



Satellite-based climate information within the WMO RA VI Regional Climate Centre on Climate Monitoring

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The WMO Regional Climate Centre on Climate Monitoring (RCC-CM) for Europe and the Middle East (hosted at Deutscher Wetterdienst) assists National Meteorological and Hydrological Services (NMHSs) to deliver better climate services and products within the Global Framework for Climate Services (GFCS). The services are provided based on scientific standards, are routinely and reliably generated and made available in an operational mode.

The RCC-CM product portfolio is based on the Essential Climate Variables (ECVs) as defined by the Global Climate Observing System (GCOS) and comprises in situ-based and satellite-based products. Satellites make a valuable contribution to regional climate monitoring efforts due to their capacity of measuring in regions with a coarse station network and with high resolution. High-quality satellite monitoring products are therefore an integrative part of RCC-CM. The satellite component of RCC-CM offers various products spanning the atmospheric domain (e.g. radiation, clouds, water vapour) and terrestrial domain (e.g. snow cover, soil moisture). The exploited atmospheric data are provided by the EUMETSAT Satellite Application Facility on Climate Monitoring (CM SAF), while the terrestrial data are provided by other EUMETSAT SAFs and by projects of ESA's Climate Change Initiative (CCI).

The satellite-based monitoring products are generally taking advantage of a new generation of climate datasets, such as near-real-time Environmental Data Records (EDRs) for operational monitoring purposes and long-term Thematic Climate Data Records (TCDRs) with adequate stability, accuracy and homogeneity for the generation of Climate Information Records (CIRs). These derived records consist of monthly, seasonal and annual means and anomalies, spatio-temporal diagrams, trend maps and time series. The products are provided as maps, statistical plots and gridded data, which are made available through the RCC-CM website (www.dwd.de/rcc-cm). Special efforts are made on the documentation of the products including quality and uncertainties.

The poster presents the outline of the RCC-CM satellite-based climate monitoring scheme and the existing products at a glance.