

EUMETSAT's Drought & Vegetation Data Cube

A prototype

Information Day: 11 May 2021

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Agenda D&V Cube Info Day

09:30 – 09:45: Welcome & Introduction

09:45 – 11:00: The Drought & Vegetation Data Cube: Introduction to the variables

(2m Temperature &) Solar Radiation (SIS, DNI, SDU)

Precipitation

Root Zone Soil Wetness

~10:15 break of 5 min

Land Surface Temperature

Vegetation Parameter (FVC, LAI, fAPAR)

NDVI

Reference Evapotranspiration

10:45 – 11:15: COFFEE BREAK

11:15 – 11:45: Access to the Data Cube and CM SAF R Toolbox demonstration

11:45 – 12:15: Climatological drought monitoring in Switzerland using SAF satellite products

12:15 – 12:45: What now? – The Exploration Phase

12:45 – 13:00: Q & A and Feedback

Accessing the D&V Cube

- Link to access the cube only for “enrolled” users:
 - create an account on moodle and enrol yourself to the “Data Cube Information Page”

<https://training.eumetsat.int/course/view.php?id=399>

11 May 2021, 09:30 - 13:00 - Register [here](#).

Enrol in the Exploration phase

Following the Info day, get hands-on with the cube and test it in “real live” applications, in the **Exploration phase (May - Sept. 2021)**. This will give you access to additional resources and networking opportunities. [How to join?](#)

1. Step

• Create an account

• use [Enrol me](#) with key provided during the Info day

2. Step

What is the Drought & Vegetation Data Cube?

The Drought & Vegetation Data Cube (D&V Data Cube) is a collection of data records of the portfolio of EUMETSAT SAFs and others relevant for drought and vegetation monitoring and analysis. All data records are provided on a regular latitude/ longitude grid and in CF-compliant netCDF via a THREDDS server.

An overview on the data cube, as well the list of variables included is provided below:

Variable	Datasource	Temporal Coverage	Spatial Resolution	Temporal Resolution
Global Radiation	Satellite	Jan 1983 – Dec 2020	0.05°	Daily & monthly
Direct normal Solar Radiation	Satellite	Jan 1983 – Dec 2020	0.05°	
Sunshine Duration	Satellite	Jan 1983 – Dec 2020	0.05°	
Land Surface Temperature	Satellite	Jan 2004 – Dec 2020	0.05°	
Reference Evapotranspiration	Satellite	Jan 2004 – Dec 2020	0.05°	
NDVI	Satellite	Mar 2007 – Dec 2020	0.01°	
Fractional Vegetation Cover	Satellite	Jan 2004 – Dec 2020	0.05°	

Exploration phase (May - September)

Restricted

Not available unless: You belong to **Exploration group**

Forum

For regular exchange on the Data Cube - Please post any questions or comments regarding the D&V Cube to this forum.

Please note that posts in the forum generate emails in your inbox. You can unsubscribe to this forum to stop being notified of new posts.

How to access the Data Cube

[Link to D&V Cube THREDDS](#)

Enrolment key: **explored&vcube21**

3 EUM/USC/VWG/21/1228254, v1 Draft, 11 May 2021

EUMETSAT

Browsing the D&V Cube



Panoply

Version 4.10.4
Build PAN124M2
2019-02-04

NASA/GISS

NASA Goddard Institute for Space Studies
2880 Broadway, New York, NY 10025 USA

Panoply uses several third-party, open-source Java libraries. See the 'Credits & Acknowledgments' help window for more information.

Windows 10 10.0 — Java 1.8.0_221
Max memory 1013 MB

Please note: at the moment there might be issues accessing the LST CDR. We are working this!

Panoply: Panoply — Sources

File Edit View History Bookmarks Plot Window

New Ctrl+N

Open... Ctrl+O

Open Remote Dataset... Ctrl+L

Open Remote Catalog... Ctrl+Shift+L

Close Ctrl+W

Save Image

Save Image As...

Export CL Script...

Export Data

Export KMZ...

Export Animation...

Print...

Quit Panoply

Panoply: Panoply — Sources

File Edit View History Bookmarks Plot Window Help

Create Plot Combine Plot Open Dataset

Datasets Catalogs Bookmarks

Unidata THREDDS PSDC Server

PSDC - Data Catalog

CMSAF_CDR_DN1_M

CMSAF_CDR_DN1_D

CMSAF_CDR_SDU_M

CMSAF_CDR_SDU_D

CMSAF_CDR_SIS_M

CMSAF_CDR_SIS_D

CMSAF_JCDR_DN1_M

CMSAF_JCDR_DN1_D

CMSAF_JCDR_SDU_M

CMSAF_JCDR_SDU_D

CMSAF_JCDR_SIS_M

CMSAF_JCDR_SIS_D

ECMWF_T2M_M

GPCP_PRECIP_M

HSR_CDR_WET_D

HSR_JCDR_WET_D

LSASAF_CDR_FAPAR_D

LSASAF_CDR_FVC_D

LSASAF_CDR_LAI_D

LSASAF_CDR_LST_H

LSASAF_CDR_METREF_D

LSASAF_CDR_NDVI_100

LSASAF_JCDR_FAPAR_D

LSASAF_JCDR_FVC_D

LSASAF_JCDR_LAI_D

LSASAF_JCDR_NDVI_100

LSASAF_JRT_LST_H

Catalog Branch "PSDC - Data Catalog"

Full Name: PSDC - Data Catalog

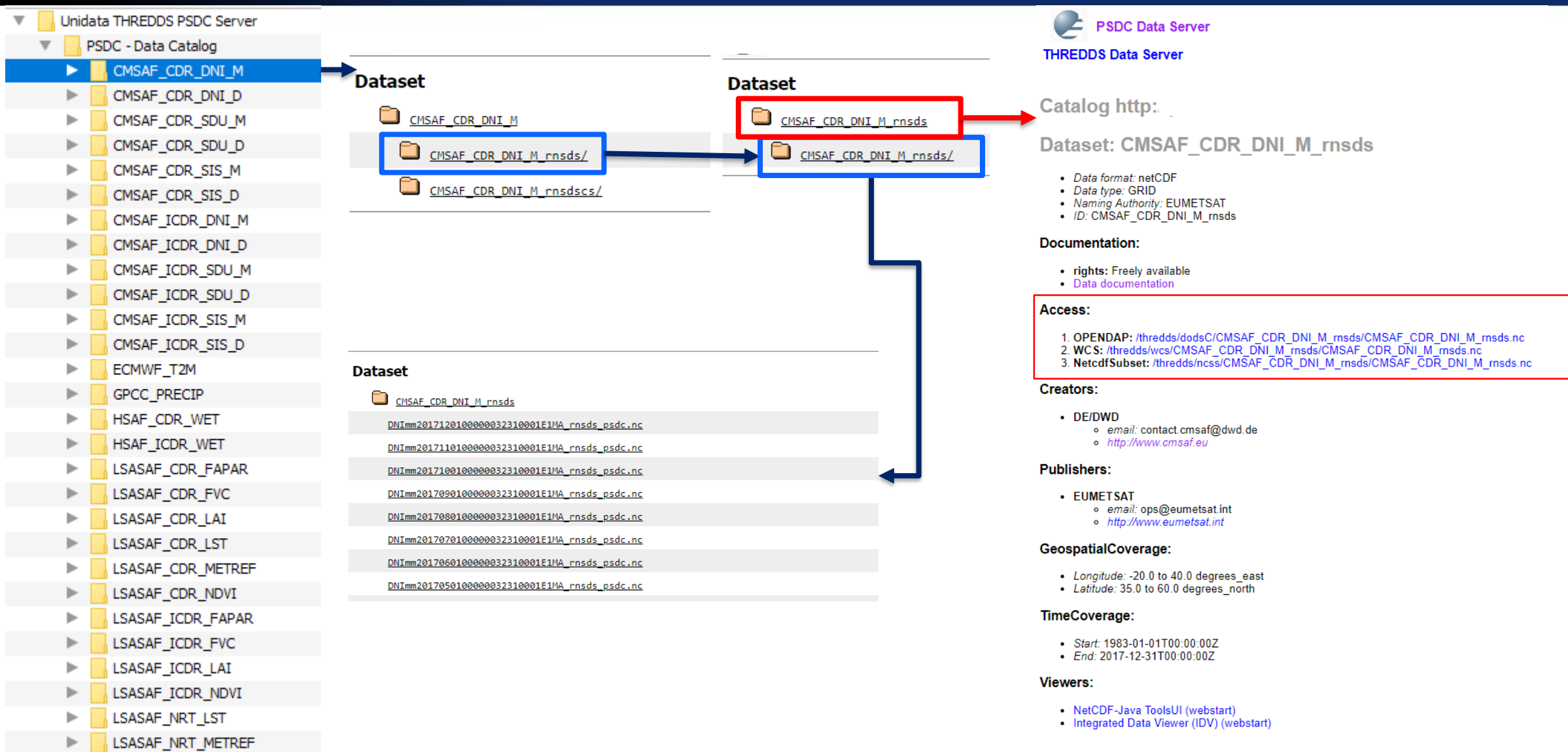
Catalog URL: http://psd.cube.eumetsat.int/thredds/catalog

ID: DatasetScan

Data FormatType: NETCDF

Data Type: netCDF

Accessing the D&V Cube



Some R Tools you may want to consider

- CM SAF R Toolbox

- Designed for CM SAF data, but works for all cf-compliant ncdf data on regular lat-lon grid with a time dimension
- designed for climate analysis (many CDO functionalities)
- Introduction follows
- Check out the [Short Course \(20 Jan 2021\)](#)

- R-Instat

- For comparison with station data
- Tutorial on Moodle, linked from D&V Cube Info Page
- Check out the [Short Course \(03 Feb 2021\)](#)