BIOMASS
ATLAS Factsheet

Specifications	Description
What is it?	Forest aboveground biomass density (AGBD in Mg ha^{-1}) and canopy height (CH in m) at 30 m spatial resolution, with global coverage annually from 2000 onwards.
Modelling approach	Two-step regional method: - Spatial k-fold Canopy Height modelling (realm-specific neural network algorithm) - Canopy Height to Aboveground Biomass Density (plant functional type-specific nonlinear regression)
Reference data (labels)	- Multi-scale lidar AGBD - Third party peer-reviewed ALS AGBD - GEDI L4A AGBD and GEDI L2A CH
Satellite ARD data (predictors)	Landsat constellation 12-month temporal composites (5,7,8,9) and SRTM-derived topographic data
Validation	Unbiased predictions (average bias -0.5%),. Relative error averages at 39% (ranging from 20% to 64%) at pixel level. Project level error averages at 16%
Value range	AGBD: 0 - 1000 Mg ha^{-1} , CH: 0 - 120 m
Dataset units	AGBD: Mg ha^{-1}, CH: m
Uncertainty	Residual variance, as standard error, for both CH and AGBD
Temporal coverage	2000 to previous year
Temporal resolution	Annual cadence
Spatial resolution	30 m
Spatial coverage	Global, excl. ice sheets
Variable type	Continuous
Science & methods	Rodriguez-Veiga et al, 2025, Demol et al., (2024), Rodriguez-Veiga et al., (2021), Ploton et al., (2020), McRoberts et al., (2022), Naesset et al (2020)