



Collection of Ground Biophysical Measurements in support of Copernicus Global Land Product Validation: The ImagineS database

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Provision of reliable ground reference datasets is mandatory for the validation of satellite products. The ground data should be collected considering the spatial variability of the sites in agreement with recommendations of the CEOS WGCV Land Product Validation sub-group for validation of moderate resolution satellite products. This paper describes a network of demonstration sites established within the FP7 ImagineS project in support of the validation of Copernicus Global Land biophysical vegetation (LAI, FAPAR and FCOVER) products where ground measurements are being collected. Protocols for field data collection based on optical instruments as well as for up-scaling of local ground data to the site extent are provided. Up to now, 10 different sites have been sampled in 45 field campaigns during the last two years (2013-2014); reaching the number of one-thousand Elementary Sampling Units (ESU) sampled with digital hemispherical photograph (DHP), LAI-2200 or AccuPAR devices. Additional campaigns are expected during 2015. Moreover, autonomous PAR systems (PASTIS) have been installed over a few sites for the continuous monitoring of FAPAR and PAI. A comprehensive database for the validation of Copernicus Global Land biophysical products is being prepared. The ImagineS database will be shared through the ImagineS web site whereas mean values at 3x3 km² could be shared through the CEOS On-Line Validation Experiment (OLIVE) tool for the validation of medium resolution satellite biophysical products.