



## Ensuring Validated Earth Observation Datasets

**F**or sustainable resource management, decision-makers rely on consistent interpretations of Earth Observation (EO) data, often acquired over large areas, on different dates, and from different sensor systems. When system-induced artifacts are present, erroneous interpretations may occur. However, many artifacts can be removed using standardised methodologies. To-date, the non-existence of such methodologies has been a large stumbling block to the wider use of EO data for natural resources management.

The approaches to validating the calibration models for EO data must be standardized over time and space. Well calibrated, validated and self-consistent digital geospatial data are essential for creating new knowledge relevant to the sustainable development of natural resources issues.

The **Validated Earth Observation Datasets** project will produce correction algorithms and tools that will remove artifacts related to the technical aspects of the EO process accompanied by supporting quality assessment reports. Emphasis will be placed on new environmental EO sensor systems that will be of importance in sustainable resource management strategies.

These sensor systems include:

- spaceborne hyperspectral systems,
- high spatial resolution and advanced radar systems, and
- ground-based (*in situ*) sensorwebs

### Project Priorities:

- The generation of new tools for the characterization, correction and integration of EO data. An assessment will be made of the improvements resulting from application of the new correction tools on EO data products.
- Improvements to remote sensing data and the standardization of new EO products through usage of sensorwebs, which are ground-based (*in situ*) networks of automated, intra-communicating sensors.
- The validation of users needs for calibrated EO data products.

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