

CONFERENCE 2021

VIRTUAL 20 – 24 SEPTEMBER 2021

The Satellite Applications Facility on Land Surface Analysis: The next Continuous Development and Operations Phase (No 430)

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The EUMETSAT Satellite Application Facility on Land Surface Analysis (LSA-SAF), a member of the EUMETSAT SAF Network, has been in operations for over 15 years, providing an array of products and services for the characterization and monitoring of land surfaces. The LSA-SAF will soon initiate a new Continuous Development and Operations Phase (CDOP-4), a 5-year period during which the LSA-SAF is committed to strengthen its position as a reference centre for retrieval of information on land surfaces from remote sensing data, with emphasis on the use of EUMETSAT satellites.

The range of products and services provided by the LSA-SAF has grown steadily since its first CDOP. The production and distribution of near-real-time and offline land surface products are at the core of the LSA-SAF activity. In CDOP-4, the LSA-SAF products will cover three main (and inter-linked) thematic areas, aiming the characterization of (i) the surface radiation components; (ii) vegetation state and stress; and (iii) land-atmosphere exchanges of energy, water and carbon.

CDOP-4 will be marked by the initial operations of the next generation of EUMETSAT satellites. Service continuity and the transition from MSG to MTG and from EPS to EPS-SG will therefore be given high priority. This means that the LSA-SAF will maintain the MSG and EPS processing chains as they are at the end of CDOP-3: the operational production, archiving and dissemination will continue to be ensured during CDOP-4. The maintenance of MSG and EPS processing chains, while implementing the service to derive similar products from MTG and EPS-SG, will allow users to compare estimates from different sensors and to prepare their applications to the most recent product/satellite versions. Finally, the maintenance of the MSG and EPS products ensures the continuation of existing datasets in near real time, allowing these products to be used as interim data records, in some cases in line with climate data records (i.e., as ICDR).



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The LSA-SAF team is focused on the use of the capabilities of forthcoming instruments, primarily those on-board MTG and EPS-SG, to drive the development of new algorithms and products, this in view to maintain the service being provided state-of-the-art. These, together with a careful assessment of user needs and users' feedback, will dictate the evolution of LSA-SAF products and services.