LAMPIRAN 1

Kalibrasi sensor citra dan koreksi atmosfer

1. Buka software envi 64 bit, klik icon data manager



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3. Untuk melihat tampilan warna mangrove, maka dapat mengubah band RGB, dengan cara klik kanan pada jendela layer manager file citra yang akan diubah tampilan band RGB nya : change RGB band



4. Masukkan dengan cara klik band yang akan dipilih : R (Near Infrared/Band 5), G (SWIR 1/Band 6), B (Red/Band 4), lalu klik OK



Koreksi Radiometrik

1. Pada menu tampilan toolbox berada disebelah kanan. Pilih radiometric correction \rightarrow Radiometric calibration



2. Pilihlah input file selection MTL Multispectral, kemudian klik OK



3. Pada jendela tampilan radiometric calibration pilihlah calibration type : reflectance, output interleave: BSQ, output data type: float, Scale factor:1



4. Simpan output file name. pilih file tempat menyimpan koreksi radiometric. Lalu OK



5. Proses koreksi radiometric selesai maka selanjutnya proses DOS atau Dark Object Substraction. Pada toolbox Radiometrix correction → Dark substraction



6. Input file hasil koreksi radiometric sebelumnya, lalu klik OK



7. Setelah data file dimasukkan maka akan tampil jendela Dark Substraction Parameter, lalu simpan hasil DOS



8. Hasil koreksi DOS dapat dilihat dari tampilan layer manager



9. Untuk melihat nilai hasil koreksi DOS dengan cara klik kanan Quick stats



Koreksi Geometrik

1. Buka file landsat yang sudat terkoreksi radiometric, RGB colour 564



2. Buka file vector Indonesia kab. Shp. File \rightarrow open vector file



3. Edit \rightarrow view attributes \rightarrow cari daerah sesuai citra landsat 8



4. File – save selected record to new layer – simpan output file nya – ok



5. Muncul subset, untuk mengecek load selected – display 1



6. Buka new display greyscale yang akan dikoreksi



7. Proses koreksi geometric, map→registration→select gcp image to image Base image (image yang digunakan sebagai base) warp image (yg akan dikoreksi/grey scale)



8. Available vector list \rightarrow pilih layer Indonesia kab.shp di display citra base image



9. Buat GCP selection bebas tapi merata dan tidak boleh diperairan pilih lokasi yang ada di citra, geographic link antara 2 display



10. Setelah semua GCP selesai file – save GCP to ASCII lalu ok

11. Options - wrap file









12. Kemudian sav<mark>e hasil koreksi geometrik</mark>







Klasifikasi multispectral Maximum Likelihood

1. Buka ENVI classic → buka file hasil koreksi radiometric dan geometric → dalam table available band list, klik RGB color masukkan composite warna vegetasi



2. Untuk menggabungkan band menjadi satu klik Basic tool \rightarrow Layer stacking \rightarrow Import file \rightarrow klik file yang akan diolah \rightarrow save file









3. Cropping ROI. Klik tools \rightarrow Region of Interest \rightarrow ROI tools



4. Dalam ROI type pilih rectangle, lalu digitasi sesuai daerah yang kita teliti





5. Klik Basic tools \rightarrow Subset data via ROI



6. Kemudian save hasil cropping



7. Lalu dalam table available band list dilakukan ulang pewarnaan komposit dalam cropping



8. Mencari sampel yang akan dijadikan sebagai parameter klasifikasi (region of interest) diambil dari citra hasil komposit 564. Klik tools→region of interest→ROI tools



9. Klik ROI type→Rectangle lalu klik pada bulatan zoom. Window merupakan jendela yang akan diambil sampelnya, zoom dipilih karena zoom merupakan jendela perbesaran yang menampilkan kenampakan lebih detail

JENDERAL SO



- 10. Kenampakan yang akan diambil sampelnya meliputi
 - a.Non mangrove1 : lahan terbangun (kenampakan berwarna biru cyan)
 - b. Non mangrove2 : vegetasi non- mangrove (kenampakan jingga agak kekuningan)

- c. Non mangrove3 : sawah dan lahan tergenang (kenampakan biru kehitaman berpola)
- d. Mangrove : mangrove berbagai kerapatan (kenampakan jingga pada alur sungai)

lalu klik classification→supervised→maximum likelihood



11. Lalu buka ha<mark>sil croppi</mark>ng kemudian pilih 4 hasil kl<mark>asifikasi k</mark>emudian save file







 Kemudian klik vector → classification to vector. Ubah output menjadi one layer per class dan beri nama vector. Maka data otomatis berubah menjadi vector tiap klasifikasi.



 Membuat masking dengan hasil klasifikasi mangrove sehingga citra yang akan dianalisis hanya terfokus pada wilayah mangrove. Klik pada toolbar Basic Tools > Masking > Build Mask







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15. Untuk mengubah data vector ke shapefile, pada window baru pilih File Export active layer to shapefile lalu save file



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Pengolahan data citra

16. Input file data citra dengan cara klik add data→pilih file landsat yang akan diolah



17. Crop citra, klik draw→windows→image analysis→pilih citra yang akan di crop→clip





18. Composite band, masukkan band 564 untuk vegetasi mangrove



19. Lalu klik feature class pada catalog untuk pengkelasan mangrove→masukkan file mangrove shp yang telah diklasifikasi pada ENVI







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20. Untuk memasukkan rumus NDVI klik Raster Calculator→masukkan rumusnya→lalu OK



21. Lalu ubah warna sesuai warna standart mangrove, klik kanan pada layer→properties→Simbology



22. Potong citra untuk pengklasifikasian mangrove, klik clip→input raster→output mangrove→lalu OK

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23. Lakukan pengklasifikasian tingkat kerapatan mangrove sesuai literatur

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24. Lakukan pengklasifikasian ulang untuk menghitung luasan tiap kerapatan. Klik reclassify→classification→atur tingkat kerapatan sesuai literatur→lalu OK





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26. Kemudian add field

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30. Untuk melihat seluruh luasan klik kanan pada table luasan lalu pilih statistic

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