exercises

Project: Water Loss Estimation

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Step 1:

Install the new free Firefox updated version from <https://www.mozilla.org/el/firefox/new/> and check for the new java version.

Step 2:

Go to <http://glovis.usgs.gov/> and sign up.

Step 3:

Locate your region, and add a recent Landsat 8 image file (from 2015 or 2016) to the basket. Let's call this file as “the new image”.

Step 4:

Download the “GEOTIFF” format.

Step 5:

Locate the zip file, extract and open with ENVI package. Compare “the new image” with an older Landsat 5 or 8 imagery of the same region (path) taken from the past, assuming it as “the old image”. Subset images in order to avoid big files.

Step 6:

Make image correction fitting (georeferencing) to the desired geographical system (EGSA 87 or other) for both of the images.

Step 7:

Compute Normalized Difference Water Index (NDWI) for both old and new image. Please, remember that Landsat 5 and Landsat 8 have different bands (and wavelengths). For the computation of NDWI, please adjust the formula properly.

Step 8:

Compare the two results (old and new) of NDWI and compute the related difference. Estimate the total water surface for both cases. Please make comments!
