

Available images for possible use in a pixel-based multivariate analysis

1. NDVI annual average (from historical average images) Resolution 1 km (all water=255, out of RoI pixels = 254) (yearly average vegetation level in pixel, high for forest, low for cropping areas)

2. NDVI annual Standard Deviation (from historical average images) Resolution 1 km (all water=255, out of RoI pixels = 254) (measures the variation over the year of the vegetation level: low values for forests, high values for cultivations)

3. NDVI interannual variation, averaged over the year.

Computed from the series of all dekadal images, 1998-2005, and the historical average images.

Per pixel, it is computed as the annual average of the dekadal ratios

between the i.a. NDVI stdev 98-05 (per dekad) and the average 98-05 NDVI value (per dekad)

Resolution 1 km (all water=255, out of RoI pixels = 254)

4-7. The minNPP images have resolution 5' (0.0833299980 deg), size 359 x 359, proj center (104.9994, 14.9994), offset (x=179, y=179 pixels).

They are

- minNPP05.img (coded in 0..253), minNPP15.img (coded in 0..253),
- their absolute variation NPPAbsVar05-15.img (coded in 1..250)
- and the relative variation NPPRelVar05-15.img (coded in 1..250).

Missing value=254.

The georeferencing is not perfect: corrected the header (offset and pixel size) to better match the vectorial (merge3)

Created 2 sample IDA headers (NPP_2.5'_sampleheader and NPPRelVar_2.5_sampleheader) to reproject the two images to 2.5'.

It was actually necessary to re-create the AbsVar e RelVar images in j:\lavori\hotspots\NPP, in order to have the percentage values multiplied by 1000 in the image.

THE NPP IMAGES HAVE BEEN REPROJECTED TO 2.5'. THE REPROJECTED IMAGES ARE minNPP05_2.5.img minNPP2015_2.5.img NPPAbsVar_05-15_2.5.img NPPRelVar_05-15_2.5.img

8. Annual population growth rate 05-15.

Computed from the CIESIN 2005 and 2005 population distribution images.

The growth rate estimated by CIESIN results quite uniform all over Cambodia VietNam and Laos, and spatially well detailed only for Thailand and Malaysia.

For Myanmar and Yunnan it varies with the administrative units (quite large in Myanmar, resulting in a rough pop variation grain, quite small in Yunnan, resulting in sufficiently spatially differentiated details). Pixels out of the RoI are set to 254, water pixels (both sea and internal) to 0.

9. IIASA-Plate 19 - <plate19_sea1.img> - Expected output/ha for 13 types of RF maize

File: plate19_sea1.img Resolution 5' (331w x 349h)

Internal and sea water = 255 all other pixels valid (to be masked)

10. IIASA-Plate 52 - <plate52_sea1.img> - Expected output/ha for SCRFI cereals

File: plate52_sea1.img Resolution 5' (331w x 349h)

Internal and sea water = 255 all other pixels valid (to be masked)

11. IIASA-Plate 63 - <plate63_sea1.img> - Potential distribution of RF grain maize under current climate

File: plate63_sea1.img Resolution 5' (331w x 349h)

Internal and sea water = 255 all other pixels valid (to be masked)

12. IIASA-Plate 68 - <plate68_sea1.img> - Impact of climate change

File: plate68_sea1.img Resolution 5' (331w x 349h)

Internal and sea water = 0 (must be set to 255)

Real values -100..+100 byte count in 50..250 (to be masked)

THE 4 PRECEDING PLATES HAVE BEEN RE-PROJECTED TO 2.5'

13.CYCLONE HAZARD (from Dilley)

Values are in [0..10] and represent the inclusion of the concerned pixel in a hazard decile. All pixels subject to no hazard are set to 0, sea water inclusive.

Resolution 2.5' (sea_cyclone.img, 698x661 originally. The image in this folder is modified to width=662 adding a trailing column. The header matches that of seapopvar.img)

Resolution 1km SEA_CYCLONE_HR_MSK.IMG is the same images, converted to 1km, so as to match the NDVI VGT images, and then suitably masked using the mask SEA_MASK0_1_254. Water pixels (both internal and sea) are recoded to 255, external land pixels to 254, clouded pixels to 253. Values 0 through 10 represent the hazard deciles.

14.FLOOD HAZARD (from Dilley)

Values are in [0..10] and represent the inclusion of the concerned pixel in a hazard decile. All pixels subject to no hazard are set to 0, sea water inclusive.

Resolution 2.5' (sea_flood.img, 698x661 - The image in this folder is modified to width=662 adding a trailing column. The header matches that of seapopvar.img)

Resolution 1km SEA_FLOOD_HR_MSK.IMG is the same images, converted to 1km, so as to match the NDVI VGT images, and then suitably masked using the mask SEA_MASK0_1_254. Water pixels (both internal and sea) are recoded to 255, external land pixels to 254, clouded pixels to 253. Values 0 through 10 represent the hazard deciles.

15.DROUGHT HAZARD (from Dilley)

Values are in [0..10] and represent the inclusion of the concerned pixel in a hazard decile. All pixels subject to no hazard are set to 0, sea water inclusive.

Resolution 2.5' (sea_drought.img, 698x661 - The image in this folder is modified to width=662 adding a trailing column. The header matches that of seapopvar.img)

Resolution 1km SEA_DROUGHT_HR_MSK.IMG is the same images, converted to 1km, so as to match the NDVI VGT images, and then suitably masked using the mask SEA_MASK0_1_254. Water pixels (both internal and sea) are recoded to 255, external land pixels to 254, clouded pixels to 253. Values 0 through 10 represent the hazard deciles.