I Colin Prentice

List of Publications by Citations

283 papers	59,094 citations	109 h-index	242 g-index
376 ext. papers	67,156 ext. citations	9.7 avg, IF	7.3 L-index

#	Paper	IF	Citations
283	Global consequences of land use. *Science*, **2005**, 309, 570-4	33.3	7529
282	Evaluation of ecosystem dynamics, plant geography and terrestrial carbon cycling in the LPJ dynamic global vegetation model. *Global Change Biology*, **2003**, 9, 161-185	11.4	2307
281	Fire in the Earth system. *Science*, **2009**, 324, 481-4	33.3	1799
280	TRY a global database of plant traits. *Global Change Biology*, **2011**, 17, 2905-2935	11.4	1623
279	Climate change threats to plant diversity in Europe. *Proceedings of the National Academy of Sciences of the United States of America*, **2005**, 102, 8245-50	11.5	1598
278	A dynamic global vegetation model for studies of the coupled atmosphere-biosphere system. *Global Biogeochemical Cycles*, **2005**, 19,	5.9	1481
277	Special Paper: A Global Biome Model Based on Plant Physiology and Dominance, Soil Properties and Climate. *Journal of Biogeography*, **1992**, 19, 117	4.1	1480
276	Global response of terrestrial ecosystem structure and function to CO2 and climate change: results from six dynamic global vegetation models. *Global Change Biology*, **2001**, 7, 357-373	11.4	1464
275	Trends in the sources and sinks of carbon dioxide. *Nature Geoscience*, **2009**, 2, 831-836	18.3	1453
274	A Theory of Gradient Analysis. *Advances in Ecological Research*, **1988**, 18, 271-317	4.6	1435
273	The global spectrum of plant form and function. *Nature*, **2016**, 529, 167-71	50.4	1191
272	Ecosystem service supply and vulnerability to global change in Europe. *Science*, **2005**, 310, 1333-7	33.3	1181
271	Mid- to Late Holocene climate change: an overview. *Quaternary Science Reviews*, **2008**, 27, 1791-1828	3.9	1166
270	Beyond predictions: biodiversity conservation in a changing climate. *Science*, **2011**, 332, 53-8	33.3	1160
269	Recent patterns and mechanisms of carbon exchange by terrestrial ecosystems. *Nature*, **2001**, 414, 169-72	50.4	1018
268	Evaluation of the terrestrial carbon cycle, future plant geography and climate-carbon cycle feedbacks using five Dynamic Global Vegetation Models (DGVMs). *Global Change Biology*, **2008**, 14, 2015-2039	11.4	955
267	An integrated biosphere model of land surface processes, terrestrial carbon balance, and vegetation dynamics. *Global Biogeochemical Cycles*, **1996**, 10, 603-628	5.9	919

266	Long-term sensitivity of soil carbon turnover to warming. *Nature*, **2005**, 433, 298-301	50.4	905
265	Quantitative Interpretation of Fossil Pollen Spectra: Dissimilarity Coefficients and the Method of Modern Analogs. *Quaternary Research*, **1985**, 23, 87-108	1.9	830
264	BIOME3: An equilibrium terrestrial biosphere model based on ecophysiological constraints, resource availability, and competition among plant functional types. *Global Biogeochemical Cycles*, **1996**, 10, 693-709	5.9	720
263	Carbon balance of the terrestrial biosphere in the Twentieth Century: Analyses of CO2, climate and land use effects with four process-based ecosystem models. *Global Biogeochemical Cycles*, **2001**, 15, 183-206	5.9	606
262	Reconciling the optimal and empirical approaches to modelling stomatal conductance. *Global Change Biology*, **2011**, 17, 2134-2144	11.4	595
261	Climate and human influences on global biomass burning over the past two millennia. *Nature Geoscience*, **2008**, 1, 697-702	18.3	584
260	Climatic control of the high-latitude vegetation greening trend and Pinatubo effect. *Science*, **2002**, 296, 1687-9	33.3	578
259	Representation of vegetation dynamics in the modelling of terrestrial ecosystems: comparing two contrasting approaches within European climate space. *Global Ecology and Biogeography*, **2001**, 10, 621-637	6.1	544
258	Reconstructing biomes from palaeoecological data: a general method and its application to European pollen data at 0 and 6 ka. *Climate Dynamics*, **1996**, 12, 185-194	4.2	513
257	Mid-Holocene and glacial-maximum vegetation geography of the northern continents and Africa. *Journal of Biogeography*, **2000**, 27, 507-519	4.1	492
256	Changes in fire regimes since the Last Glacial Maximum: an assessment based on a global synthesis and analysis of charcoal data. *Climate Dynamics*, **2008**, 30, 887-907	4.2	487
255	A climate-change risk analysis for world ecosystems. *Proceedings of the National Academy of Sciences of the United States of America*, **2006**, 103, 13116-20	11.5	468
254	Pollen-based continental climate reconstructions at 6 and 21 ka: a global synthesis. *Climate Dynamics*, **2011**, 37, 775-802	4.2	414
253	TRY plant trait database - enhanced coverage and open access. *Global Change Biology*, **2020**, 26, 119-188	11.4	399
252	Climate change and Arctic ecosystems: 2. Modeling, paleodata-model comparisons, and future projections. *Journal of Geophysical Research*, **2003**, 108,		361
251	A simulation model for the transient effects of climate change on forest landscapes. *Ecological Modelling*, **1993**, 65, 51-70	3	337
250	Global climatic drivers of leaf size. *Science*, **2017**, 357, 917-921	33.3	334
249	Palaeovegetation. Diversity of temperate plants in east Asia. *Nature*, **2001**, 413, 129-30	50.4	323

248	Palaeovegetation of China: a pollen data-based synthesis for the mid-Holocene and last glacial maximum. *Journal of Biogeography*, **2000**, 27, 635-664	4.1	321
247	Vegetation and Climate Change in Eastern North America Since the Last Glacial Maximum. *Ecology*, **1991**, 72, 2038-2056	4.6	321
246	Monsoon changes for 6000 years ago: Results of 18 simulations from the Paleoclimate Modeling Intercomparison Project (PMIP). *Geophysical Research Letters*, **1999**, 26, 859-862	4.9	318
245	A General Model for the Light-Use Efficiency of Primary Production. *Functional Ecology*, **1996**, 10, 551	5.6	307
244	Global warming feedbacks on terrestrial carbon uptake under the Intergovernmental Panel on Climate Change (IPCC) Emission Scenarios. *Global Biogeochemical Cycles*, **2001**, 15, 891-907	5.9	306
243	The influence of vegetation, fire spread and fire behaviour on biomass burning and trace gas emissions: results from a process-based model. *Biogeosciences*, **2010**, 7, 1991-2011	4.6	301
242	Evaluation of 11 terrestrial carbon-nitrogen cycle models against observations from two temperate Free-Air CO2 Enrichment studies. *New Phytologist*, **2014**, 202, 803-822	9.8	300
241	Mycorrhizal association as a primary control of the CO fertilization effect. *Science*, **2016**, 353, 72-4	33.3	277
240	Forest water use and water use efficiency at elevated CO2 : a model-data intercomparison at two contrasting temperate forest FACE sites. *Global Change Biology*, **2013**, 19, 1759-79	11.4	271
239	Tropical climates at the Last Glacial Maximum: a new synthesis of terrestrial palaeoclimate data. I. Vegetation, lake-levels and geochemistry. *Climate Dynamics*, **1999**, 15, 823-856	4.2	270
238	Biome reconstruction from pollen and plant macrofossil data for Africa and the Arabian peninsula at 0 and 6000 years. *Journal of Biogeography*, **1998**, 25, 1007-1027	4.1	267
237	Optimal stomatal behaviour around the world. *Nature Climate Change*, **2015**, 5, 459-464	21.4	264
236	CO2 fertilization in temperate FACE experiments not representative of boreal and tropical forests. *Global Change Biology*, **2008**, 14, 1531-1542	11.4	249
235	A roadmap for improving the representation of photosynthesis in Earth system models. *New Phytologist*, **2017**, 213, 22-42	9.8	245
234	Global variability in leaf respiration in relation to climate, plant functional types and leaf traits. *New Phytologist*, **2015**, 206, 614-36	9.8	244
233	A framework for benchmarking land models. *Biogeosciences*, **2012**, 9, 3857-3874	4.6	238
232	BIOME 6000: reconstructing global mid-Holocene vegetation patterns from palaeoecological records. *Journal of Biogeography*, **1998**, 25, 997-1005	4.1	238
231	Process-based estimates of terrestrial ecosystem isoprene emissions: incorporating the effects of a direct CO₂-isoprene interaction. *Atmospheric Chemistry and Physics*, **2007**, 7, 31-53	6.8	237

230	Comparing and evaluating process-based ecosystem model predictions of carbon and water fluxes in major European forest biomes.. *Global Change Biology*, **2005**, 11, 2211-2233	11.4	231
229	Improving assessment and modelling of climate change impacts on global terrestrial biodiversity. *Trends in Ecology and Evolution*, **2011**, 26, 249-59	10.9	230
228	The climate of Europe 6000 years ago. *Climate Dynamics*, **1996**, 13, 1-9	4.2	228
227	Present-day and mid-Holocene biomes reconstructed from pollen and plant macrofossil data from the former Soviet Union and Mongolia. *Journal of Biogeography*, **1998**, 25, 1029-1053	4.1	222
226	Balancing the costs of carbon gain and water transport: testing a new theoretical framework for plant functional ecology. *Ecology Letters*, **2014**, 17, 82-91	10	220
225	Climate change and Arctic ecosystems: 1. Vegetation changes north of 55°N between the last glacial maximum, mid-Holocene, and present. *Journal of Geophysical Research*, **2003**, 108,		220
224	Primary productivity of planet earth: biological determinants and physical constraints in terrestrial and aquatic habitats. *Global Change Biology*, **2001**, 7, 849-882	11.4	220
223	Implementation and evaluation of a new methane model within a dynamic global vegetation model: LPJ-WHyMe v1.3.1. *Geoscientific Model Development*, **2010**, 3, 565-584	6.3	217
222	July temperatures in europe from pollen data, 6000 years before present. *Science*, **1988**, 241, 687-90	33.3	214
221	Coupling dynamic models of climate and vegetation. *Global Change Biology*, **1998**, 4, 561-579	11.4	213
220	Climate-related changes in peatland carbon accumulation during the last millennium. *Biogeosciences*, **2013**, 10, 929-944	4.6	209
219	Global vegetation and terrestrial carbon cycle changes after the last ice age. *New Phytologist*, **2011**, 189, 988-998	9.8	208
218	Quantifying the role of biosphere-atmosphere feedbacks in climate change: coupled model simulations for 6000 years BP and comparison with palaeodata for northern Eurasia and northern Africa. *Climate Dynamics*, **1997**, 13, 865-881	4.2	208
217	Tropical paleoclimates at the Last Glacial Maximum: comparison of Paleoclimate Modeling Intercomparison Project (PMIP) simulations and paleodata. *Climate Dynamics*, **1999**, 15, 857-874	4.2	201
216	Recent pause in the growth rate of atmospheric CO due to enhanced terrestrial carbon uptake. *Nature Communications*, **2016**, 7, 13428	17.4	195
215	Where does the carbon go? A model-data intercomparison of vegetation carbon allocation and turnover processes at two temperate forest free-air CO2 enrichment sites. *New Phytologist*, **2014**, 203, 883-99	9.8	194
214	The status and challenge of global fire modelling. *Biogeosciences*, **2016**, 13, 3359-3375	4.6	193
213	Using ecosystem experiments to improve vegetation models. *Nature Climate Change*, **2015**, 5, 528-534	21.4	191

212	How should we model plant responses to drought? An analysis of stomatal and non-stomatal responses to water stress. *Agricultural and Forest Meteorology*, **2013**, 182-183, 204-214	5.8	190
211	Global effects of soil and climate on leaf photosynthetic traits and rates. *Global Ecology and Biogeography*, **2015**, 24, 706-717	6.1	179
210	Reconstruction of Holocene Precipitation Patterns in Europe Using Pollen and Lake-Level Data. *Quaternary Research*, **1993**, 40, 139-149	1.9	177
209	Transient simulations of Holocene atmospheric carbon dioxide and terrestrial carbon since the Last Glacial Maximum. *Global Biogeochemical Cycles*, **2004**, 18, n/a-n/a	5.9	174
208	Dynamic Global Vegetation Modeling: Quantifying Terrestrial Ecosystem Responses to Large-Scale Environmental Change **2007**, 175-192		174
207	Representation of vegetation dynamics in the modelling of terrestrial ecosystems: comparing two contrasting approaches within European climate space. *Global Ecology and Biogeography*, **2001**, 10, 621-637	6.1	169
206	Constraining global methane emissions and uptake by ecosystems. *Biogeosciences*, **2011**, 8, 1643-1665	4.6	168
205	Ecosystem dynamics based on plankton functional types for global ocean biogeochemistry models. *Global Change Biology*, **2005**, 11, 051013014052005-???	11.4	162
204	Predictability of biomass burning in response to climate changes. *Global Biogeochemical Cycles*, **2012**, 26, n/a-n/a	5.9	161
203	Multiple greenhouse-gas feedbacks from the land biosphere under future climate change scenarios. *Nature Climate Change*, **2013**, 3, 666-672	21.4	161
202	Untangling the confusion around land carbon science and climate change mitigation policy. *Nature Climate Change*, **2013**, 3, 552-557	21.4	160
201	Mediterranean vegetation, lake levels and palaeoclimate at the Last Glacial Maximum. *Nature*, **1992** , 360, 658-660	50.4	159
200	Pollen-based biome reconstructions for China at 0 and 6000 years. *Journal of Biogeography*, **1998**, 25, 1055-1069	4.1	157
199	Maximum impacts of future reforestation or deforestation on atmospheric CO2. *Global Change Biology*, **2002**, 8, 1047-1052	11.4	155
198	Drought impacts on terrestrial primary production underestimated by satellite monitoring. *Nature Geoscience*, **2019**, 12, 264-270	18.3	154
197	Mid-Holocene climates of the Americas: a dynamical response to changed seasonality. *Climate Dynamics*, **2003**, 20, 663-688	4.2	153
196	Ecophysiological and bioclimatic foundations for a global plant functional classification. *Journal of Vegetation Science*, **2010**, 21, 300-317	3.1	150
195	Reduced streamflow in water-stressed climates consistent with CO2 effects on vegetation. *Nature Climate Change*, **2016**, 6, 75-78	21.4	146

194	Climate model benchmarking with glacial and mid-Holocene climates. *Climate Dynamics*, **2014**, 43, 671-688	4.2	145
193	Possible role of atmosphere-biosphere interactions in triggering the Last Glaciation. *Geophysical Research Letters*, **1996**, 23, 3191-3194	4.9	142
192	Integrating peatlands and permafrost into a dynamic global vegetation model: 1. Evaluation and sensitivity of physical land surface processes. *Global Biogeochemical Cycles*, **2009**, 23, n/a-n/a	5.9	140
191	Climate change, tree species distributions and forest dynamics: A case study in the mixed conifer/northern hardwoods zone of northern Europe. *Climatic Change*, **1996**, 34, 161	4.5	139
190	Towards a universal model for carbon dioxide uptake by plants. *Nature Plants*, **2017**, 3, 734-741	11.5	139
189	Vegetation responses to past climatic variation. *Plant Ecology*, **1986**, 67, 131-141		133
188	Modeling fire and the terrestrial carbon balance. *Global Biogeochemical Cycles*, **2011**, 25, n/a-n/a	5.9	132
187	Terrestrial nitrogen cycle simulation with a dynamic global vegetation model. *Global Change Biology*, **2008**, 14, 1745-1764	11.4	132
186	Palaeovegetation in China during the late Quaternary: Biome reconstructions based on a global scheme of plant functional types. *Palaeogeography, Palaeoclimatology, Palaeoecology*, **2010**, 289, 44-61	2.9	126
185	Nitrogen and phosphorus constrain the CO2 fertilization of global plant biomass. *Nature Climate Change*, **2019**, 9, 684-689	21.4	125
184	Maximum Likelihood Linear Calibration of Pollen Spectra in Terms of Forest Composition. *Biometrics*, **1983**, 39, 1051	1.8	125
183	Terrestrial biosphere carbon storage under alternative climate projections. *Climatic Change*, **2006**, 74, 97-122	4.5	122
182	Pollen-based reconstructions of biome distributions for Australia, Southeast Asia and the Pacific (SEAPAC region) at 0, 6000 and 18,000 14C yr BP. *Journal of Biogeography*, **2004**, 31, 1381-1444	4.1	121
181	Large inert carbon pool in the terrestrial biosphere during the Last Glacial Maximum. *Nature Geoscience*, **2012**, 5, 74-79	18.3	120
180	Implementing plant hydraulic architecture within the LPJ Dynamic Global Vegetation Model. *Global Ecology and Biogeography*, **2006**, 15, 567-577	6.1	120
179	Reliable, robust and realistic: the three R© of next-generation land-surface modelling. *Atmospheric Chemistry and Physics*, **2015**, 15, 5987-6005	6.8	118
178	Land surface feedbacks and palaeomonsoons in northern Africa. *Geophysical Research Letters*, **1998**, 25, 3615-3618	4.9	118
177	Volatile isoprenoid emissions from plastid to planet. *New Phytologist*, **2013**, 197, 49-57	9.8	116

176	Evaluation of terrestrial carbon cycle models through simulations of the seasonal cycle of atmospheric CO2: First results of a model intercomparison study. *Global Biogeochemical Cycles*, **1998**, 12, 1-24	5.9	114
175	The climate and biomes of Europe at 6000 yr BP: comparison of model simulations and pollen-based reconstructions. *Quaternary Science Reviews*, **1998**, 17, 659-668	3.9	110
174	Integrating peatlands and permafrost into a dynamic global vegetation model: 2. Evaluation and sensitivity of vegetation and carbon cycle processes. *Global Biogeochemical Cycles*, **2009**, 23, n/a-n/a	5.9	109
173	Records of vegetation in time and space: the principles of pollen analysis **1988**, 17-42		109
172	The Fire Modeling Intercomparison Project (FireMIP), phase 1: experimental and analytical protocols with detailed model descriptions. *Geoscientific Model Development*, **2017**, 10, 1175-1197	6.3	106
171	Projected Changes in Terrestrial Carbon Storage in Europe under Climate and Land-use Change, 19902100. *Ecosystems*, **2007**, 10, 380-401	3.9	105
170	Latitudinal limits to the predicted increase of the peatland carbon sink with warming. *Nature Climate Change*, **2018**, 8, 907-913	21.4	105
169	Quantifying soil moisture impacts on light use efficiency across biomes. *New Phytologist*, **2018**, 218, 1430-3449	9.8	103
168	A comprehensive benchmarking system for evaluating global vegetation models. *Biogeosciences*, **2013**, 10, 3313-3340	4.6	101
167	Climatic controls on Holocene lake-level changes in Europe. *Climate Dynamics*, **1993**, 8, 189-200	4.2	98
166	Ecosystem responses to elevated CO governed by plant-soil interactions and the cost of nitrogen acquisition. *New Phytologist*, **2018**, 217, 507-522	9.8	98
165	Pattern and Process and the Dynamics of Forest Structure: A Simulation Approach. *Journal of Ecology*, **1990**, 78, 340	6	95
164	Ecosystem effects of CO₂ concentration: evidence from past climates. *Climate of the Past*, **2009**, 5, 297-307	3.9	93
163	A test of the One-point method for estimating maximum carboxylation capacity from field-measured, light-saturated photosynthesis. *New Phytologist*, **2016**, 210, 1130-44	9.8	92
162	Blanket peat biome endangered by climate change. *Nature Climate Change*, **2013**, 3, 152-155	21.4	91
161	A coupled carbon and water flux model to predict vegetation structure. *Journal of Vegetation Science*, **1996**, 7, 651-666	3.1	91
160	Evidence of a universal scaling relationship for leaf CO2 drawdown along an aridity gradient. *New Phytologist*, **2011**, 190, 169-180	9.8	90
159	Causal relationships versus emergent patterns in the global controls of fire frequency. *Biogeosciences*, **2014**, 11, 5087-5101	4.6	88

158	Modelling terrestrial nitrous oxide emissions and implications for climate feedback. *New Phytologist*, **2012**, 196, 472-488	9.8	87
157	The Response of Northern Hemisphere Extratropical Climate and Vegetation to Orbitally Induced Changes in Insolation during the Last Interglaciation. *Quaternary Research*, **1995**, 43, 174-184	1.9	87
156	Short-term water stress impacts on stomatal, mesophyll and biochemical limitations to photosynthesis differ consistently among tree species from contrasting climates. *Tree Physiology*, **2014**, 34, 1035-46	4.2	85
155	. *Tellus, Series B: Chemical and Physical Meteorology*, **2003**, 55, 649-656	3.3	85
154	Silvics of north European trees: Compilation, comparisons and implications for forest succession modelling. *Forest Ecology and Management*, **1991**, 42, 79-93	3.9	85
153	Comprehensive ecosystem model-data synthesis using multiple data sets at two temperate forest free-air CO2 enrichment experiments: Model performance at ambient CO2 concentration. *Journal of Geophysical Research G: Biogeosciences*, **2014**, 119, 937-964	3.7	83
152	Global photosynthetic capacity is optimized to the environment. *Ecology Letters*, **2019**, 22, 506-517	10	80
151	. *Tellus, Series B: Chemical and Physical Meteorology*, **1996**, 48, 652-661	3.3	75
150	From biota to chemistry and climate: towards a comprehensive description of trace gas exchange between the biosphere and atmosphere. *Biogeosciences*, **2010**, 7, 121-149	4.6	74
149	The stable carbon isotope composition of the terrestrial biosphere: Modeling at scales from the leaf to the globe. *Global Biogeochemical Cycles*, **2002**, 16, 8-1-8-11	5.9	70
148	Transforming conservation science and practice for a postnormal world. *Conservation Biology*, **2017**, 31, 1008-1017	6	68
147	Boreal forest futures: Modelling the controls on tree species range limits and transient responses to climate change. *Water, Air, and Soil Pollution*, **1995**, 82, 415-428	2.6	67
146	Orbital variations, climate and paleoecology. *Trends in Ecology and Evolution*, **1989**, 4, 195-9	10.9	67
145	A model of plant isoprene emission based on available reducing power captures responses to atmospheric CO *New Phytologist*, **2014**, 203, 125-39	9.8	64
144	Relationships among fire frequency, rainfall and vegetation patterns in the wet dry tropics of northern Australia: an analysis based on NOAA-AVHRR data. *Global Ecology and Biogeography*, **2005** , 14, 439-454	6.1	62
143	Evaluation of terrestrial carbon cycle models with atmospheric CO2 measurements: Results from transient simulations considering increasing CO2, climate, and land-use effects. *Global Biogeochemical Cycles*, **2002**, 16, 39-1-39-15	5.9	62
142	Modelling the vegetation of China using the process-based equilibrium terrestrial biosphere model BIOME3. *Global Ecology and Biogeography*, **2000**, 9, 463-479	6.1	62
141	Sensitivity of a dynamic global vegetation model to climate and atmospheric CO2. *Global Change Biology*, **2004**, 10, 1223-1239	11.4	61

140	The optimal stomatal response to atmospheric CO2 concentration: Alternative solutions, alternative interpretations. *Agricultural and Forest Meteorology*, **2013**, 182-183, 200-203	5.8	56
139	Relationships between human population density and burned area at continental and global scales. *PLoS ONE*, **2013**, 8, e81188	3.7	53
138	Role of zooplankton dynamics for Southern Ocean phytoplankton biomass and global biogeochemical cycles. *Biogeosciences*, **2016**, 13, 4111-4133	4.6	53
137	Do land surface models need to include differential plant species responses to drought? Examining model predictions across a mesic-xeric gradient in Europe. *Biogeosciences*, **2015**, 12, 7503-7518	4.6	52
136	Satellite based estimates underestimate the effect of CO2 fertilization on net primary productivity. *Nature Climate Change*, **2016**, 6, 892-893	21.4	52
135	Is NPP proportional to GPP? Waring hypothesis 20 years on. *Tree Physiology*, **2019**, 39, 1473-1483	4.2	51
134	Biophsyical constraints on gross primary production by the terrestrial biosphere. *Biogeosciences*, **2014**, 11, 5987-6001	4.6	50
133	Observed and modelled historical trends in the water-use efficiency of plants and ecosystems. *Global Change Biology*, **2019**, 25, 2242-2257	11.4	49
132	Methane flux from northern wetlands and tundra. *Tellus, Series B: Chemical and Physical Meteorology*, **1996**, 48, 652-661	3.3	49
131	A worldwide analysis of trends in water-balance evapotranspiration. *Hydrology and Earth System Sciences*, **2013**, 17, 4177-4187	5.5	46
130	Photosynthetic responses to altitude: an explanation based on optimality principles. *New Phytologist*, **2017**, 213, 976-982	9.8	45
129	Simulation of regional soil moisture deficits on a European scale. *Norsk Geografisk Tidsskrift*, **1988**, 42, 149-151	0.9	45
128	Precipitation scaling with temperature in warm and cold climates: An analysis of CMIP5 simulations. *Geophysical Research Letters*, **2013**, 40, 4018-4024	4.9	44
127	Impact of climate variability on present and Holocene vegetation: A model-based study. *Ecological Modelling*, **2006**, 191, 469-486	3	44
126	Leaf nitrogen from first principles: field evidence for adaptive variation with climate. *Biogeosciences*, **2017**, 14, 481-495	4.6	43
125	Simple process-led algorithms for simulating habitats (SPLASH v.1.0): robust indices of radiation, evapotranspiration and plant-available moisture. *Geoscientific Model Development*, **2017**, 10, 689-708	6.3	43
124	Simulated and Observed Preindustrial to Modern Vegetation and Climate Changes*. *Journal of Climate*, **2005**, 18, 3650-3671	4.4	43
123	What have we learnt from palaeoclimate simulations?. *Journal of Quaternary Science*, **2016**, 31, 363-385	2.3	42

122	Global mapping of potential natural vegetation: an assessment of machine learning algorithms for estimating land potential. *PeerJ*, **2018**, 6, e5457	3.1	42
121	Comment on "The global tree restoration potential". *Science*, **2019**, 366,	33.3	41
120	Long-term water stress leads to acclimation of drought sensitivity of photosynthetic capacity in xeric but not riparian Eucalyptus species. *Annals of Botany*, **2016**, 117, 133-44	4.1	39
119	A first-order analysis of the potential rle of CO2 fertilization to affect the global carbon budget: a comparison of four terrestrial biosphere models. *Tellus, Series B: Chemical and Physical Meteorology*, **1999**, 51, 343-366	3.3	39
118	Lessons Learned from IPCC AR4: Scientific Developments Needed to Understand, Predict, and Respond to Climate Change. *Bulletin of the American Meteorological Society*, **2009**, 90, 497-514	6.1	38
117	An introduction to the European Terrestrial Ecosystem Modelling Activity. *Global Ecology and Biogeography*, **2001**, 10, 581-593	6.1	38
116	Acclimation of leaf respiration consistent with optimal photosynthetic capacity. *Global Change Biology*, **2020**, 26, 2573	11.4	37
115	Evaluation of global continental hydrology as simulated by the Land-surface Processes and eXchanges Dynamic Global Vegetation Model. *Hydrology and Earth System Sciences*, **2011**, 15, 91-105	5.5	37
114	Growth enhancement due to global atmospheric change as predicted by terrestrial ecosystem models: consistent with US forest inventory data. *Global Change Biology*, **2002**, 8, 299-303	11.4	36
113	QUANTITATIVE BIRCH (BETULA L.) POLLEN SEPARATION BY ANALYSIS OF SIZE FREQUENCY DATA. *New Phytologist*, **1981**, 89, 145-157	9.8	36
112	A continental-scale assessment of variability in leaf traits: Within species, across sites and between seasons. *Functional Ecology*, **2018**, 32, 1492-1506	5.6	35
111	Evolution of isoprene emission capacity in plants. *Trends in Plant Science*, **2014**, 19, 439-46	13.1	35
110	Modeling glacial-interglacial changes in global fire regimes and trace gas emissions. *Global Biogeochemical Cycles*, **2005**, 19,	5.9	35
109	Quantifying the Impact of Global Climate Change on Potential Natural Vegetation. *Climatic Change*, **1999**, 41, 37-52	4.5	35
108	Components of leaf-trait variation along environmental gradients. *New Phytologist*, **2020**, 228, 82-94	9.8	33
107	Responses of leaf traits to climatic gradients: adaptive variation versus compositional shifts. *Biogeosciences*, **2015**, 12, 5339-5352	4.6	33
106	Simulation of tree-ring widths with a model for primary production, carbon allocation, and growth. *Biogeosciences*, **2014**, 11, 6711-6724	4.6	33
105	Organizing principles for vegetation dynamics. *Nature Plants*, **2020**, 6, 444-453	11.5	32

104	P-model v1.0: an optimality-based light use efficiency model for simulating ecosystem gross primary production. *Geoscientific Model Development*, **2020**, 13, 1545-1581	6.3	32
103	Biophysical homoeostasis of leaf temperature: A neglected process for vegetation and land-surface modelling. *Global Ecology and Biogeography*, **2017**, 26, 998-1007	6.1	32
102	The interaction of climate and land use in future terrestrial carbon storage and release. *Water, Air, and Soil Pollution*, **1993**, 70, 595-614	2.6	32
101	The China Plant Trait Database: toward a comprehensive regional compilation of functional traits for land plants. *Ecology*, **2018**, 99, 500	4.6	32
100	Carbon–nitrogen interactions in idealized simulations with JSBACH (version 3.10). *Geoscientific Model Development*, **2017**, 10, 2009-2030	6.3	31
99	Terrestrial biosphere changes over the last 120 kyr. *Climate of the Past*, **2016**, 12, 51-73	3.9	31
98	Quantitative assessment of fire and vegetation properties in simulations with fire-enabled vegetation models from the Fire Model Intercomparison Project. *Geoscientific Model Development*, **2020**, 13, 3299-3318	6.3	31
97	Quantifying leaf-trait covariation and its controls across climates and biomes. *New Phytologist*, **2019**, 221, 155-168	9.8	31
96	Historical changes in the stomatal limitation of photosynthesis: empirical support for an optimality principle. *New Phytologist*, **2020**, 225, 2484-2497	9.8	28
95	Plant respiration: Controlled by photosynthesis or biomass?. *Global Change Biology*, **2020**, 26, 1739-1753	11.4	26
94	Stable isotope and modelling evidence for CO₂ as a driver of glacial–interglacial vegetation shifts in southern Africa. *Biogeosciences*, **2013**, 10, 2001-2010	4.6	25
93	Improved simulation of fire–vegetation interactions in the Land surface Processes and eXchanges dynamic global vegetation model (LPX-Mv1). *Geoscientific Model Development*, **2014**, 7, 2411-2433	6.3	24
92	The validity of optimal leaf traits modelled on environmental conditions. *New Phytologist*, **2019**, 221, 1409-1423	9.8	24
91	Increased light-use efficiency in northern terrestrial ecosystems indicated by CO2 and greening observations. *Geophysical Research Letters*, **2016**, 43, 11,339	4.9	23
90	Effects of fire and CO2 on biogeography and primary production in glacial and modern climates. *New Phytologist*, **2015**, 208, 987-94	9.8	22
89	Terrestrial nitrogen cycling in Earth system models revisited. *New Phytologist*, **2016**, 210, 1165-8	9.8	22
88	Reconstructing ice-age palaeoclimates: Quantifying low-CO2 effects on plants. *Global and Planetary Change*, **2017**, 149, 166-176	4.2	21
87	Forest production efficiency increases with growth temperature. *Nature Communications*, **2020**, 11, 5322	17.4	21

86	Atmospheric science. The burning issue. *Science*, **2010**, 330, 1636-7	33.3	20
85	Palaeoecology and plant population dynamics. *Trends in Ecology and Evolution*, **1988**, 3, 343-5	10.9	20
84	Thermal acclimation of leaf photosynthetic traits in an evergreen woodland, consistent with the coordination hypothesis. *Biogeosciences*, **2018**, 15, 3461-3474	4.6	20
83	Morphological and moisture availability controls of the leaf area-to-sapwood area ratio: analysis of measurements on Australian trees. *Ecology and Evolution*, **2015**, 5, 1263-70	2.8	19
82	Increased ratio of electron transport to net assimilation rate supports elevated isoprenoid emission rate in eucalypts under drought. *Plant Physiology*, **2014**, 166, 1059-72	6.6	19
81	Dynamic Global Vegetation Models **2013**, 670-689		19
80	Frost and leaf-size gradients in forests: global patterns and experimental evidence. *New Phytologist* , **2018**, 219, 565-573	9.8	19
79	Data-based modelling and environmental sensitivity of vegetation in China. *Biogeosciences*, **2013**, 10, 5817-5830	4.6	18
78	A biogeochemistry-based dynamic vegetation model and its application along a moisture gradient in the continental United States. *Journal of Vegetation Science*, **2002**, 13, 369-382	3.1	17
77	Bridging Drought Experiment and Modeling: Representing the Differential Sensitivities of Leaf Gas Exchange to Drought. *Frontiers in Plant Science*, **2018**, 9, 1965	6.2	16
76	A theory of plant function helps to explain leaf-trait and productivity responses to elevation. *New Phytologist*, **2020**, 226, 1274-1284	9.8	15
75	The biomass burning contribution to climate–carbon-cycle feedback. *Earth System Dynamics*, **2018**, 9, 663-677	4.8	15
74	Modelling the demand for new nitrogen fixation by terrestrial ecosystems. *Biogeosciences*, **2017**, 14, 2003-2017	4.6	14
73	Climate-driven expansion of blanket bogs in Britain during the Holocene. *Climate of the Past*, **2016**, 12, 129-136	3.9	14
72	Vegetation plays an important role in mediating future water resources. *Environmental Research Letters*, **2016**, 11, 094022	6.2	14
71	Impacts of soil water stress on the acclimated stomatal limitation of photosynthesis: Insights from stable carbon isotope data. *Global Change Biology*, **2020**, 26, 7158-7172	11.4	13
70	Primary production in forests and grasslands of China: contrasting environmental responses of light- and water-use efficiency models. *Biogeosciences*, **2012**, 9, 4689-4705	4.6	12
69	THE HILL VEGETATION OF NORTH HOY, ORKNEY. *New Phytologist*, **1975**, 75, 313-367	9.8	12

68	Species-specific photorespiratory rate, drought tolerance and isoprene emission rate in plants. *Plant Signaling and Behavior*, **2015**, 10, e990830	2.5	11
67	Reliable, robust and realistic: the three R of next-generation land surface modelling		11
66	Do land surface models need to include differential plant species responses to drought? Examining model predictions across a latitudinal gradient in Europe		11
65	Recent trends in gross primary production and their drivers: analysis and modelling at flux-site and global scales. *Environmental Research Letters*, **2020**, 15, 124050	6.2	11
64	Evaluation of biospheric components in Earth system models using modern and palaeo-observations: the state-of-the-art. *Biogeosciences*, **2013**, 10, 8305-8328	4.6	10
63	Eco-evolutionary optimality as a means to improve vegetation and land-surface models. *New Phytologist*, **2021**, 231, 2125-2141	9.8	10
62	A new multivariable benchmark for Last Glacial Maximum climate simulations. *Climate of the Past*, **2020**, 16, 699-712	3.9	9
61	A global model for the uptake of atmospheric hydrogen by soils. *Global Biogeochemical Cycles*, **2012** , 26,	5.9	9
60	Climate versus carbon dioxide controls on biomass burning: a model analysis of the glacial–interglacial contrast. *Biogeosciences*, **2014**, 11, 6017-6027	4.6	8
59	A comprehensive benchmarking system for evaluating global vegetation models		8
58	The TRY Plant Trait Database - enhanced coverage and open access		8
57	Pollen-based reconstruction of vegetation patterns of China in mid-Holocene. *Science in China Series D: Earth Sciences*, **1998**, 41, 130-136		7
56	Isoprene emissions track the seasonal cycle of canopy temperature, not primary production: evidence from remote sensing. *Biogeosciences*, **2014**, 11, 3437-3451	4.6	7
55	Improved simulation of fire-vegetation interactions in the Land surface Processes and eXchanges dynamic global vegetation model (LPX-Mv1)		7
54	When and where soil is important to modify the carbon and water economy of leaves. *New Phytologist*, **2020**, 228, 121-135	9.8	6
53	Extending a first-principles primary production model to predict wheat yields. *Agricultural and Forest Meteorology*, **2020**, 287, 107932	5.8	6
52	Herbivores enable plant survival under nutrient limited conditions in a model grazing system. *Ecological Modelling*, **2011**, 222, 381-397	3	6
51	Causal relationships vs. emergent patterns in the global controls of fire frequency		6

50	Global climate and nutrient controls of photosynthetic capacity. *Communications Biology*, **2021**, 4, 462	6.7	6
49	AusTraits, a curated plant trait database for the Australian flora. *Scientific Data*, **2021**, 8, 254	8.2	6
48	Atmospheric dryness reduces photosynthesis along a large range of soil water deficits.. *Nature Communications*, **2022**, 13, 989	17.4	6
47	A model analysis of climate and CO2 controls on tree growth and carbon allocation in a semi-arid woodland. *Ecological Modelling*, **2016**, 342, 175-185	3	5
46	Fundamentals of climate change science39-71		5
45	Vegetation and Climate Change in Eastern North America Since the Last Glacial Maximum. *Ecology*, **1993**, 74, 998-998	4.6	5
44	Understanding and modelling wildfire regimes: an ecological perspective. *Environmental Research Letters*,	6.2	5
43	Climate vs. carbon dioxide controls on biomass burning: a model analysis of the glacial-interglacial contrast		5
42	Climate changes in interior semi-arid Spain from the last interglacial to the late Holocene		5
41	Predictability of leaf traits with climate and elevation: a case study in Gongga Mountain, China. *Tree Physiology*, **2021**, 41, 1336-1352	4.2	5
40	Global variation in the fraction of leaf nitrogen allocated to photosynthesis. *Nature Communications*, **2021**, 12, 4866	17.4	5
39	A constraint on historic growth in global photosynthesis due to increasing CO. *Nature*, **2021**, 600, 253-258	50.4	5
38	Boreal Forest Futures: Modelling the Controls on Tree Species Range Limits and Transient Responses to Climate Change **1995**, 415-428		4
37	The importance of antecedent vegetation and drought conditions as global drivers of burnt area. *Biogeosciences*, **2021**, 18, 3861-3879	4.6	4
36	The impact of methodological decisions on climate reconstructions using WA-PLS. *Quaternary Research*, **2021**, 99, 341-356	1.9	4
35	Functional trait variation related to gap dynamics in tropical moist forests: A vegetation modelling perspective. *Perspectives in Plant Ecology, Evolution and Systematics*, **2018**, 35, 52-64	3	4
34	Dry corridors opened by fire and low CO2 in Amazonian rainforest during the Last Glacial Maximum. *Nature Geoscience*, **2021**, 14, 578-585	18.3	4
33	Rising CO and warming reduce global canopy demand for nitrogen.. *New Phytologist*, **2022**,	9.8	4

32	Response to Comment on "Mycorrhizal association as a primary control of the CO2 fertilization effect". *Science*, **2017**, 355, 358	33.3	3
31	The climatic space of European pollen taxa. *Ecology*, **2020**, 101, e03055	4.6	3
30	The Earth system feedbacks that matter for contemporary climate102-128		3
29	Biophysical constraints on gross primary production by the terrestrial biosphere		3
28	Role of zooplankton dynamics for Southern Ocean phytoplankton biomass and global biogeochemical cycles		3
27	A new multi-variable benchmark for Last Glacial Maximum climate simulations		3
26	A worldwide analysis of trends in water-balance evapotranspiration		3
25	Optimality-based modelling of climate impacts on global potential wheat yield. *Environmental Research Letters*, **2021**, 16, 114013	6.2	3
24	Global decadal variability of plant carbon isotope discrimination and its link to gross primary production. *Global Change Biology*, **2021**,	11.4	3
23	A universal model for carbon dioxide uptake by plants		3
22	Plant respiration: controlled by photosynthesis or biomass?		3
21	An improved statistical approach for reconstructing past climates from biotic assemblages. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2020**, 476, 20200346	2.4	3
20	N₂O changes from the Last Glacial Maximum to the preindustrial Part 2: terrestrial N₂O emissions and carbon–nitrogen cycle interactions. *Biogeosciences*, **2020**, 17, 3511-3543	4.6	3
19	Coordination of plant hydraulic and photosynthetic traits: confronting optimality theory with field measurements. *New Phytologist*, **2021**, 232, 1286-1296	9.8	3
18	Vegetation responses to climate extremes recorded by remotely sensed atmospheric formaldehyde. *Global Change Biology*, **2021**,	11.4	3
17	CO fertilization of terrestrial photosynthesis inferred from site to global scales.. *Proceedings of the National Academy of Sciences of the United States of America*, **2022**, 119, e2115627119	11.5	3
16	Ecosystem Photosynthesis in Land-Surface Models: A First-Principles Approach Incorporating Acclimation. *Journal of Advances in Modeling Earth Systems*, **2022**, 14,	7.1	2
15	N₂O changes from the Last Glacial Maximum to the preindustrial Part II: Terrestrial N₂O emissions constrain carbon-nitrogen interactions		2

14	Simulation of tree ring-widths with a model for primary production, carbon allocation and growth		2
13	Climate-driven expansion of blanket bogs in Britain during the Holocene		2
12	Quantitative assessment of fire and vegetation properties in historical simulations with fire-enabled vegetation models from the Fire Model Intercomparison Project		2
11	A Method for Generating Coherent Spatially Explicit Maps of Seasonal Paleoclimates From Site-Based Reconstructions. *Journal of Advances in Modeling Earth Systems*, **2020**, 12, e2019MS001630	7.1	2
10	Seasonal temperature and moisture changes in interior semi-arid Spain from the last interglacial to the Late Holocene. *Quaternary Research*,1-13	1.9	2
9	Leaf economics explained by optimality principles		2
8	Changes in biomass allocation buffer low CO effects on tree growth during the last glaciation. *Scientific Reports*, **2017**, 7, 43087	4.9	1
7	P-model v1.0: An optimality-based light use efficiency model for simulating ecosystem gross primary production **2019**,		1
6	Responses of leaf traits to climatic gradients: adaptive variation vs. compositional shifts		1
5	Evaluation of biospheric components in Earth system models using modern and palaeo observations: the state-of-the-art		1
4	AusTraits a curated plant trait database for the Australian flora		1
3	Land-surface evapotranspiration derived from a first-principles primary production model. *Environmental Research Letters*,	6.2	1
2	Accounting for atmospheric carbon dioxide variations in pollen-based reconstruction of past hydroclimates. *Global and Planetary Change*, **2022**, 211, 103790	4.2	1
1	Reconstructing burnt area during the Holocene: an Iberian case study. *Climate of the Past*, **2022**, 18, 1189-1201	3.9	0