



The ESA Scientific Exploitation of Operational Missions element

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The objectives of the ESA Scientific Exploitation of Operational Missions (SEOM) programme element are

- to federate, support and expand the research community
- to strengthen the leadership of European EO research community
- to enable the science community to address new scientific research

As a preparation for the SEOM element a series of international science users consultation has been organized by ESA in 2012 and 2013. In particular the ESA Living Planet Symposium was successfully organized in Edinburgh September 2013 and involving 1700 participants from 60 countries.

The science users recommendations have been gathered and form the basis for the 2014 SEOM work plan approved by ESA member states.

The SEOM element is organized along the following action lines:

1. Developing open-source, multi-mission, scientific toolboxes : the new toolboxes for Sentinel 1/2/3 and 5P will be introduced
2. Research and development studies: the first SEOM studies are being launched such as the INSARAP studies for Sentinel 1 interferometry in orbit demonstration , the IAS study to generate an improved spectroscopic database of the trace gas species CH₄, H₂O, and CO in the 2.3 μm region and SO₂ in the UV region for Sentinel 5 P. In addition larger Sentinels for science call will be tendered in 2014 covering grouped studies for Sentinel 1 Land , Sentinel 1 Ocean , Sentinel 2 Land, Sentinel 3 SAR Altimetry , Sentinel 3 Ocean color, Sentinel 3 Land and Sentinels Synergy .
3. Science users consultation : the Sentinel 2 for Science workshop is planned from 20 to 22 may 2014 at ESRIN to prepare for scientific exploitation of the Sentinel-2 mission (<http://seom.esa.int/S2forScience2014>) . In addition the FRINGE workshop focusing on scientific exploitation of Sentinel1 using SAR interferometry is planned to be held at ESA ESRIN in Q2 2015
4. Training the next generation of European EO scientists on the scientific exploitation of Sentinels data: the Advanced Training course Land Remote sensing will be held in University of Valencia , Valencia, Spain from 8 to 12 September 2014 (see <http://seom.esa.int/landtraining2014/index.php>) . The bi-annual ESA EO summer school on “Earth System Monitoring & Modelling” will be held in ESRIN next summer (4-14 Aug 2014). (See: <http://earth.eo.esa.int/trainingcourses/EOSummerSchool2012/index.php>)

5. Promoting Science data use and results : A web site has been prepared for the SEOM element and is available at: <http://seom.esa.int/>.

Proceedings of the ESA Living Planet Symposium are in preparation to be published Q1-2014.

The SEOM element plans for 2014 will be further detailed and the first results will be presented.