

**Remote Sensing Laboratory
Lab Assignment # 1**

Introduction of Basic Tool and Color Composite Images

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1. OBJECTIVE

To familiarize ourselves with image processing software (ENVI) and multi-spectral data by;

- Creating True Color Composite, False Color Composite and Pseudo color images
- Saving part of the file as another image in Tiff format
- Viewing the X, Y & Z profiles
- To differentiate between water, bare land, paddy field and buildup area through “X profile“, “Y profile“ & “Z profile“

2. METHODOLOGY

2.1 Color Composite: True color, False color and Pseudo color.

2.1.1 True color:

- Open the image file named *pathum_edm*.
- Select RGB Color and then assign spectral

Region of Red, Green and Blue by select band 3, 2 and 1 following.

2.1.2 False color:

- Select RGB Color and then assign spectral

Region of Red, Green and Blue by select Band 4, 3, and 2 following.

2.1.3 Pseudo color:

- Select Gray scale and then click the Band for showing such as Band 5
- Click “Load Band” for display.
- From menu “Tool” select “Color Mapping”
- select “ENVI color Tables” and then select “Rainbow” in color Tables list.

For appropriate image, should to design range of Blue region by sliding “stretch Bottom” bar and slide “Stretch Top” bar for assign range of Red region.

2.2 Subsection a dataset

- Load True color image.
- From main window in menu “File” select menu bar on “image window”, select “Save Image as”
- click on “Spatial subset” and enter X0, X1 in samples and Y0, Y1 in lines to subsection a dataset. Click “OK” button.
- select output file type to “TIFF/GeoTiff”
- Specific output filename and location of output file. And then click “OK”

2.3 Checking Pixel value/Location and Profiles.

2.3.1 Load true color image of subsection image.

2.3.2 Go to “Tools” in the menu bar on “image window” and select “Cursor location/value...” or double click some point in “main window”

2.3.4 Try to move mouse to another point and check the value of location, data color value and screen color value.

2.3.5 Go to menu “Tools”, select “Profiles” and then Select “X profile”

2.3.6 Pick some objects and try to move mouse along horizontal direction (X) and then check the red line value (the line of the profile for which the DN number are plotted”, or check the value from “cursor location/value..” in R color.

2.3.7 Selecting “Y profile” that same methods in step 2.3.5 to 2.3.6 but change select “Y profile” instead of “X profile”. Move mouse cursor along vertical direction (Y) and then check the value from “cursor location/value..” in R color.

2.3.8 Selecting “Y profile” that same methods in step 2.3.5 to 2.3.6 but change select “Z profile” instead of “X profile”. Move mouse cursor along vertical or horizontal direction and then check the value from “cursor location/value..” in R color.

3. Data

Sample datasets of Landsat7

4. Result

5. Discussions and Conclusion: