Geophysical Research Abstracts
Vol. 17, EGU2015-2423, 2015
EGU General Assembly 2015

Validation of satellite-derived land surface variables - international coordination and status

Gabriela Schaepman-Strub and the Land Product Validation Sub-group (CEOS/WGCV/LPV, http://lpvs.gsfc.nasa.gov/) Team

Evol. Biology and Environmental Studies, University of Zurich, Switzerland (gabriela.schaepman@ieu.uzh.ch)

Validation and quality assessment are important components in the processing chain of satellite-derived land surface products. While most products nowadays are being validated by the responsible space agency, common validation data sets and methods across products from different agencies are still under development. The aim of the Land Product Validation Sub-group (Committee on Earth Observation Satellites) is to internationally coordinate intercomparison and validation efforts of satellite-derived land surface variables.

Main components of the proposed validation concept are a peer-reviewed protocol describing standard methods and the identification of fiducial reference data and reference sites where new validation methods and algorithms can be tested. The identified methods, fiducial reference data, and satellite product subsets are then integrated in an online platform to generate standardized validation reports.

This presentation summarizes the state of validation of satellite-derived products as assessed by LPV. LPV currently covers albedo, FAPAR, LAI, land cover, snow cover, land surface temperature, soil moisture, phenology, and fire/burnt area. For a selected set of above variables, a summary of validation methods, available in situ data, challenges, and validation stage are provided. We conclude with the identification of methodological gaps and data needs for a sustainable validation of satellite-based terrestrial Essential Climate and Biodiversity Variables in support of the climate observing system and biodiversity and ecosystem services assessments.

The presentation is thought to highlight achievements by LPV, as well as to reach out to the satellite product user community and to measurement networks interested in supporting validation efforts with reference data.