



## DA-09-01b\_1: Land Product Harmonisation

1. Continue developing the strategy for generating consistent biophysical products from medium resolution sensors.
2. Evaluate global landcover classification at regional scale.
3. Update the BELMANIP, and intercompare the fAPAR products.
4. Publish the results.

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## DA-09-01b\_1: Update(1 of 4)

A prototype of 'consensus' product is currently under development within GEOLAND2 project. This will extract currently available products (LAI, fAPAR and fCover mainly derived from MODIS C5, GLOBCARBON and CYCLOPES) and use orthogonal empirical functions to generate a composite product. It is then scaled based on ground measurements available over a few sites. The validation is achieved by cross validation to get more independent calibration and validation processes. A 'consensus' database is thus generated and it is currently used to train specific algorithms for each sensor. This will provide consistency between products derived from each sensor and improve performance because of the calibration over ground measurements. The final release of the algorithms is planned for June 2009. A paper will be written (submission planned for September 2009) to describe the algorithm and the corresponding performances.

## DA-09-01b\_1: Update(2 of 4)

The several landcover maps currently available have been compared over a hotspot of discrepancy (Michoacan, Mexico) where strong differences are observed. Several matrices have been analysed to quantify the (in)consistency between landcover maps. The GLC2000 and GLOBCOVER maps appear to be the closest to the locally derived maps based on Landsat TM. A paper is currently under preparation (to be submitted probably in June 2009).

## DA-09-01b\_1: Update(3 of 4)

The previous database of sites (called BELMANIP) used for intercomparison of products was jeopardized by some sites showing a significant degree of heterogeneity. A second version of the network (called BELMANIP2) has been proposed, including 400 sites of 31x31 pixels for which the heterogeneity (between 1km pixels) is limited. A quantification of the distribution of biomes according to GLOBCOVER global land cover map is currently under process. A paper describing this update of BELMANIP will be submitted in September 2009.

## DA-09-01b\_1: Update(4 of 4)

To parallel the validation exercise already achieved with LAI products, several fAPAR products (CYCLOPES, MODIS C5, GLOBCARBON) have been extracted over the BELMANIP2 sites. The MERIS products are still missing due to the difficulty in extracting them from the archive in an automatic way. This should be solved hopefully within a few months by developing a GPOD processing facility. Results are expected for the end of 2009 and will be published in early 2010.