



Overview and Status of the CEOS Land Product Validation Subgroup

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The Committee on Earth Observation Satellites (CEOS), the space arm of the Group on Earth Observations (GEO), plays a key role in ensuring long-term confidence in the accuracy and quality of Earth Observation data and products. The Land Product Validation (LPV) subgroup of the CEOS Working Group on Calibration and Validation (WGCV) arose out of the recognition that standardized approaches to global land product validation were essential for wide acceptance and use of science-quality products. A common approach to validation, based on internationally recognized best practices protocols, has helped encourage widespread use of fiducial reference datasets, thus helping science product developers move towards standardized approaches for intercomparison and validation across products from different satellites, algorithms, and CEOS agency sources.

This presentation will provide the status and activities of eleven LPV subgroup focus areas, that now include nine Global Climate Observing System (GCOS) terrestrial Essential Climate Variables (ECVs) and two GEO Biodiversity Observation Network (BON) Essential Biodiversity Variables (EBVs): (1) Snow Cover, (2) Surface Albedo, (3) Land Cover, (4) Leaf Area Index, (5) Fraction of Absorbed Photosynthetically Active Radiation (FAPAR), (6) Active Fires, (7) Soil Moisture, (8) Land Surface Temperature and Emissivity, (9) Land Surface Phenology, (10) Biomass, and (11) Vegetation Indices. We highlight activities of the Biomass focus area, which is developing a protocol for the use of ground and airborne observation networks in calibration and validation of biomass data products from the upcoming confluence of ESA and NASA space-based Lidar and SAR missions planned for launch between 2018 and 2022.

The LPV subgroup is also focusing on the implementation of a global validation framework for product intercomparison and validation. This framework is based on a citable protocol, fiducial reference data, and automated subsetting. Ideally, each of these parts will be integrated into an online platform where quantitative tests are run, and standardized intercomparison and validation results reported for all products used in the exercise. The establishment of consensus guidelines for in situ measurements as well as inter-comparison of trends derived from independently-obtained reference data and derived products will enhance coordination of the scientific needs of the Earth system communities.