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METOP-ASCAT surface soil moisture data in near-real time supporting operational hydrology and water management

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Within the framework of the Satellite Application Facility on Support to Operational Hydrology and Water Management (H-SAF) new satellite-derived soil moisture products are generated on an operational level for European users. Amongst a range of products for precipitation and snow, surface and profile soil moisture datasets are generated, that are available in near-real time.

This contribution presents the product generation chain and product characteristics of the value-added surface soil moisture products, derived from the Advanced Scatterometer Instrument (ASCAT) aboard the METOP satellite, which will be available until the 2020 timeframe. The 25 km ASCAT surface soil moisture product gives a nearly daily coverage over Europe. This product is used for the generation of the 1 km downscaled ASCAT surface soil moisture product following a statistical disaggregation approach, where the relationship between the mean surface soil moisture content of a small-scale local area (derived from ENVISAT ASAR data) and its regional-scale mean (derived from METOP ASCAT data) is exploited.