



12 years time series of SPOT/VEGETATION biophysical variables

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Geoland2 project is the FP7 project which intends to prepare, validate and demonstrate pre-operational service chains and products of the GMES Land Monitoring Service. The architecture of geoland2 is made of 3 Core Mapping Services (CMS) providing “basic” land products to 7 Core Information Services (CIS) acting on various applications in spatial planning, water quality, forest monitoring, agriculture and food security, land carbon monitoring, and natural resources monitoring.

We focus here on the BioPar CMS products related to soil and vegetation variables: the surface albedo, the Leaf Area Index (LAI), the Fraction of green Vegetation Cover (FCover), the fraction of absorbed photosynthetically active radiation (FAPAR) and the Normalized Differential Vegetation Index (NDVI). These products are derived from SPOT/VEGETATION sensor data and are currently distributed on the geoland2 portal (<http://www.geoland2.eu>). During the last year, the French Space Agency (CNES) has processed the 12 years of VGT archive data and generated a long term time series of biophysical variables, from 1999 to 2010. Since 2011, the production is running continuously at VITO (Belgium). The products provide a global coverage with a spatial resolution of 1 km and a temporal resolution of 10 days. CNES is currently processing this archive to produce a climatology : the vegetation variables are averaged over the 12 years to get a reference on vegetation variables with a 10 days step. In the next months, the SPOT/VGT time series will be completed by consistent LAI, FAPAR and FCover products derived from the AVHRR long term data archive covering the period from 1982 to 2000. This 30-years time series will provide a unique view of the evolution of ecosystems due to natural changes or human pressure. The poster will briefly describe the organization set-up to build the BioPar CMS and the product portfolio. Then the emphasis will be put on the content of the 12-year archive of vegetation products delivered for free to the users : technical content of the products, validation protocol, examples of maps on different phenomena (drought, burnt area, ...).