



ECV IN BRIEF

- Domain:** Terrestrial
- Subdomain:** Biology
- Scientific Area:** Biosphere
- ECV Stewards:** Martin Herold, Sassan Saatchi
- Products:** Maps of above-ground biomass

 **Above-ground Biomass**

Land cover is the observed (bio)-physical cover on the Earth’s surface. It influences climate by modifying water and energy exchanges with the atmosphere and by changing greenhouse gas and aerosol sources and sinks. Land-cover conditions are inherently dynamic (i.e. seasonality) and distributions are linked to regional climatic conditions, so changes in cover can be due to climate change on a regional scale as well as directly due to human activities.

ECV Product¹

| PRODUCT | DEFINITION | REQUIREMENTS | | | | |
|-------------------------------------|---|--------------|--|--|-----------|---|
| | | FREQUENCY | RESOLUTION | REQUIRED MEASUREMENT UNCERTAINTY | STABILITY | STANDARDS/ REFERENCES |
| Maps of above-ground biomass | Mass of live and/or dead organic matter in terrestrial vegetation | Annual | 500m-1km (based on satellite observations of 100-200m) | < 20% error for biomass values > 50 t/ha, and 10 t/ha for biomass values ≤ 50 t/ha | 10% | No agreed standards but see: GOFC-GOLD (2015b); GFOI (2013) |

Data Sources²

- ▶ ESA-Globbiomass www.globbiomass.org
- ▶ GEOCARBON lucid.wur.nl
- ▶ WRI Global Forest Watch <https://www.globalforestwatch.org/>
- ▶ FLUXNET <https://fluxnet.ornl.gov/fluxnetdb>

¹ Current Products and Requirements as in the Implementation Plan 2016 (GCOS-200). GCOS is reviewing and will update the requirements until 2022. More information on: gcos.wmo.int and climatedata.wmo.int.
² This list provides sources for openly accessible data sets with worldwide coverage for which metadata is available. It is curated by the respective GCOS ECV Steward(s). The list does not claim to be complete. Anyone with a suitable dataset who would like it to be added to this list should contact GCOS.

Global Forest Aboveground Biomass

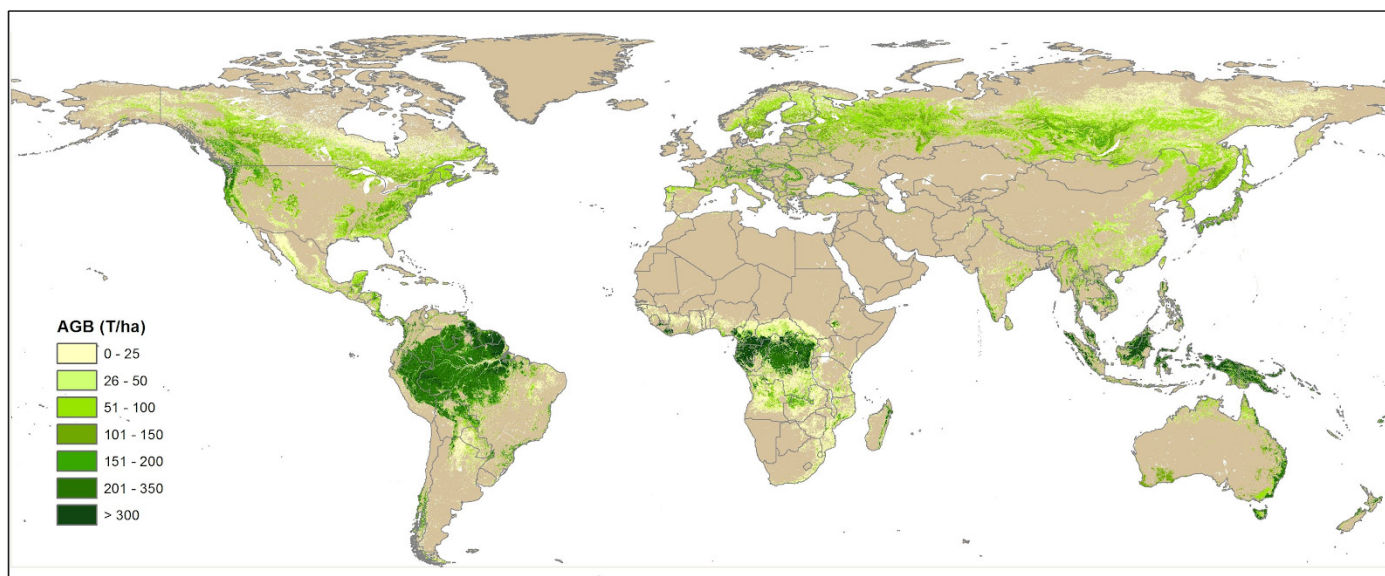


Figure: GEOCARBON global forest aboveground biomass map for 2010 at 0.01° (lucid.wur.nl). Forest areas according to the GLC2000 map (lucid.wur.nl).