

PROJECT INFORMATION

Project title: GlobBiomass

Project ID: 87

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PROJECT DESCRIPTION

The main purpose of the DUE GlobBiomass project is to better characterise and to reduce uncertainties of AGB estimates by developing an innovative synergistic mapping approach in five regional sites for the epochs 2005, 2010 and 2015 and for one global map for the year 2010. The project team includes the leading Earth Observation experts of Europe and is linked through Partnership Agreements with further national bodies from Brazil, Canada, China, Russia and South Africa. More information on the project can be found at <http://globbiomass.org/>

The data requested from the UNECE ICP Forests programme on vegetation biomass will be specifically used to validate (in combination with other available biomass reference data) the GlobBiomass global biomass map for the area of Europe.

The validation task will use different types of existing reference data in a harmonized manner for a thorough assessment of the GlobBiomass products. The validation concept will consist of an internal validation, an independent validation; a product inter-comparison and a user assessment. The internal validation will be performed by the production team and will provide information on product confidence, uncertainty, and quality flags, as well as consistency among multi-epoch products. The independent validation will use existing independent reference data to compute error statistics for the regional and global biomass products, with particular attention on the problematic areas identified by the internal validation. The data requested from the UNECE ICP Forests programme will specifically support this task. The inter-comparison with existing products will produce discrepancy maps and highlight problematic areas in need of further investigation. The user assessment will be performed at regional levels in coordination with the regional GlobBiomass products and at the international level using the Geo-Wiki platform to assess user acceptance and receive recommendations for product improvement

Since the validation process will rely on existing reference data, the following aspects will be considered. Firstly, if existing data have not been acquired according to a statistical sampling design, the validation scheme will be designed to cope with their limited spatial distribution and representativeness, and the assessment of data gaps will also be useful to prioritize

future data acquisitions. Secondly, since field data have been collected using different procedures and standards, they will be converted to common units and harmonized allometry (possible when proper metadata and the tree-level data are available), and rigorous data screening procedures will be designed and implemented to remove data not matching the quality criteria. The screening procedure will substantially reduce the amount of observation available but will ensure the reliability of the reference data.