Hans Verbeeck

List of Publications by Citations

110 papers	4,998 citations	32 h-index	69 g-index
150 ext. papers	6,652 ext. citations	7.9 avg, IF	4.86 L-index

#	Paper	IF	Citations
110	Terrestrial biosphere models need better representation of vegetation phenology: results from the North American Carbon Program Site Synthesis. *Global Change Biology*, **2012**, 18, 566-584	11.4	481
109	TRY plant trait database - enhanced coverage and open access. *Global Change Biology*, **2020**, 26, 119-188	11.4	399
108	An integrated pan-tropical biomass map using multiple reference datasets. *Global Change Biology*, **2016**, 22, 1406-20	11.4	358
107	Vegetation demographics in Earth System Models: A review of progress and priorities. *Global Change Biology*, **2018**, 24, 35-54	11.4	309
106	A model-data comparison of gross primary productivity: Results from the North American Carbon Program site synthesis. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		239
105	A model-data intercomparison of CO2 exchange across North America: Results from the North American Carbon Program site synthesis. *Journal of Geophysical Research*, **2010**, 115,		216
104	Above-ground biomass and structure of 260 African tropical forests. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2013**, 368, 20120295	5.8	204
103	Asynchronous carbon sink saturation in African and Amazonian tropical forests. *Nature*, **2020**, 579, 80-87	50.4	202
102	Terrestrial biosphere model performance for inter-annual variability of land-atmosphere CO2 exchange. *Global Change Biology*, **2012**, 18, 1971-1987	11.4	191
101	Forest resilience and tipping points at different spatio-temporal scales: approaches and challenges. *Journal of Ecology*, **2015**, 103, 5-15	6	166
100	Air temperature optima of vegetation productivity across global biomes. *Nature Ecology and Evolution*, **2019**, 3, 772-779	12.3	128
99	Phylogenetic classification of the world's tropical forests. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, 1837-1842	11.5	107
98	Variation in stem mortality rates determines patterns of above-ground biomass in Amazonian forests: implications for dynamic global vegetation models. *Global Change Biology*, **2016**, 22, 3996-4013	11.4	99
97	Long-term thermal sensitivity of Earth's tropical forests. *Science*, **2020**, 368, 869-874	33.3	92
96	Parameter sensitivity and uncertainty of the forest carbon flux model FORUG: a Monte Carlo analysis. *Tree Physiology*, **2006**, 26, 807-17	4.2	83
95	Mechanisms of water supply and vegetation demand govern the seasonality and magnitude of evapotranspiration in Amazonia and Cerrado. *Agricultural and Forest Meteorology*, **2014**, 191, 33-50	5.8	81
94	Conventional tree height-diameter relationships significantly overestimate aboveground carbon stocks in the Central Congo Basin. *Nature Communications*, **2013**, 4, 2269	17.4	81

93	Terrestrial laser scanning in forest ecology: Expanding the horizon. *Remote Sensing of Environment*, **2020**, 251, 112102	13.2	79
92	Carbon stock changes and carbon sequestration potential of Flemish cropland soils. *Global Change Biology*, **2003**, 9, 1193-1203	11.4	68
91	Characterizing the performance of ecosystem models across time scales: A spectral analysis of the North American Carbon Program site-level synthesis. *Journal of Geophysical Research*, **2011**, 116,		66
90	Evaluation of continental carbon cycle simulations with North American flux tower observations. *Ecological Monographs*, **2013**, 83, 531-556	9	63
89	Seasonal patterns of CO2 fluxes in Amazon forests: Fusion of eddy covariance data and the ORCHIDEE model. *Journal of Geophysical Research*, **2011**, 116,		60
88	Characterizing the diurnal patterns of errors in the prediction of evapotranspiration by several land-surface models: An NACP analysis. *Journal of Geophysical Research G: Biogeosciences*, **2014**, 119, 1458-1473	3.7	55
87	Impacts of future deforestation and climate change on the hydrology of the Amazon Basin: a multi-model analysis with a new set of land-cover change scenarios. *Hydrology and Earth System Sciences*, **2017**, 21, 1455-1475	5.5	53
86	Pan-tropical prediction of forest structure from the largest trees. *Global Ecology and Biogeography*, **2018**, 27, 1366-1383	6.1	52
85	Overview of the Large-Scale Biosphere–Atmosphere Experiment in Amazonia Data Model Intercomparison Project (LBA-DMIP). *Agricultural and Forest Meteorology*, **2013**, 182-183, 111-127	5.8	49
84	Stored water use and transpiration in Scots pine: a modeling analysis with ANAFORE. *Tree Physiology*, **2007**, 27, 1671-85	4.2	45
83	Testing conceptual and physically based soil hydrology schemes against observations for the Amazon Basin. *Geoscientific Model Development*, **2014**, 7, 1115-1136	6.3	44
82	Impact of hydrological variations on modeling of peatland CO2 fluxes: Results from the North American Carbon Program site synthesis. *Journal of Geophysical Research*, **2012**, 117,		42
81	High fire-derived nitrogen deposition on central African forests. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, 549-554	11.5	35
80	Spatial Distribution of Carbon Stored in Forests of the Democratic Republic of Congo. *Scientific Reports*, **2017**, 7, 15030	4.9	34
79	Liana and tree below-ground water competition-evidence for water resource partitioning during the dry season. *Tree Physiology*, **2018**, 38, 1071-1083	4.2	33
78	Improved Supervised Learning-Based Approach for Leaf and Wood Classification From LiDAR Point Clouds of Forests. *IEEE Transactions on Geoscience and Remote Sensing*, **2020**, 58, 3057-3070	8.1	32
77	Model performance of tree height-diameter relationships in the central Congo Basin. *Annals of Forest Science*, **2017**, 74, 1	3.1	29
76	Functional community structure of African monodominant forest influenced by local environmental filtering. *Ecology and Evolution*, **2017**, 7, 295-304	2.8	29

75	The importance of including lianas in global vegetation models. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, E4	11.5	29
74	Inter-annual variability of carbon and water fluxes in Amazonian forest, Cerrado and pasture sites, as simulated by terrestrial biosphere models. *Agricultural and Forest Meteorology*, **2013**, 182-183, 145-155	5.8	27
73	The global forest above-ground biomass pool for 2010 estimated from high-resolution satellite observations. *Earth System Science Data*, **2021**, 13, 3927-3950	10.5	26
72	Time for a Plant Structural Economics Spectrum. *Frontiers in Forests and Global Change*, **2019**, 2,	3.7	25
71	Improving the ISBA_{CC} land surface model simulation of water and carbon fluxes and stocks over the Amazon forest. *Geoscientific Model Development*, **2015**, 8, 1709-1727	6.3	24
70	Multi-year model analysis of GPP in a temperate beech forest in France. *Ecological Modelling*, **2008**, 210, 85-103	3	24
69	Inventory-based carbon stock of Flemish forests: a comparison of European biomass expansion factors. *Annals of Forest Science*, **2004**, 61, 677-682	3.1	24
68	Environmental impact assessment and monetary ecosystem service valuation of an ecosystem under different future environmental change and management scenarios; a case study of a Scots pine forest. *Journal of Environmental Management*, **2016**, 173, 79-94	7.9	23
67	Contrasting nitrogen fluxes in African tropical forests of the Congo Basin. *Ecological Monographs*, **2019**, 89, e01342	9	23
66	Reconciling biodiversity and carbon stock conservation in an Afrotropical forest landscape. *Science Advances*, **2018**, 4, eaar6603	14.3	22
65	Assessing the role of megafauna in tropical forest ecosystems and biogeochemical cycles the potential of vegetation models. *Ecography*, **2018**, 41, 1934-1954	6.5	19
64	Modeling the impact of liana infestation on the demography and carbon cycle of tropical forests. *Global Change Biology*, **2019**, 25, 3767-3780	11.4	19
63	Does canopy mean nitrogen concentration explain variation in canopy light use efficiency across 14 contrasting forest sites?. *Tree Physiology*, **2012**, 32, 200-18	4.2	19
62	Aboveground vs. Belowground Carbon Stocks in African Tropical Lowland Rainforest: Drivers and Implications. *PLoS ONE*, **2015**, 10, e0143209	3.7	19
61	Evaluating the potential of full-waveform lidar for mapping pan-tropical tree species richness. *Global Ecology and Biogeography*, **2020**, 29, 1799-1816	6.1	19
60	Carbon and energy fluxes in cropland ecosystems: a model-data comparison. *Biogeochemistry*, **2016**, 129, 53-76	3.8	17
59	Tropical forests: Include Congo basin. *Nature*, **2011**, 479, 179	50.4	15
58	Taking the pulse of Earth's tropical forests using networks of highly distributed plots. *Biological Conservation*, **2021**, 260, 108849	6.2	15

57	Can decision rules simulate carbon allocation for years with contrasting and extreme weather conditions? A case study for three temperate beech forests. *Ecological Modelling*, **2013**, 263, 42-55	3	14
56	Effects of Tree Trunks on Estimation of Clumping Index and LAI from HemiView and Terrestrial LiDAR. *Forests*, **2018**, 9, 144	2.8	12
55	Semi-automatic extraction of liana stems from terrestrial LiDAR point clouds of tropical rainforests. *ISPRS Journal of Photogrammetry and Remote Sensing*, **2019**, 154, 114-126	11.8	12
54	Functional identity explains carbon sequestration in a 77-year-old experimental tropical plantation. *Ecosphere*, **2015**, 6, art198	3.1	12
53	Aboveground biomass density models for NASA's Global Ecosystem Dynamics Investigation (GEDI) lidar mission. *Remote Sensing of Environment*, **2022**, 270, 112845	13.2	11
52	Causes and consequences of pronounced variation in the isotope composition of plant xylem water. *Biogeosciences*, **2020**, 17, 4853-4870	4.6	11
51	Drivers of carbon stocks in forest edges across Europe. *Science of the Total Environment*, **2021**, 759, 143497	10.2	11
50	Long-term recovery of the functional community assembly and carbon pools in an African tropical forest succession. *Biotropica*, **2019**, 51, 319-329	2.3	10
49	Structural variation of forest edges across Europe. *Forest Ecology and Management*, **2020**, 462, 117929	3.9	10
48	Terrestrial Laser Scanning to Detect Liana Impact on Forest Structure. *Remote Sensing*, **2018**, 10, 810	5	10
47	Resistance of African tropical forests to an extreme climate anomaly. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	10
46	High aboveground carbon stock of African tropical montane forests. *Nature*, **2021**, 596, 536-542	50.4	10
45	Functional Composition of Tree Communities Changed Topsoil Properties in an Old Experimental Tropical Plantation. *Ecosystems*, **2017**, 20, 861-871	3.9	9
44	Disentangling how management affects biomass stock and productivity of tropical secondary forests fallows. *Science of the Total Environment*, **2019**, 659, 101-114	10.2	9
43	Plant measurements on African tropical Maesopsis eminii seedlings contradict pioneering water use behaviour. *Environmental and Experimental Botany*, **2017**, 135, 27-37	5.9	8
42	The ecology of Maesopsis eminii Engl. in tropical Africa. *African Journal of Ecology*, **2017**, 55, 679-692	0.8	8
41	Parallel functional and stoichiometric trait shifts in South American and African forest communities with elevation. *Biogeosciences*, **2017**, 14, 5313-5321	4.6	8
40	The global forest above-ground biomass pool for 2010 estimated from high-resolution satellite observations		8

39	Terrestrial laser scanning for non-destructive estimates of liana stem biomass. *Forest Ecology and Management*, **2020**, 456, 117751	3.9	8
38	Understanding 3D structural complexity of individual Scots pine trees with different management history. *Ecology and Evolution*, **2021**, 11, 2561-2572	2.8	8
37	Large-sized rare tree species contribute disproportionately to functional diversity in resource acquisition in African tropical forest. *Ecology and Evolution*, **2019**, 9, 4349-4361	2.8	7
36	Century-long apparent decrease in intrinsic water-use efficiency with no evidence of progressive nutrient limitation in African tropical forests. *Global Change Biology*, **2020**, 26, 4449-4461	11.4	7
35	Long-term scenarios of the invasive black cherry in pine-oak forest: Impact of regeneration success. *Acta Oecologica*, **2011**, 37, 203-211	1.7	6
34	Thirty Years of Land Cover and Fraction Cover Changes over the Sudano-Sahel Using Landsat Time Series. *Remote Sensing*, **2020**, 12, 3817	5	6
33	Unraveling the relative role of light and water competition between lianas and trees in tropical forests: A vegetation model analysis. *Journal of Ecology*, **2021**, 109, 519-540	6	6
32	Small scale environmental variation modulates plant defence syndromes of understorey plants in deciduous forests of Europe. *Global Ecology and Biogeography*, **2021**, 30, 205-219	6.1	5
31	Refining Species Traits in a Dynamic Vegetation Model to Project the Impacts of Climate Change on Tropical Trees in Central Africa. *Forests*, **2018**, 9, 722	2.8	5
30	Increasing liana frequency in temperate European forest understories is driven by ivy. *Frontiers in Ecology and the Environment*, **2020**, 18, 550-557	5.5	4
29	High photosynthetic capacity of Sahelian C and C plants. *Photosynthesis Research*, **2021**, 147, 161-175	3.7	4
28	Consequences of vertical basic wood density variation on the estimation of aboveground biomass with terrestrial laser scanning. *Trees - Structure and Function*, **2021**, 35, 671-684	2.6	4
27	A generic pixel-to-point comparison for simulated large-scale ecosystem properties and ground-based observations: an example from the Amazon region. *Geoscientific Model Development*, **2018**, 11, 5203-5215	6.3	4
26	Characterising Termite Mounds in a Tropical Savanna with UAV Laser Scanning. *Remote Sensing*, **2021**, 13, 476	5	4
25	Historical Aerial Surveys Map Long-Term Changes of Forest Cover and Structure in the Central Congo Basin. *Remote Sensing*, **2020**, 12, 638	5	3
24	Taxonomic, phylogenetic and functional diversity of understorey plants respond differently to environmental conditions in European forest edges. *Journal of Ecology*, **2021**, 109, 2629-2648	6	3
23	Comparable canopy and soil free-living nitrogen fixation rates in a lowland tropical forest. *Science of the Total Environment*, **2021**, 754, 142202	10.2	3
22	Biomass Expansion Factors for Hedgerow-Grown Trees Derived from Terrestrial LiDAR. *Bioenergy Research*, **2021**, 14, 561-574	3.1	3

21	Modelling Amazonian Carbon Budgets and Vegetation Dynamics in a Changing Climate. *Ecological Studies*, **2016**, 331-366	1.1	2
20	Quantifying tropical forest structure through terrestrial and UAV laser scanning fusion in Australian rainforests. *Remote Sensing of Environment*, **2022**, 271, 112912	13.2	2
19	A comprehensive framework for assessing the accuracy and uncertainty of global above-ground biomass maps. *Remote Sensing of Environment*, **2022**, 272, 112917	13.2	2
18	Diurnal variation in the isotope composition of plant xylem water biases the depth of root-water uptake estimates		2
17	Parallel functional and stoichiometric trait shifts in South-American and African forest communities with elevation		2
16	Using terrestrial laser scanning to constrain forest ecosystem structure and functions in the Ecosystem Demography model (ED2.2)		2
15	Lianas and trees exhibit divergent intrinsic water-use efficiency along elevational gradients in South American and African tropical forests. *Global Ecology and Biogeography*, **2021**, 30, 2259	6.1	2
14	Fire-derived phosphorus fertilization of African tropical forests. *Nature Communications*, **2021**, 12, 5129	17.4	2
13	Liana communities exhibit different species composition, diversity and community structure across forest types in the Congo Basin. *Biotropica*, **2020**, 52, 651-663	2.3	1
12	Quantifying Tropical Forest Stand Structure Through Terrestrial and UAV Laser Scanning Fusion **2021**,		1
11	Liana optical traits increase tropical forest albedo and reduce ecosystem productivity. *Global Change Biology*, **2022**, 28, 227-244	11.4	1
10	Microclimatic edge-to-interior gradients of European deciduous forests. *Agricultural and Forest Meteorology*, **2021**, 311, 108699	5.8	1
9	Within-Site Variability of Liana Wood Anatomical Traits: A Case Study in Laussat, French Guiana. *Forests*, **2020**, 11, 523	2.8	1
8	Lianas in silico, ecological insights from a model of structural parasitism. *Ecological Modelling*, **2020**, 431, 109159	3	1
7	Liana optical traits increase tropical forest albedo and reduce ecosystem productivity		1
6	Lianas Significantly Reduce Aboveground and Belowground Carbon Storage: A Virtual Removal Experiment. *Frontiers in Forests and Global Change*,4,	3.7	1
5	Contrasting responses of woody and herbaceous vegetation to altered rainfall characteristics in the Sahel. *Biogeosciences*, **2021**, 18, 77-93	4.6	1
4	Forest above-ground volume assessments with terrestrial laser scanning: a ground-truth validation experiment in temperate, managed forests. *Annals of Botany*, **2021**, 128, 805-819	4.1	1

3	□lianification□r liana invasion □s there a difference?. *Frontiers in Ecology and the Environment*, **2021**, 19, 377-378	5.5	1
2	Why can we detect lianas from space?		1
1	Ideas and perspectives: patterns of soil CO₂, CH₄, and N₂O fluxes along an altitudinal gradient □ pilot study from an Ecuadorian neotropical montane forest. *Biogeosciences*, **2021**, 18, 413-421	4.6	0