

# README of GLOBBIOMASS Global Biomass Data Products

Web version

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Version 1.0 - 24 April 2017  
Version 2.0 - 5 December 2017  
Version 3.0 - 31 May 2018

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This document provides a description of the GlobBiomass global biomass data products. The work was supported by the European Space Agency (ESA) within the Data User Element (DUE) project GlobBiomass (ESRIN contract No. 4000113100/14/I-NB).

**NOTE:** For questions, feedback and data-related issues, please contact

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## **Data products**

The data products consist of global datasets including estimates of

### **- growing stock volume (GSV, unit: m<sup>3</sup>/ha) for the year 2010**

Definition: volume of all living trees more than 10 cm in diameter at breast height measured over bark from ground or stump height to a top stem diameter of 0 cm. Excludes: smaller branches, twigs, foliage, flowers, seeds, stump and roots (definition of FAO).

A separate data layer is provided with per-pixel uncertainty expressed as standard error in m<sup>3</sup>/ha.

### **- above ground biomass (AGB, unit: tons/ha i.e., Mg/ha) for the year 2010**

Definition: the mass, expressed as oven-dry weight of the woody parts (stem, bark, branches and twigs) of all living trees excluding stump and roots.

A separate data layer is provided with per-pixel uncertainty expressed as standard error in Mg/ha.

## **Summary of GSV and AGB retrieval algorithms**

The GSV estimates were obtained from spaceborne SAR (ALOS PALSAR, Envisat ASAR), optical (Landsat-7), LiDAR (ICESAT) and auxiliary datasets with multiple estimation procedures.

AGB was obtained from GSV with a set of Biomass Expansion and Conversion Factors (BCEF) following approaches to extend on ground estimates of wood density and stem-to-total biomass expansion factors to obtain a global raster dataset.

It is referred to the Algorithm Theoretical Basis Document for details on the EO datasets, the biomass retrieval algorithms and the estimation of the BCEF

(see [http://globbiomass.org/wp-content/uploads/DOC/Deliverables/D6\\_D7/GlobBiomass\\_D6\\_7\\_Global\\_ATBD\\_final.pdf](http://globbiomass.org/wp-content/uploads/DOC/Deliverables/D6_D7/GlobBiomass_D6_7_Global_ATBD_final.pdf))

## **Specifications of GSV and AGB data products**

Spatial coverage: global

Validity of estimates: Estimates have been generated for each point on Earth for which EO data were available. However, areas for which the Landsat canopy cover of 2010 (Hansen et al., 2013) is equal to zero (typically, water, urban, permanent snow and ice and bare soil) have been masked out.

Reference system: Lat-long, WGS-84

Corner coordinates: top left corner of pixel

Pixel spacing: The GSV and AGB estimates are provided with a pixel spacing of 0.0008888° (roughly corresponding to 100 m at the Equator).

Timeframe: year 2010 (+/- 1 year)

Data format: GeoTIFF, LZW compression, unsigned 16-bit integer

Structure of dataset:

All GSV and AGB maps, including estimates of uncertainty, are stored as zip files in 40 deg x 40 deg tiles

The most recent version is date = **20180531**

The file name refer to the top left corner coordinate and indicates the data product

Example of file name (for tile with top left corner coordinate 0°N and 2°E)

**Layers:**

GSV:	N00E002_gsv.tif
GSV standard error:	N00E002_gsv_err.tif
AGB:	N00E002_agb.tif
AGB standard error	N00E002_agb_err.tif

**Legend of GSV and AGB estimates**

> 0 : GSV or AGB estimate

0: masked out with Landsat canopy cover of 2010 or no data