



The Satellite Application Facility on Climate Monitoring: Continued Development and Operations Phase

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This presentation provides an overview of EUMETSAT's *Satellite Application Facility on Climate Monitoring* (CM-SAF) being a joint activity of the meteorological services of Belgium, Finland, the Netherlands, Sweden, Switzerland, and Germany. The contribution will concentrate on the lessons learnt during the Initial Operations Phase (IOP) and the activities for the Continued Development and Operations Phase (CDOP) in the years 2007 - 2012.

Within the IOP CM-SAF established operational services for several atmospheric parameters related to water vapour, clouds and radiation fluxes at the top of the atmosphere and the surface. Currently, CM-SAF is providing a full suite of monitoring products from the SEVIRI and GERB instrument covering the full disc. Validation studies have shown that especially shortwave radiation fluxes at the surface outperform model based reanalysis. Water vapour products are provided from two systems, ATOVS and SSM/I globally. The SSM/I record covers almost 20 years and it has already climate quality because the time series is recalibrated and homogenised.

The CDOP started in March 2007 and the activities reflect the lessons learnt during the IOP. Key activities within the next five years are: (1) A consistent time series of atmospheric parameters from SEVIRI and GERB data for Meteosat 8 and 9. (2) A federation activity between three Satellite Application Facilities (CM, GRAS and Ozone) will analyse water vapour products derived from MetOp instruments ATOVS, IASI, GOME-2 and GRAS. (3) A thirty year time series of Upper Tropospheric Humidity derived from Meteosat first and second generation done in collaboration of CM-SAF, the Laboratoire Météorologie Dynamic (LMD) and EUMETSAT, (4) Consistent global cloud and surface radiation fluxes derived from AVHRR data and (5)

Expansion of SSM/I products to over ocean precipitation and turbulent heat fluxes at the ocean surface in collaboration with the Max-Planck Institute for Meteorology in Hamburg.