

W03-1: Read remote sensing data

In this worksheet, we will explore Landsat data of Fogo. After completing this worksheet you should be able to find and download satellite data (e.g. Landsat) and read these data in R.

Things you need for this worksheet

- R — the interpreter can be installed on any operation system. For Linux, you should use the r-cran packages supplied for your Linux distribution. If you use Ubuntu, [this](#) is one of many starting points. If you use Windows, you could install R from the official [CRAN](#) web page.
- R Studio — we recommend to use R Studio for (interactive) programming with R. You can download R Studio from the official [web page](#).
- A login for the [Earth Explorer](#)

Learning log assignments

In this worksheet, we will download and read Landsat data of Fogo.



Search in the Landsat Achieve of the Earth Explorer for the Landsat 8 scene from 13.12.2015 and download the scene as Level 1 product



Get familiar with loading raster data to R: Load a single raster band of the Landsat scene and plot it



Go to R and create a RasterStack of the listed channels 1-7.



Describe what information about the data you can get when you print the RasterStack



The scene is quite large. For further work on it, please crop it to the extent of Fogo using the crop function. Use the following corner coordinates for cropping: c(765000,795000,1638000,1667000)



