# CM SAF Newsletter 29
# March 2017

## Start of CM SAF Continuous Development and Operations Phase 3 (CDOP-3)

On 1 March 2017 CM SAF started its 3rd Continuous Development and Operations Phase (CDOP-3). The CDOP-3 covers the period March 2017- February 2022 and will further extend the CM SAFs portfolio of operational products and develop new products. CM SAF has now a consortium of eight partners: Deutscher Wetterdienst (DWD, leading entity), Finnish Meteorological Institute (FMI), Federal Office of Meteorology and Climatology MeteoSwiss, the Royal Netherlands Meteorological Institute (KNMI), Royal Meteorological Institute of Belgium (RMI), Swedish Meteorological and Hydrological Institute (SMHI), UK Met Office (UKMO), and the National Center for Scientific Research, Laboratoire d'etudes en Géophysique et Océanographie Spatiales (CNRS/LEGOS) from France as new partner in CDOP-3.

## Release of CLARA-A2: CM SAF cLoud, Albedo and surface RAdiation dataset from AVHRR data - Edition 2

The CLARA-A2 record provides cloud properties, surface albedo and surface radiation parameters derived from the AVHRR sensor onboard polar orbiting NOAA and METOP satellites. This second edition is the improved and extended follow-up of the first version of the record (CLARA-A1) which now covers a 34 year time period (1982-2015). CLARA-A2 features a range of cloud products: cloud mask, cloud top temperature/pressure/height (CTT/CTP/CTH), cloud thermodynamic phase (CPH), cloud optical thickness (COT), cloud particle effective radius (REF) and cloud water path (CWP). Cloud products are available as monthly and daily averages and also as daily resampled global products (Level 2b) for individual satellites. Cloud parameter results are also presented as single-parameter distributions (frequency histograms of CTP, CTT, COT, REF and CWP) and multi-parameter distributions (joint frequency histograms of COT, CTP and CPH for daytime conditions). Surface albedo is presented as monthly and pentad (5 day) averages and is derived using all available data during the studied period. Surface radiation products are provided as monthly averages for the downwelling shortwave (including also daily averages) and the down- and upwelling longwave components. All monthly and daily averages are available on a 0.25°x0.25° global grid. Surface albedo and cloud products are also provided in two equal area grids with a resolution of 25 km x 25 km covering the Polar Regions. Daily resampled cloud products (level 2b) are provided in a global grid with a resolution of 0.05°x0.05°. For the latter, also a probabilistic cloud mask is added as an experimental product. The data record can be ordered via the Web User Interface. More information on the data record is available from the DOI page: 10.5676/EUM_SAF_CM/CLARA AVHRR/V002

## Change in CM SAF product portfolio from March 2017 onwards

As described above CM SAF recently started a new project phase, which brings some changes and new challenges. Generally CM SAF will continue to develop and deliver improved Climate Data Records (CDRs) of Essential Climate Variables (ECV) related to the energy and water cycle and corresponding operational versions. However, the development and provision of new products also mean that a few currently available parameters are discontinued:

With the start of the CDOP-3 in March 2017 the ATOVS-based EDR products of HTW, HLW and HSH are discontinued and are not part of the CM SAF product portfolio anymore. The products from Jan 2004 to Feb 2017 will remain available to the users via the Web User Interface. Additionally, CM SAF will continue the processing on a best-effort basis as long as possible and products from March 2017 onwards will be available to the users as auxiliary data via the Web User Interface. Users are recommended to use the products from March 2017 onwards with caution as no validation of these parameters will be done by CM SAF. Further note the service message No. 105 from 11 November 2016 (or respective section in Newsletter 26).

The generation of the GERB/SEVIRI-based parameters TRS and TET will be terminated as well. Products will be provided until February 2017. All TRS and TET EDR data from Jan 2004 to Feb 2017 will remain available via the Web User Interface. As for the ATOVS-based parameters, CM SAF will continue the processing on a best-effort basis as long as possible and products from March 2017 onwards will be available to the users as auxiliary data via the Web User Interface. Users are recommended to use the products from March 2017 onwards with caution as no validation of these parameters will be done by CM SAF

We apologize for any inconvenience this may cause!

## Summary report and presentations from CM SAF/EUMETSAT workshop 2016

From 15 to 17 November 2016 a workshop on Applications of Satellite Climate Data Records in Numerical Modelling organized by CM SAF and EUMETSAT took place hosted by ECMWF at Reading, UK. This workshop brought together scientists using satellite data records in the context of numerical modelling and providers of satellite-based data records. The workshop was organized around three topics:

1) Data assimilation and model initialization
2) Process-oriented model evaluation and improvement
3) Model validation, climate trends and attribution studies

and provided valuable information on the current use and future requirements on satellite climate data records.
The summary report and the presentations of the workshop are now available via the webpage of the workshop.

## Publications by CM SAF team

The following list gives an overview of some recently published papers by the CM SAF team covering CM SAF products and developments. Authors from the current CM SAF team are marked in bold:

**Dietzsch, F.**, Andersson, A., Ziese, M., **Schröder, M.**, Raykova, K., Schamm, K., Becker, A.: A Global ETCCDI-Based Precipitation Climatology from Satellite and Rain Gauge Measurements. Climate. 2017; 5(1):9., DOI: 10.3390/cli5010009

**Karlsson, K.-G**., **Anttila, K.**, **Trentmann, J.**, **Stengel, M.**, **Meirink, J. F.**, **Devasthale, A**., **Hanschmann, T.**, **Kothe, S.**, **Jääskeläinen,E.**, **Sedlar, J., Benas, N., van Zadelhoff, G.-J.,** Schlundt, C., **Stein, D., Finkensieper, S.,** Håkansson, N., and **Hollmann, R.:** CLARA-A2: The second edition of the CM SAF cloud and radiation data record from 34 years of global AVHRR data, Atmos. Chem. Phys. Discuss., DOI: 10.5194/acp-2016-935, in review, 2017.

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