



ESA's activity for preparation the scientific exploitation of the Sentinel missions

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In the last years, data streams from various Earth observing systems including ESA's ERS-1, ERS-2, and Envisat mission served different disciplines of the Earth science community. The manifold achievements are documented in numerous high-level scientific publications. Today more than 7000 scientists are exploiting these data and many of their scientific achievements found their way into operational services.

Shortly, a new age in the ESA Earth Observation (EO) program is becoming a reality with the launch of the Earth Explorers, the continuity of well-established meteorological missions and the development of the space component for the GMES (Global Monitoring for Environment and Security) namely the Sentinels. These planned missions will provide the science community with an unprecedented observation capacity in addressing challenges of ESA's Living Planet Program and of the objectives outlined by major international scientific initiatives. The suite of instruments available on these missions support the generation of harmonised data streams, essential for the generation of consistent data products, and thus supporting data ingestion into integrated models. The strategy in the scientific exploitation of these data streams therefore must follow the GEOSS concept by considering the instruments not in isolation but as one observing system. Preparation activities for the scientific exploitation therefore need to be focussed on data harmonisation issues and the development of consistent data products by making full use of the synergies provided by the suite of instruments. A close dialogue with the modelling communities is considered of paramount importance for the success of this undertaking.

Activities undertaken by ESA to prepare the scientific exploitation of the Sentinel missions will be introduced in this presentation.