

Appendix A. File Organization

All level 3 or higher-level products (CSO, BAP, and vegetation indices) are organized in one directory per FORCE-tile (Figure 3) and one directory with virtual mosaics [26]. Hence, each directory include files with the same file names, separated by the directory they are stored in and corresponding geo-location. Each directory is compressed with `tar -zcvf archive-name.tar.gz directory-name` where the archive-name is the same as directory-name. This means that all files belonging to directory `./X0042_Y0027` are stored in the file `X0042_Y0027.tar.gz`. Extract the files with `tar -zxvf archive-name.tar.gz` or equivalent functionality. A list of directories (and compressed files) is given below. In order to access the virtual mosaics in the `./mosaic` folder, all directories must be downloaded and uncompressed, or a new virtual mosaic created [26]. A definition of the data cube projections and setting used is available in a plain-text file called `datacube-definition.prj` with the standard format used by FORCE.

```
./X0042_Y0027
./X0042_Y0028
./X0042_Y0029
./X0043_Y0025
./X0043_Y0026
./X0043_Y0027
./X0043_Y0028
./X0043_Y0029
./X0044_Y0025
./X0044_Y0026
./X0044_Y0027
./X0044_Y0028
./X0044_Y0029
./X0045_Y0025
./X0045_Y0026
./X0045_Y0027
./X0045_Y0028
./X0045_Y0029
./X0046_Y0025
./X0046_Y0026
./X0046_Y0027
./mosaic
```

The data are delivered in 22 compressed files with names and sizes as listed below. In total, 403 GB in compressed form. Below K = kilobyte and G = Gigabyte and denoting file size.

```
60K    mosaic.tar.gz
2.9G   X0042_Y0027.tar.gz
15G    X0042_Y0028.tar.gz
7.3G   X0042_Y0029.tar.gz
8.8G   X0043_Y0025.tar.gz
19G    X0043_Y0026.tar.gz
31G    X0043_Y0027.tar.gz
38G    X0043_Y0028.tar.gz
4.4G   X0043_Y0029.tar.gz
16G    X0044_Y0025.tar.gz
39G    X0044_Y0026.tar.gz
39G    X0044_Y0027.tar.gz
35G    X0044_Y0028.tar.gz
2.6G   X0044_Y0029.tar.gz
```

22G X0045_Y0025.tar.gz
 38G X0045_Y0026.tar.gz
 38G X0045_Y0027.tar.gz
 26G X0045_Y0028.tar.gz
 1.7G X0045_Y0029.tar.gz
 1.5G X0046_Y0025.tar.gz
 15G X0046_Y0026.tar.gz
 8.6G X0046_Y0027.tar.gz
 403G~total

Appendix B. File Naming Convention

Appendix B.1. BAP

The BAP files are named according to the FORCE 29-digit naming convention [62]. For example 20190629_LEVEL3_SEN2L_BAP.tif denoting a level 3 BAP product from Sentinel-2 with 26 June 2019 as the target date (Table A1).

Table A1. Naming convention for best available pixel (BAP) composites.

Digits	Description
1–8	Target date as YYYYMMDD
10–15	Product Level
17–21	Sensor ID (SEN2L, Sentinel-2 land bands)
23–25	Product type (BAP,INF,SCR)
27–29	File type (GeoTiff)

Appendix B.2. Elevation and Land Cover Data

All digital elevation data files (one file for each FORCE tile) are named Uganda_DEM.tif and the virtual mosaic file is named Uganda_DEM.vrt All land cover files (one file for each FORCE tile) are named ESACCI-LC_uganda.tif virtual mosaic file is named ESACCI-LC_uganda.vrt.

Appendix B.3. CSO

The CSO files are named according to the FORCE 37-digit naming convention for CSO [63]. For example 2018-2018_001-365-12_HL_CSO_SEN2L_NUM.tif is the number of CSO for the period DOY 1–DOY 365 in the year 2018 in GeoTiff format (Table A2).

Table A2. Naming convention for clear sky observations (CSO).

Digits	Description
1–9	Temporal range for the years as YYYY–YYYY
11–17	Temporal binning in DOY as DDD–DDD
19–20	Temporal binning in months
22–23	Product level
25–27	Product
29–33	Sensor ID (SEN2L, Sentinel-2 land bands)
35–37	Product type (NUM = number of observations)
39–41	File type (GeoTiff)

Appendix B.4. Vegetation indices

The vegetation indices files are named according to the FORCE 42 to 46 digit naming convention [64]. For example is 2020-2020_001-365_HL_TSA_SEN2L_EVI_FBQ_QUARTER-4.tif average EVI for year 2020 quarter 4 (October-December) in GeoTiff format. HL

stands for higher level and TSA for time series analysis, the FORCE sub-module used. (Table A3).

Table A3. Naming convention for vegetation indices.

Digits	Description
1–9	Temporal range for the years as YYYY–YYYY
11–17	Temporal range for the DOY as DDD–DDD
19–20	Product level (HL)
22–24	Submodel (TSA)
26–30	Sensor ID (SEN2L, Sentinel-2 land bands)
32–34	Index Short Name (EVI, NDV)
36–38	Product type (FBQ = folded by quarter)
40–42	File type (GeoTiff)