
Climate Change Initiative Extension (CCI+) Phase 1
New Essential Climate Variables (NEW ECVS)
High Resolution Land Cover ECV (HR_LandCover_cci)

Climate Research Data Package
(CRDP)

Prepared by:

Università degli Studi di Trento
Fondazione Bruno Kessler
Università degli Studi di Pavia
Università degli Studi di Genova
Université Catholique de Louvain
Politecnico di Milano
Université de Versailles Saint Quentin
CREAF
e-GEOS s.p.a.
Planetek Italia
GeoVille



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Changelog

Issue	Changes	Date
1.0	First version.	29/10/2019
2.0	Updated version.	22/04/2020
2.1	Re-issued upload with content changes related to legend. No data is affected by this change.	20/04/2020



Detailed Change Record

Issue	RID	Description of discrepancy	Sections	Change

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1 Introduction

This Climate Research Data Package (CRDP) is a release note describing the structure of the directory containing the fully characterized Sentinel-1 and Sentinel-2 classification products and fused data with the final land cover classification map generated as the main output of the project activity.

The latest version of the data package is presented in this note and it reflects the maturity of the processing pipeline outcome.

1.1 Package download

The last issue of the CRDP package can be downloaded from a temporary remote site by following this links:

Issue	Download link	Expires	Download content
CRDPv2	https://filesender.garr.it/?s=download&token=4fe125a4-4161-4022-9c79-ece1a348a567	May 6th, 2020	1_S2_data.7z 2_S1_data.7z 3_Fusion_data.7z (outdated)
CRDPv2.1	https://filesender.garr.it/?s=download&token=da119b63-6c0c-4437-bb71-db0fd1ef690b	May 12 th , 2020	3_Fusion_data.7z info.7z

If data cannot be downloaded by these dates, please contact the project manager for issuing a new upload.

2 CRDP package description

The second production cycle has generated Sentinel-1 and Sentinel-2 pre-processed data (from L1 to L2), training data and land cover results over a study area made up of 4 tiles (MGRS notation):

- Africa: T37PCP
- Amazonia: T21KUQ
- Amazonia: T21KXT
- Siberia: T42WXS

The package contains pre-processed images, training data, land cover maps and posterior layers for uncertainty products. For each directory a ReadMe.txt file is included to better navigate the folders content.

2.1 Package tree

The package is a repository of several files. It is divided into three main compressed data packages and one info data:

- **info.7z:** info content for products legend visualization.
- **1_S2_data.7z:** input and output data for the classification processing chain of Sentinel-2 images.
- **2_S1_data.7z:** input and output data for the classification processing chain of Sentinel-1 images.
- **3_Fusion_data.7z:** input and output data for the data fusion processing chain.

Inside each data sub-folder, a "ReadMe.txt" can be found that explains in a detailed manner the information and structure of the data therein. The trees of the three compressed files are listed below.

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2.1.1 info.7z

```
├─ HOWTO.txt
├─ legend_cci+_hrlc.png
├─ legend_cci+_hrlc.txt
```

0 directories, 3 files

2.1.2 1_S2_data.7z

```
├─ Classified_data
│ └─ Africa T37PCP
│   │ └─ T37PCP_classified_map.tif
│   │ └─ T37PCP_posteriors.tif
│ └─ Amazonia T21KUQ
│   │ └─ T32KUQ_classified_map.tif
│   │ └─ T32KUQ_n_clearSky_per_pixel.tif
│   │ └─ T32KUQ_n_clouds_per_pixel.tif
│   │ └─ T32KUQ_n_images_per_pixel.tif
│   │ └─ T32KUQ_n_shadows_per_pixel.tif
│   │ └─ T32KUQ_posteriors.tif
│ └─ Amazonia T21KXT
│   │ └─ T21KXT_classified_map.tif
│   │ └─ T21KXT_posteriors.tif
│ └─ Siberia T42WXS
│   │ └─ T42WXS_classified_map.tif
│   │ └─ T42WXS_posteriors.tif
├─ MapLegend.docx
├─ ReadMe.txt
├─ Preprocessed_data
│ └─ Africa T37PCP
│   │ └─ MSIL2A_20180206T075111_N0206_R135_T37PCP.tif
│   │ └─ MSIL2A_20180216T075011_N0206_R135_T37PCP.tif
│   │ └─ MSIL2A_20180303T074819_N0206_R135_T37PCP.tif
│   │ └─ MSIL2A_20180412T074609_N0206_R135_T37PCP.tif
│   │ └─ MSIL2A_20180924T074631_N0206_R135_T37PCP.tif
│   │ └─ MSIL2A_20181024T075001_N0206_R135_T37PCP.tif
│   │ └─ MSIL2A_20181113T075151_N0207_R135_T37PCP.tif
│   │ └─ MSIL2A_20181218T075329_N0211_R135_T37PCP.tif
│   │ └─ MSIL2A_20181223T075321_N0211_R135_T37PCP.tif
│ └─ Amazonia T21KUQ
│   │ └─ MSIL2A_20180417T140049_N0206_R067_T21KUQ.tif
│   │ └─ MSIL2A_20180512T140101_N0206_R067_T21KUQ.tif
│   │ └─ MSIL2A_20180522T140051_N0206_R067_T21KUQ.tif
│   │ └─ MSIL2A_20180716T140049_N0206_R067_T21KUQ.tif
│   │ └─ MSIL2A_20180810T140051_N0206_R067_T21KUQ.tif
│   │ └─ MSIL2A_20180830T140051_N0206_R067_T21KUQ.tif
│   │ └─ MSIL2A_20181009T140051_N0206_R067_T21KUQ.tif
│   │ └─ MSIL2A_20181208T140041_N0207_R067_T21KUQ.tif
│ └─ Amazonia T21KXT
│   │ └─ MSIL2A_20180223T135109_N0206_R024_T21KXT.tif
│   │ └─ MSIL2A_20180429T135111_N0206_R024_T21KXT.tif
│   │ └─ MSIL2A_20180509T135111_N0206_R024_T21KXT.tif
│   │ └─ MSIL2A_20180529T135111_N0206_R024_T21KXT.tif
│   │ └─ MSIL2A_20180623T135109_N0206_R024_T21KXT.tif
│   │ └─ MSIL2A_20180718T135111_N0206_R024_T21KXT.tif
│   │ └─ MSIL2A_20180812T135109_N0206_R024_T21KXT.tif
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| | | └─ MSIL2A_20180827T135111_N0206_R024_T21KXT.tif
| | | └─ MSIL2A_20180911T135109_N0206_R024_T21KXT.tif
| └─ Siberia T42WXS
| | | └─ MSIL2A_20180606T065619_N0206_R063_T42WXS.tif
| | | └─ MSIL2A_20180706T065619_N0206_R063_T42WXS.tif
| | | └─ MSIL2A_20180721T065621_N0206_R063_T42WXS.tif
| | | └─ MSIL2A_20180822T064619_N0206_R020_T42WXS.tif
| | | └─ MSIL2A_20180827T064621_N0206_R020_T42WXS.tif
| | | └─ MSIL2A_20180901T064619_N0206_R020_T42WXS.tif
| | | └─ MSIL2A_20181108T070101_N0207_R063_T42WXS.tif
| └─ ReadMe.txt
└─ Training_data
| └─ Africa T37PCP
| | └─ T37PCP_trainingData.tif
| └─ Amazonia T21KUQ
| | └─ T21KUQ_trainingData.tif
| └─ Amazonia T21KXT
| | └─ T21KXT_trainingData.tif
| └─ Siberia T42WXS
| | └─ T42WXS_trainingData.tif
| └─ ReadMe.txt
└─ ReadMe.txt

```


15 directories, 54 files

2.1.3 2_S1_data.7z

```

└─ Classified_data
| └─ Africa T37PCP
| | └─ 37PCP_rf_classified.tif
| | └─ 37PCP_rf_n_images_per_pixel.tif
| | └─ 37PCP_rf_posteriors.tif
| └─ Amazonia T21KUQ
| | └─ 21KUQ_rf_classified.tif
| | └─ 21KUQ_rf_n_images_per_pixel.tif
| | └─ 21KUQ_rf_posteriors.tif
| └─ Amazonia T21KXT
| | └─ 21KXT_rf_classified.tif
| | └─ 21KXT_rf_n_images_per_pixel.tif
| | └─ 21KXT_rf_posteriors.tif
| └─ Siberia T42WXS
| | └─ 42WXS_rf_classified.tif
| | └─ 42WXS_rf_n_images_per_pixel.tif
| | └─ 42WXS_rf_posteriors.tif
| └─ ReadMe.txt
| └─ legend_s1_cci+hrlec.png
| └─ legend_s1_cci+hrlec.txt
└─ Preprocessed_data
| └─ Africa T37PCP
| | └─ filtered
| | | └─ autumn_average.tif
| | | └─ filtered_S1A_IW_GRDH_1SDV_20180116T031624_20180116T031649_020174_0226A1_DA01_clipped.tif
| | | └─ filtered_S1A_IW_GRDH_1SDV_20180209T031624_20180209T031649_020524_0231C5_6D33_clipped.tif
| | | └─ filtered_S1A_IW_GRDH_1SDV_20180221T031624_20180221T031649_020699_023755_A0EC_clipped.tif
| | | └─ filtered_S1A_IW_GRDH_1SDV_20180305T031624_20180305T031649_020874_023CDE_DD89_clipped.tif
| | | └─ filtered_S1A_IW_GRDH_1SDV_20180317T031624_20180317T031649_021049_02426C_7520_clipped.tif
| | | └─ filtered_S1A_IW_GRDH_1SDV_20180410T031624_20180410T031649_021399_024D78_EE73_clipped.tif

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├── ESACCI_GLCNMO_TrainingSet_80_37pcp
│   ├── ESACCI_GLCNMO_TrainingSet_80_37pcp.cpg
│   ├── ESACCI_GLCNMO_TrainingSet_80_37pcp.dbf
│   ├── ESACCI_GLCNMO_TrainingSet_80_37pcp.prj
│   ├── ESACCI_GLCNMO_TrainingSet_80_37pcp.qpj
│   ├── ESACCI_GLCNMO_TrainingSet_80_37pcp.shp
│   └── ESACCI_GLCNMO_TrainingSet_80_37pcp.shx
├── Training_maps
│   ├── ESACCI_37pcp.tif
│   └── GMLC_37pcp.tif
├── Amazonia T21KUQ
│   ├── TrainingSet_shapefile
│   │   └── ESACCI_GLCNMO_TrainingSet_21kuq
│   │       ├── ESACCI_GLCNMO_TrainingSet_80_21kuq_0.cpg
│   │       ├── ESACCI_GLCNMO_TrainingSet_80_21kuq_0.dbf
│   │       ├── ESACCI_GLCNMO_TrainingSet_80_21kuq_0.prj
│   │       ├── ESACCI_GLCNMO_TrainingSet_80_21kuq_0.qpj
│   │       ├── ESACCI_GLCNMO_TrainingSet_80_21kuq_0.shp
│   │       └── ESACCI_GLCNMO_TrainingSet_80_21kuq_0.shx
│   └── Training_maps
│       ├── ESACCI_21kuq.tif
│       └── GMLC_21kuq.tif
├── Amazonia T21KXT
│   ├── TrainingSet_shapefile
│   │   └── ESACCI_GLCNMO_TrainingSet_21kxt
│   │       ├── ESACCI_GLCNMO_TrainingSet_80_21kxt_1.cpg
│   │       ├── ESACCI_GLCNMO_TrainingSet_80_21kxt_1.dbf
│   │       ├── ESACCI_GLCNMO_TrainingSet_80_21kxt_1.prj
│   │       ├── ESACCI_GLCNMO_TrainingSet_80_21kxt_1.qpj
│   │       ├── ESACCI_GLCNMO_TrainingSet_80_21kxt_1.shp
│   │       └── ESACCI_GLCNMO_TrainingSet_80_21kxt_1.shx
│   └── Training_maps
│       ├── ESACCI_21kxt.tif
│       └── GMLC_21kxt.tif
├── Siberia T42WXS
│   ├── TrainingSet_shapefile
│   │   └── ESACCI_TrainingSet_80_siberia
│   │       ├── ESACCI_TrainingSet_80_siberia.cpg
│   │       ├── ESACCI_TrainingSet_80_siberia.dbf
│   │       ├── ESACCI_TrainingSet_80_siberia.prj
│   │       ├── ESACCI_TrainingSet_80_siberia.qpj
│   │       ├── ESACCI_TrainingSet_80_siberia.shp
│   │       └── ESACCI_TrainingSet_80_siberia.shx
│   └── Training_maps
│       ├── ESACCI_siberia.tif
│       └── GMLC_siberia.tif
├── ReadMe.txt
└── ReadMe.txt

```

43 directories, 263 files

2.1.4 3_Fusion_data.7z

```

├── Africa T37PCP
│   ├── T37PCP_LOGP_best_class_fused.tif
│   ├── T37PCP_LOGP_best_posterior_fused.tif
│   └── T37PCP_LOGP_secondBest_class_fused.tif

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├─ T37PCP_LOGP_secondBest_posterior_fused.tif
├─ Amazonia T21KUQ
│   ├── T21KUQ_LOGP_best_class_fused.tif
│   ├── T21KUQ_LOGP_best_posterior_fused.tif
│   ├── T21KUQ_LOGP_secondBest_class_fused.tif
│   └─ T21KUQ_LOGP_secondBest_posterior_fused.tif
├─ Amazonia T21KXT
│   ├── T21KXT_LOGP_best_class_fused.tif
│   ├── T21KXT_LOGP_best_posterior_fused.tif
│   ├── T21KXT_LOGP_secondBest_class_fused.tif
│   └─ T21KXT_LOGP_secondBest_posterior_fused.tif
├─ Siberia T42WSX
│   ├── T42WSX_LOGP_best_class_fused.tif
│   ├── T42WSX_LOGP_best_posterior_fused.tif
│   ├── T42WSX_LOGP_secondBest_class_fused.tif
│   └─ T42WSX_LOGP_secondBest_posterior_fused.tif
└─ ReadMe.txt

```

4 directories, 17 files