Elke Stehfest

List of Publications by Year
in descending order

100 papers	19,894 citations	31976 53 h-index	33894 99 g-index
124 all docs	124 docs citations	124 times ranked	20232 citing authors

#	Article	IF	Citations
1	The Shared Socioeconomic Pathways and their energy, land use, and greenhouse gas emissions implications: An overview. Global Environmental Change, 2017, 42, 153-168.	7.8	2,966
2	Assessing agricultural risks of climate change in the 21st century in a global gridded crop model intercomparison. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 3268-3273.	7.1	1,649
3	N2O and NO emission from agricultural fields and soils under natural vegetation: summarizing available measurement data and modeling of global annual emissions. Nutrient Cycling in Agroecosystems, 2006, 74, 207-228.	2.2	815
4	Scenarios towards limiting global mean temperature increase below 1.5 Â°C. Nature Climate Change, 2018, 8, 325-332.	18.8	795
5	RCP2.6: exploring the possibility to keep global mean temperature increase below 2Â°C. Climatic Change, 2011, 109, 95-116.	3.6	759
6	Exploring global changes in nitrogen and phosphorus cycles in agriculture induced by livestock production over the 1900â€“2050 period. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 20882-20887.	7.1	742
7	Land-use futures in the shared socio-economic pathways. Global Environmental Change, 2017, 42, 331-345.	7.8	645
8	Climate benefits of changing diet. Climatic Change, 2009, 95, 83-102.	3.6	640
9	Greenhouse gas mitigation potentials in the livestock sector. Nature Climate Change, 2016, 6, 452-461.	18.8	588
10	Anthropogenic land use estimates for the Holocene â€“ HYDE 3.2. Earth System Science Data, 2017, 9, 927-953.	9.9	587
11	Energy, land-use and greenhouse gas emissions trajectories under a green growth paradigm. Global Environmental Change, 2017, 42, 237-250.	7.8	523
12	Global emissions pathways under different socioeconomic scenarios for use in CMIP6: a dataset of harmonized emissions trajectories through the end of the century. Geoscientific Model Development, 2019, 12, 1443-1475.	3.6	496
13	Alternative pathways to the 1.5â€‰Â°C target reduce the need for negative emission technologies. Nature Climate Change, 2018, 8, 391-397.	18.8	455
14	The yield gap of global grain production: A spatial analysis. Agricultural Systems, 2010, 103, 316-326.	6.1	420
15	Bending the curve of terrestrial biodiversity needs an integrated strategy. Nature, 2020, 585, 551-556.	27.8	413
16	Harmonization of global land use change and management for the period 850â€“2100 (LUH2) for CMIP6. Geoscientific Model Development, 2020, 13, 5425-5464.	3.6	408
17	Competition for land. Philosophical Transactions of the Royal Society B: Biological Sciences, 2010, 365, 2941-2957.	4.0	365
18	Similar estimates of temperature impacts on global wheat yield by three independent methods. Nature Climate Change, 2016, 6, 1130-1136.	18.8	352

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19	Risk of increased food insecurity under stringent global climate change mitigation policy. Nature Climate Change, 2018, 8, 699-703.	18.8	319
20	Contribution of the land sector to a 1.5 Â°C world. Nature Climate Change, 2019, 9, 817-828.	18.8	301
21	Innovation can accelerate the transition towards a sustainable food system. Nature Food, 2020, 1, 266-272.	14.0	285
22	Future air pollution in the Shared Socio-economic Pathways. Global Environmental Change, 2017, 42, 346-358.	7.8	277
23	Reducing emissions from agriculture to meet the 2ÂÂ°C target. Global Change Biology, 2016, 22, 3859-3864.	9.5	267
24	Exploring SSP land-use dynamics using the IMAGE model: Regional and gridded scenarios of land-use change and land-based climate change mitigation. Global Environmental Change, 2018, 48, 119-135.	7.8	202
25	Global scale DAYCENT model analysis of greenhouse gas emissions and mitigation strategies for cropped soils. Global and Planetary Change, 2009, 67, 44-50.	3.5	179
26	Hotspots of uncertainty in landâ€use and landâ€cover change projections: a globalâ€scale model comparison. Global Change Biology, 2016, 22, 3967-3983.	9.5	171
27	Afforestation for climate change mitigation: Potentials, risks and tradeâ€offs. Global Change Biology, 2020, 26, 1576-1591.	9.5	162
28	Contribution of N₂O to the greenhouse gas balance of firstâ€generation biofuels. Global Change Biology, 2009, 15, 1-23.	9.5	157
29	Future bio-energy potential under various natural constraints. Energy Policy, 2009, 37, 4220-4230.	8.8	147
30	Simulation of global crop production with the ecosystem model DayCent. Ecological Modelling, 2007, 209, 203-219.	2.5	146
31	Pathways to achieve a set of ambitious global sustainability objectives by 2050: Explorations using the IMAGE integrated assessment model. Technological Forecasting and Social Change, 2015, 98, 303-323.	11.6	141
32	Land-use transition for bioenergy and climate stabilization: model comparison of drivers, impacts and interactions with other land use based mitigation options. Climatic Change, 2014, 123, 495-509.	3.6	140
33	Agricultural non-CO2 emission reduction potential in the context of the 1.5â€‰Â°C target. Nature Climate Change, 2019, 9, 66-72.	18.8	139
34	How well do integrated assessment models simulate climate change?. Climatic Change, 2011, 104, 255-285.	3.6	127
35	Projections of the availability and cost of residues from agriculture and forestry. GCB Bioenergy, 2016, 8, 456-470.	5.6	127
36	Global projections of future cropland expansion to 2050 and direct impacts on biodiversity and carbon storage. Global Change Biology, 2018, 24, 5895-5908.	9.5	126

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37	Key determinants of global land-use projections. Nature Communications, 2019, 10, 2166.	12.8	123
38	Landâ€based measures to mitigate climate change: Potential and feasibility by country. Global Change Biology, 2021, 27, 6025-6058.	9.5	114
39	Assessing uncertainties in land cover projections. Global Change Biology, 2017, 23, 767-781.	9.5	103
40	Impact of future land use and land cover changes on atmospheric chemistryâ€climate interactions. Journal of Geophysical Research, 2010, 115, .	3.3	99
41	A land-use systems approach to represent land-use dynamics at continental and global scales. Environmental Modelling and Software, 2012, 33, 61-79.	4.5	99
42	An evaluation of the global potential of bioenergy production on degraded lands. GCB Bioenergy, 2012, 4, 130-147.	5.6	96
43	Projecting terrestrial biodiversity intactness with GLOBIO 4. Global Change Biology, 2020, 26, 760-771.	9.5	94
44	Comparing impacts of climate change and mitigation on global agriculture by 2050. Environmental Research Letters, 2018, 13, 064021.	5.2	93
45	Integrated scenarios to support analysis of the foodâ€"energyâ€"water nexus. Nature Sustainability, 2019, 2, 1132-1141.	23.7	79
46	Global impacts of surface ozone changes on crop yields and land use. Atmospheric Environment, 2015, 106, 11-23.	4.1	73
47	Demand for biodiversity protection and carbon storage as drivers of global land change scenarios. Global Environmental Change, 2016, 40, 101-111.	7.8	71
48	Current challenges of implementing anthropogenic land-use and land-cover change in models contributing to climate change assessments. Earth System Dynamics, 2017, 8, 369-386.	7.1	69
49	The representation of landscapes in global scale assessments of environmental change. Landscape Ecology, 2013, 28, 1067-1080.	4.2	68
50	Indirect land use change emissions related to EU biofuel consumption: an analysis based on historical data. Environmental Science and Policy, 2011, 14, 248-257.	4.9	66
51	Exploring IMAGE model scenarios that keep greenhouse gas radiative forcing below 3W/m2 in 2100. Energy Economics, 2010, 32, 1105-1120.	12.1	62
52	Critical adjustment of land mitigation pathways for assessing countriesâ€™ climate progress. Nature Climate Change, 2021, 11, 425-434.	18.8	61
53	Land-based climate change mitigation measures can affect agricultural markets and food security. Nature Food, 2022, 3, 110-121.	14.0	61
54	The importance of three centuries of land-use change for the global and regional terrestrial carbon cycle. Climatic Change, 2009, 97, 123-144.	3.6	59

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55	A physically-based model of long-term food demand. Global Environmental Change, 2017, 45, 47-62.	7.8	59
56	Exploring global irrigation patterns: A multilevel modelling approach. Agricultural Systems, 2011, 104, 703-713.	6.1	58
57	Greenhouse gas emission curves for advanced biofuel supply chains. Nature Climate Change, 2017, 7, 920-924.	18.8	57
58	Large uncertainty in carbon uptake potential of landâ€based climateâ€change mitigation efforts. Global Change Biology, 2018, 24, 3025-3038.	9.5	56
59	The effect of agricultural trade liberalisation on land-use related greenhouse gas emissions. Global Environmental Change, 2009, 19, 434-446.	7.8	55
60	Future global pig production systems according to the Shared Socioeconomic Pathways. Science of the Total Environment, 2019, 665, 739-751.	8.0	55
61	Model collaboration for the improved assessment of biomass supply, demand, and impacts. GCB Bioenergy, 2015, 7, 422-437.	5.6	54
62	Including CO2 implications of land occupation in LCAsâ€"method and example for livestock products. International Journal of Life Cycle Assessment, 2012, 17, 962-972.	4.7	51
63	Climate extremes, landâ€"climate feedbacks and land-use forcing at 1.5Â°C. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20160450.	3.4	46
64	Making the Paris agreement climate targets consistent with food security objectives. Global Food Security, 2019, 23, 93-103.	8.1	46
65	Options to reduce the environmental effects of livestock production â€" Comparison of two economic models. Agricultural Systems, 2013, 114, 38-53.	6.1	45
66	A Global Analysis of Future Water Deficit Based On Different Allocation Mechanisms. Water Resources Research, 2018, 54, 5803-5824.	4.2	42
67	Long-term marginal abatement cost curves of non-CO2 greenhouse gases. Environmental Science and Policy, 2019, 99, 136-149.	4.9	40
68	Food choices for health and planet. Nature, 2014, 515, 501-502.	27.8	38
69	Drivers and patterns of land biosphere carbon balance reversal. Environmental Research Letters, 2016, 11, 044002.	5.2	38
70	Modelling alternative futures of global food security: Insights from FOODSECURE. Global Food Security, 2020, 25, 100358.	8.1	35
71	Global consequences of afforestation and bioenergy cultivation on ecosystem service indicators. Biogeosciences, 2017, 14, 4829-4850.	3.3	33
72	Biogeophysical Impacts of Landâ€Use Change on Climate Extremes in Lowâ€Emission Scenarios: Results From HAPPIâ€Land. Earth's Future, 2018, 6, 396-409.	6.3	31

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73	Global rules for translating land-use change (LUH2) to land-cover change for CMIP6 using GLM2. Geoscientific Model Development, 2020, 13, 3203-3220.	3.6	31
74	Simulation of N2O emissions from a urine-affected pasture in New Zealand with the ecosystem model DayCent. Journal of Geophysical Research, 2004, 109, n/a-n/a.	3.3	30
75	AÂframework for modelling the complexities of food and water security under globalisation. Earth System Dynamics, 2018, 9, 103-118.	7.1	29
76	Estimating the opportunity costs of reducing carbon dioxide emissions via avoided deforestation, using integrated assessment modelling. Land Use Policy, 2014, 41, 45-60.	5.6	28
77	Mapping the yields of lignocellulosic bioenergy crops from observations at the global scale. Earth System Science Data, 2020, 12, 789-804.	9.9	26
78	New Study For Climate Modeling, Analyses, and Scenarios. Eos, 2009, 90, 181-182.	0.1	24
79	Multi-scale scenarios of spatial-temporal dynamics in the European livestock sector. Agriculture, Ecosystems and Environment, 2011, 140, 88-101.	5.3	23
80	Modeling forest plantations for carbon uptake with the LPJmL dynamic global vegetation model. Earth System Dynamics, 2019, 10, 617-630.	7.1	22
81	Comparing the impact of future cropland expansion on global biodiversity and carbon storage across models and scenarios. Philosophical Transactions of the Royal Society B: Biological Sciences, 2020, 375, 20190189.	4.0	21
82	Short- and long-term warming effects of methane may affect the cost-effectiveness of mitigation policies and benefits of low-meat diets. Nature Food, 2021, 2, 970-980.	14.0	21
83	If climate action becomes urgent: the importance of response times for various climate strategies. Climatic Change, 2013, 121, 473-486.	3.6	19
84	Stakeholder-designed scenarios for global food security assessments. Global Food Security, 2020, 24, 100352.	8.1	18
85	How food secure are the green, rocky and middle roads: food security effects in different world development paths. Environmental Research Communications, 2020, 2, 031002.	2.3	17
86	Impacts of model structure and data aggregation on European wide predictions of nitrogen and green house gas fluxes in response to changes in livestock, land cover, and land management. Journal of Integrative Environmental Sciences, 2010, 7, 145-157.	2.5	14
87	REDD policy impacts on the agri-food sector and food security. Food Policy, 2017, 66, 73-87.	6.0	14
88	Future projections of biodiversity and ecosystem services in Europe with two integrated assessment models. Regional Environmental Change, 2020, 20, 1.	2.9	14
89	Impact of LULCC on the emission of BVOCs during the 21st century. Atmospheric Environment, 2017, 165, 73-87.	4.1	11
90	Are scenario projections overly optimistic about future yield progress?. Global Environmental Change, 2020, 64, 102120.	7.8	11

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91	Quantifying synergies and trade-offs in the global water-land-food-climate nexus using a multi-model scenario approach. Environmental Research Letters, 2022, 17, 045004.	5.2	11
92	Identifying regional drivers of future land-based biodiversity footprints. Global Environmental Change, 2021, 69, 102304.	7.8	10
93	Low Stabilization Scenarios and Implications for Major World Regions from an Integrated Assessment Perspective. Energy Journal, 2010, 31, 165-192.	1.7	9
94	Integration of future water scarcity and electricity supply into prospective LCA: Application to the assessment of water desalination for the steel industry. Journal of Industrial Ecology, 2022, 26, 1182-1194.	5.5	7
95	Data for long-term marginal abatement cost curves of non-CO2 greenhouse gases. Data in Brief, 2019, 25, 104334.	1.0	6
96	Trade-offs between water needs for food, utilities, and the environmentâ€"a nexus quantification at different scales. Environmental Research Letters, 2021, 16, 115003.	5.2	5
97	Commentary: Food choices and environmental impacts: Achievements and challenges. Global Environmental Change, 2021, 71, 102402.	7.8	4
98	Contribution of N2O to the greenhouse gas balance of first-generation biofuels. Global Change Biology, 2009, 15, 780-780.	9.5	3
99	Reply to: An appeal to cost undermines food security risks of delayed mitigation. Nature Climate Change, 2020, 10, 420-421.	18.8	2
100	The contribution of N2O to the greenhouse gas balance of first-generation biofuels. Global Change Biology, 2009, 16, 2400-2400.	9.5	0