

Thomas A M Pugh

List of Publications by Year in descending order

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Version: 2024-02-01

94
papers

10,583
citations

66343

42
h-index

42399

92
g-index

143
all docs

143
docs citations

143
times ranked

14160
citing authors

#	ARTICLE	IF	CITATIONS
1	Greening of the Earth and its drivers. <i>Nature Climate Change</i> , 2016, 6, 791-795.	18.8	1,675
2	Assessing agricultural risks of climate change in the 21st century in a global gridded crop model intercomparison. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 3268-3273.	7.1	1,649
3	Global change pressures on soils from land use and management. <i>Global Change Biology</i> , 2016, 22, 1008-1028.	9.5	605
4	Pervasive shifts in forest dynamics in a changing world. <i>Science</i> , 2020, 368, .	12.6	576
5	Effectiveness of Green Infrastructure for Improvement of Air Quality in Urban Street Canyons. <i>Environmental Science & Technology</i> , 2012, 46, 7692-7699.	10.0	482
6	Role of forest regrowth in global carbon sink dynamics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 4382-4387.	7.1	370
7	Similar estimates of temperature impacts on global wheat yield by three independent methods. <i>Nature Climate Change</i> , 2016, 6, 1130-1136.	18.8	352
8	Consistent negative response of US crops to high temperatures in observations and crop models. <i>Nature Communications</i> , 2017, 8, 13931.	12.8	321
9	Historical carbon dioxide emissions caused by land-use changes are possibly larger than assumed. <i>Nature Geoscience</i> , 2017, 10, 79-84.	12.9	284
10	Global gridded crop model evaluation: benchmarking, skills, deficiencies and implications. <i>Geoscientific Model Development</i> , 2017, 10, 1403-1422.	3.6	213
11	Regional disparities in the beneficial effects of rising CO ₂ concentrations on crop water productivity. <i>Nature Climate Change</i> , 2016, 6, 786-790.	18.8	190
12	State-of-the-art global models underestimate impacts from climate extremes. <i>Nature Communications</i> , 2019, 10, 1005.	12.8	168
13	Nitrogen management is essential to prevent tropical oil palm plantations from causing ground-level ozone pollution. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 18447-18451.	7.1	161
14	Multisectoral climate impact hotspots in a warming world. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 3233-3238.	7.1	149
15	Simulating atmospheric composition over a South-East Asian tropical rainforest: performance of a chemistry box model. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 279-298.	4.9	132
16	Overview: oxidant and particle photochemical processes above a south-east Asian tropical rainforest (the OP3 project): introduction, rationale, location characteristics and tools. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 169-199.	4.9	130
17	Fluxes and concentrations of volatile organic compounds from a South-East Asian tropical rainforest. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 8391-8412.	4.9	119
18	Climate Change Risks to Global Forest Health: Emergence of Unexpected Events of Elevated Tree Mortality Worldwide. <i>Annual Review of Plant Biology</i> , 2022, 73, 673-702.	18.7	117

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19	Benchmarking sustainability in cities: The role of indicators and future scenarios. <i>Global Environmental Change</i> , 2012, 22, 245-254.	7.8	105
20	Important role of forest disturbances in the global biomass turnover and carbon sinks. <i>Nature Geoscience</i> , 2019, 12, 730-735.	12.9	105
21	Simulated carbon emissions from land-use change are substantially enhanced by accounting for agricultural management. <i>Environmental Research Letters</i> , 2015, 10, 124008.	5.2	103
22	Global isoprene and monoterpene emissions under changing climate, vegetation, CO ₂ and land use. <i>Atmospheric Environment</i> , 2017, 155, 35-45.	4.1	100
23	Understanding the weather signal in national crop yield variability. <i>Earth's Future</i> , 2017, 5, 605-616.	6.3	85
24	Climate analogues suggest limited potential for intensification of production on current croplands under climate change. <i>Nature Communications</i> , 2016, 7, 12608.	12.8	80
25	Crop productivity changes in 1.5°C and 2°C worlds under climate sensitivity uncertainty. <i>Environmental Research Letters</i> , 2018, 13, 064007.	5.2	79
26	Taking the pulse of Earth's tropical forests using networks of highly distributed plots. <i>Biological Conservation</i> , 2021, 260, 108849.	4.1	71
27	Current challenges of implementing anthropogenic land-use and land-cover change in models contributing to climate change assessments. <i>Earth System Dynamics</i> , 2017, 8, 369-386.	7.1	69
28	Narrowing uncertainties in the effects of elevated CO ₂ on crops. <i>Nature Food</i> , 2020, 1, 775-782.	14.0	67
29	Modelling feedbacks between human and natural processes in the land system. <i>Earth System Dynamics</i> , 2018, 9, 895-914.	7.1	65
30	Spatial and temporal uncertainty of crop yield aggregations. <i>European Journal of Agronomy</i> , 2017, 88, 10-21.	4.1	63
31	Tree mode of death and mortality risk factors across Amazon forests. <i>Nature Communications</i> , 2020, 11, 5515.	12.8	62
32	Large potential for crop production adaptation depends on available future varieties. <i>Global Change Biology</i> , 2021, 27, 3870-3882.	9.5	62
33	Global irrigation contribution to wheat and maize yield. <i>Nature Communications</i> , 2021, 12, 1235.	12.8	61
34	Ground-level ozone influenced by circadian control of isoprene emissions. <i>Nature Geoscience</i> , 2011, 4, 671-674.	12.9	59
35	Land-use and land-cover change carbon emissions between 1901 and 2012 constrained by biomass observations. <i>Biogeosciences</i> , 2017, 14, 5053-5067.	3.3	58
36	The Global Gridded Crop Model Intercomparison phase 1 simulation dataset. <i>Scientific Data</i> , 2019, 6, 50.	5.3	57

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37	Large uncertainty in carbon uptake potential of land-based climate change mitigation efforts. <i>Global Change Biology</i> , 2018, 24, 3025-3038.	9.5	56
38	Concerns about reported harvests in European forests. <i>Nature</i> , 2021, 592, E15-E17.	27.8	56
39	Exploring uncertainties in global crop yield projections in a large ensemble of crop models and CMIP5 and CMIP6 climate scenarios. <i>Environmental Research Letters</i> , 2021, 16, 034040.	5.2	53
40	Adaptation of global land use and management intensity to changes in climate and atmospheric carbon dioxide. <i>Global Change Biology</i> , 2018, 24, 2791-2809.	9.5	50
41	Implications of climate mitigation for future agricultural production. <i>Environmental Research Letters</i> , 2015, 10, 125004.	5.2	49
42	Spring photosynthetic onset and net CO_2 uptake in Alaska triggered by landscape thawing. <i>Global Change Biology</i> , 2018, 24, 3416-3435.	9.5	48
43	Understanding the uncertainty in global forest carbon turnover. <i>Biogeosciences</i> , 2020, 17, 3961-3989.	3.3	45
44	Parameterization-induced uncertainties and impacts of crop management harmonization in a global gridded crop model ensemble. <i>PLoS ONE</i> , 2019, 14, e0221862.	2.5	42
45	Key knowledge and data gaps in modelling the influence of CO_2 concentration on the terrestrial carbon sink. <i>Journal of Plant Physiology</i> , 2016, 203, 3-15.	3.5	41
46	The influence of small-scale variations in isoprene concentrations on atmospheric chemistry over a tropical rainforest. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 4121-4134.	4.9	40
47	Soil carbon management in large-scale Earth system modelling: implications for crop yields and nitrogen leaching. <i>Earth System Dynamics</i> , 2015, 6, 745-768.	7.1	40
48	Global patterns of crop yield stability under additional nutrient and water inputs. <i>PLoS ONE</i> , 2018, 13, e0198748.	2.5	40
49	Actual European forest management by region, tree species and owner based on 714,000 re-measured trees in national forest inventories. <i>PLoS ONE</i> , 2018, 13, e0207151.	2.5	39
50	Occurrence of crop pests and diseases has largely increased in China since 1970. <i>Nature Food</i> , 2022, 3, 57-65.	14.0	39
51	Evapotranspiration simulations in ISIMIP2: Evaluation of spatio-temporal characteristics with a comprehensive ensemble of independent datasets. <i>Environmental Research Letters</i> , 2018, 13, 075001.	5.2	38
52	Global Response Patterns of Major Rainfed Crops to Adaptation by Maintaining Current Growing Periods and Irrigation. <i>Earth's Future</i> , 2019, 7, 1464-1480.	6.3	38
53	The GCGMI Phase 2 experiment: global gridded crop model simulations under uniform changes in CO_2 , temperature, water, and nitrogen levels (protocol) <i>Tj ETQq1 1 0.784314 rg38/Overlaid</i>	3.4	38
54	The atmospheric chemistry of trace gases and particulate matter emitted by different land uses in Borneo. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2011, 366, 3177-3195.	4.0	36

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55	Uncertainties in the land-use flux resulting from land-use change reconstructions and gross land transitions. <i>Earth System Dynamics</i> , 2017, 8, 91-111.	7.1	36
56	Increasing climatic sensitivity of global grassland vegetation biomass and species diversity correlates with water availability. <i>New Phytologist</i> , 2021, 230, 1761-1771.	7.3	36
57	Interactive climate factors restrict future increases in spring productivity of temperate and boreal trees. <i>Global Change Biology</i> , 2020, 26, 4042-4055.	9.5	34
58	Global consequences of afforestation and bioenergy cultivation on ecosystem service indicators. <i>Biogeosciences</i> , 2017, 14, 4829-4850.	3.3	33
59	Plant Regrowth as a Driver of Recent Enhancement of Terrestrial CO ₂ Uptake. <i>Geophysical Research Letters</i> , 2018, 45, 4820-4830.	4.0	32
60	Large-scale variations in the dynamics of Amazon forest canopy gaps from airborne lidar data and opportunities for tree mortality estimates. <i>Scientific Reports</i> , 2021, 11, 1388.	3.3	32
61	Land use change and El Niño-Southern Oscillation drive decadal carbon balance shifts in Southeast Asia. <i>Nature Communications</i> , 2018, 9, 1154.	12.8	28
62	The impact of local surface changes in Borneo on atmospheric composition at wider spatial scales: coastal processes, land-use change and air quality. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2011, 366, 3210-3224.	4.0	27
63	Emissions of biogenic volatile organic compounds and subsequent photochemical production of secondary organic aerosol in mesocosm studies of temperate and tropical plant species. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 12781-12801.	4.9	27
64	Simulating the recent impacts of multiple biotic disturbances on forest carbon cycling across the United States. <i>Global Change Biology</i> , 2018, 24, 2079-2092.	9.5	26
65	Effects of the spatial resolution of climate data on estimates of biogenic isoprene emissions. <i>Atmospheric Environment</i> , 2013, 70, 1-6.	4.1	25
66	A Lagrangian model of air-mass photochemistry and mixing using a trajectory ensemble: the Cambridge Tropospheric Trajectory model of Chemistry And Transport (CiTTYCAT) version 4.2. <i>Geoscientific Model Development</i> , 2012, 5, 193-221.	3.6	24
67	A Large Committed Long-Term Sink of Carbon due to Vegetation Dynamics. <i>Earth's Future</i> , 2018, 6, 1413-1432.	6.3	24
68	Delivering a Multi-Functional and Resilient Urban Forest. <i>Sustainability</i> , 2015, 7, 4600-4624.	3.2	23
69	Agricultural breadbaskets shift poleward given adaptive farmer behavior under climate change. <i>Global Change Biology</i> , 2022, 28, 167-181.	9.5	23
70	Impacts of land-use history on the recovery of ecosystems after agricultural abandonment. <i>Earth System Dynamics</i> , 2016, 7, 745-766.	7.1	22
71	Historical and future quantification of terrestrial carbon sequestration from a Greenhouse-Gas-Value perspective. <i>Global Environmental Change</i> , 2015, 32, 153-164.	7.8	20
72	The GGCMI Phase 2 emulators: global gridded crop model responses to changes in CO ₂ , temperature, water, and nitrogen (version 1.0). <i>Geoscientific Model Development</i> , 2020, 13, 3995-4018.	3.6	19

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73	A Dynamic Model for Strategies and Dynamics of Plant Water-Potential Regulation Under Drought Conditions. <i>Frontiers in Plant Science</i> , 2020, 11, 373.	3.6	17
74	Strong regional influence of climatic forcing datasets on global crop model ensembles. <i>Agricultural and Forest Meteorology</i> , 2021, 300, 108313.	4.8	17
75	Effect of land-use change and management on biogenic volatile organic compound emissions – selecting climate-smart cultivars. <i>Plant, Cell and Environment</i> , 2015, 38, 1896-1912.	5.7	16
76	Climate Sensitivity Controls Uncertainty in Future Terrestrial Carbon Sink. <i>Geophysical Research Letters</i> , 2018, 45, 4329-4336.	4.0	16
77	Polar amplification of Pliocene climate by elevated trace gas radiative forcing. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 23401-23407.	7.1	15
78	Influence of boundary layer dynamics and isoprene chemistry on the organic aerosol budget in a tropical forest. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013, 118, 9351-9366.	3.3	14
79	Impacts of future agricultural change on ecosystem service indicators. <i>Earth System Dynamics</i> , 2020, 11, 357-376.	7.1	13
80	A futures-based analysis for urban air quality remediation. <i>Proceedings of the Institution of Civil Engineers: Engineering Sustainability</i> , 2012, 165, 21-36.	0.7	12
81	Impact of LULCC on the emission of BVOCs during the 21st century. <i>Atmospheric Environment</i> , 2017, 165, 73-87.	4.1	11
82	Accounting for interannual variability in agricultural intensification: The potential of crop selection in Sub-Saharan Africa. <i>Agricultural Systems</i> , 2016, 148, 159-168.	6.1	10
83	Systematic variation in North American tree species abundance distributions along macroecological climatic gradients. <i>Global Ecology and Biogeography</i> , 2019, 28, 601-611.	5.8	10
84	Identifying the Drivers of Spatial Taxonomic and Functional Beta-Diversity of British Breeding Birds. <i>Frontiers in Ecology and Evolution</i> , 2021, 9, .	2.2	10
85	Modelling chemistry in the nocturnal boundary layer above tropical rainforest and a generalised effective nocturnal ozone deposition velocity for sub-ppbv NO _x conditions. <i>Journal of Atmospheric Chemistry</i> , 2010, 65, 89-110.	3.2	8
86	Reconciling Precipitation with Runoff: Observed Hydrological Change in the Midlatitudes. <i>Journal of Hydrometeorology</i> , 2015, 16, 2403-2420.	1.9	7
87	Are Land-Use Change Emissions in Southeast Asia Decreasing or Increasing?. <i>Global Biogeochemical Cycles</i> , 2022, 36, .	4.9	7
88	Potential yield simulated by global gridded crop models: using a process-based emulator to explain their differences. <i>Geoscientific Model Development</i> , 2021, 14, 1639-1656.	3.6	6
89	Assessing taxonomic and functional change in British breeding bird assemblages over time. <i>Global Ecology and Biogeography</i> , 2022, 31, 925-939.	5.8	6
90	Climate change projections of terrestrial primary productivity over the Hindu Kush Himalayan forests. <i>Earth System Dynamics</i> , 2021, 12, 857-870.	7.1	5

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91	A New Modelling Approach to Adaptation-Mitigation in the Land System. Springer Climate, 2022, , 133-140.	0.6	3
92	Reply to 'Circadian control of global isoprene emissions'. Nature Geoscience, 2012, 5, 435-436.	12.9	2
93	Delayed and altered post-fire recovery pathways of Mediterranean shrubland under 20-year drought manipulation. Forest Ecology and Management, 2022, 506, 119970.	3.2	1
94	State of science in carbon budget assessments for temperate forests and grasslands. , 2022, , 237-270.		0