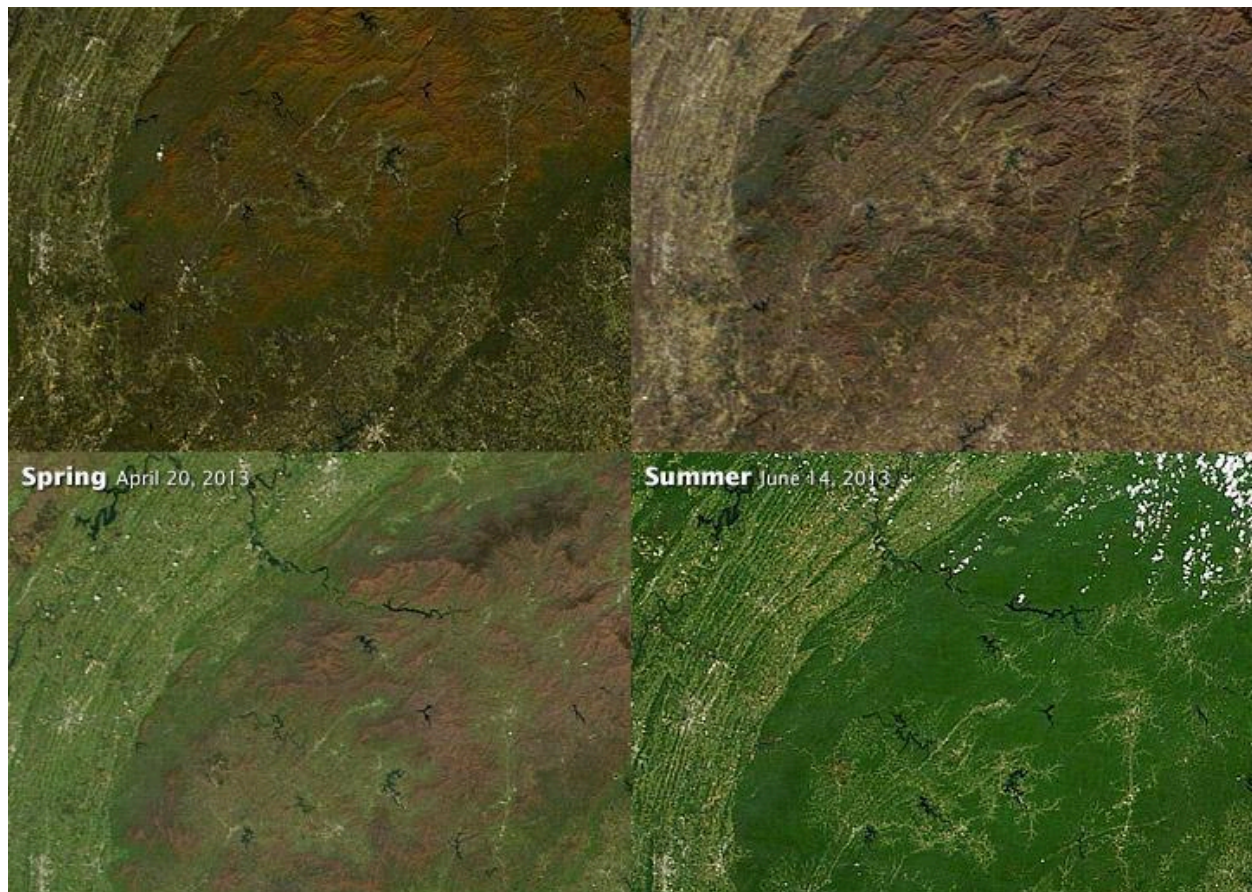# SR-HUB

Task : To find ndwi, ndvi and evi indexes from satellite images

How can we proceed ?

1. Understanding the input data:

Satellite images are typically stored as **GeoTIFF** files and contain multiple bands (e.g., Red, NIR, Green, Blue). Each band represents data for a specific wavelength of light.

- **NDVI** uses the **Red** and **Near-Infrared (NIR)** bands.
- **NDWI** uses the **Green** and **Near-Infrared (NIR)** bands.
- **EVI** uses **Blue**, **Red**, and **NIR** bands.

2. Load the Satellite Image

We will use the `rasterio` library to load the GeoTIFF image.

3. Extract Individual Bands

Identify which band corresponds to each wavelength (refer to your satellite's metadata). Common mappings:

- **Landsat 8**:
    - Band 4: Red
    - Band 5: NIR
    - Band 3: Green
    - Band 2: Blue

4. Compute NDVI, NDWI, and EVI

Using the respective formulas calculate the indices and display.