

REDD+ for the Guiana Shield

Technical and Regional Platform for the
Development of REDD+ in the Guiana Shield

Classification fusion

Objective : This tutorial is designed to explain how to merge different classifications. It's useful when you need to fill gap (due to cloud for example in optical imagery) or when you want to take the best of among different sources such as Radar classification, Optical classification or any other relevant source map.

In order to merge the 2 data (ALOS2 and LANDSAT 8), to fill the LANDSAT8 gaps and to use this classification scheme:

Landsat

- 1-Forest
- 3-Low Vegetation
- 4-Bare soil

ALOS2

- 2-Swamp
- 5-Watter

We need to do the following things:

1 Qgis – Load the two classification

Use the menu “Layer → add layer → add raster layer” to add your classification raster

2 Vectorize the 2 dataset

Using the r.to.vect Grass tools of the processing toolbox we need to vectorize the 2 dataset

Click here to see the video

[QgisGrassVectorisation.mp4](#) or [YouTube](#)

3 Remove no data polygon in the 2 dataset

For each dataset we will select the “no data polygon” (0 for the background, 10 and 11 for cloud and shadow respectively in the LANDSAT8 classification). We have to use filter function in the attribute table and edition tools.

Click here to see the video

[QgisSelectEraseVectorFeatures.mp4](#) or [YouTube](#)

4 Select and save from ALOS2 vector the classes 2 and 5

As for previous step we select only feature classes 2 and 5 and save this selected feature to a new file

Click here to see the video

[QgisSelectEraseVectorFeatures.mp4](#) or [YouTube](#)

5 Create a copy of ALOS2 RASTER Called FusionClassifALOS2LANDSAT8.tiff

Go to your file explorer, then copy and paste. Rename this file.

6 Rasterize the LANDSAT8 vector inside ALOS2 raster of step 5)

Using the rasterize tool of Qgis we will rasterize the LANDSAT8 vector inside ALOS2 raster. Indeed, by doing that we will avoid any problem due to different resolution cell of the dataset, and avoid missing area.

Click here to see the video

[QgisRasterize.mp4](#) or [YouTube](#)

7 Rasterize ALOS2 selection vector of step 4) inside ALOS2 raster of step 5)

Do the same things as previous step but using ALOS2 water Swamp vector.

Click here to see the video

[QgisRasterize.mp4](#) or [YouTube](#)

8 It's Finish !!!