



How to foster the application of Satellite Climatology within national Climate Services?

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The Satellite Application Facility on Climate Monitoring (CM SAF) has been run by several national European weather and climate services under guidance of EUMETSAT for more than a decade. CM SAF substantially contributes to a better understanding of the regional and global climate system. CM SAF generates, documents and freely distributes long term satellite-based climate data records (CDRs) of the atmospheric energy and water cycle. These CDRs are for instance utilized for validating climate re-analyses at the European Centre for Medium Range Weather Forecast (ECMWF) and they are a foundation for the development and evaluation of climate models.

However, why are these CDRs only rarely used at national climate services? The climate service at MeteoSwiss has endeavored to reply to this question by carrying out interviews with the respective climatologists. We gained insights on how climatologists traditionally work and we have learned what keeps them from using satellite climatologies. We also learned about the many opportunities that could be taken by satellite-based CDR producers which would readily fulfill climatologist's expectations. CDRs are still too far away from end user applications but there is currently no space agency or no climate service able to bridge this gap. The provision of well documented and high quality CDRs is often only one third of the way to a climate service. We will utilize examples to demonstrate how satellite-based CDRs could be applied within the national climate service. We will also provide programmatic aspects on how space agencies and national stakeholders could better cover the full requirements and process chain from sensor radiances to an end-user climate climate service application.