Michael Obersteiner

List of Publications by Year
in descending order

160 papers	22,126 citations	10956 71 h-index	9553 142 g-index
177 all docs	177 docs citations	177 times ranked	23131 citing authors

#	Article	IF	Citations
1	Global maps and factors driving forest foliar elemental composition: the importance of evolutionary history. New Phytologist, 2022, 233, 169-181.	3.5	15
2	Linking Distributed Optimization Models for Food, Water, and Energy Security Nexus Management. Sustainability, 2022, 14, 1255.	1.6	8
3	Containing the Risk of Phosphorus Pollution in Agricultural Watersheds. Sustainability, 2022, 14, 1717.	1.6	3
4	The meaning of net zero and how to get it right. Nature Climate Change, 2022, 12, 15-21.	8.1	257
5	Global forest management data for 2015 at a 100â€‰m resolution. Scientific Data, 2022, 9, 199.	2.4	30
6	Reply to: Restoration prioritization must be informed by marginalized people. Nature, 2022, 607, E7-E9.	13.7	5
7	Early systems change necessary for catalyzing long-term sustainability in a post-2030 agenda. One Earth, 2022, 5, 792-811.	3.6	15
8	Can N₂O emissions offset the benefits from soil organic carbon storage?. Global Change Biology, 2021, 27, 237-256.	4.2	174
9	Articulating the effect of food systems innovation on the Sustainable Development Goals. Lancet Planetary Health, The, 2021, 5, e50-e62.	5.1	135
10	Climate warming from managed grasslands cancels the cooling effect of carbon sinks in sparsely grazed and natural grasslands. Nature Communications, 2021, 12, 118.	5.8	106
11	Robust Management of Systemic Risks and Food-Water-Energy-Environmental Security: Two-Stage Strategic-Adaptive GLOBIOM Model. Sustainability, 2021, 13, 857.	1.6	4
12	Empirical support for the biogeochemical niche hypothesis in forest trees. Nature Ecology and Evolution, 2021, 5, 184-194.	3.4	50
13	Agricultural commodity price dynamics and their determinants: A comprehensive econometric approach. Journal of Forecasting, 2021, 40, 1245-1273.	1.6	6
14	The Mediterranean Region as a Paradigm of the Global Decoupling of N and P Between Soils and Freshwaters. Global Biogeochemical Cycles, 2021, 35, e2020GB006874.	1.9	9
15	Implementing Brazilâ€™s Forest Code: a vital contribution to securing forests and conserving biodiversity. Biodiversity and Conservation, 2021, 30, 1621-1635.	1.2	10
16	Restoring Nature at Lower Food Production Costs. Frontiers in Environmental Science, 2021, 9, .	1.5	6
17	Alternative futures for global biological invasions. Sustainability Science, 2021, 16, 1637-1650.	2.5	25
18	Recent advances and future research in ecological stoichiometry. Perspectives in Plant Ecology, Evolution and Systematics, 2021, 50, 125611.	1.1	57

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19	Influences of international agricultural trade on the global phosphorus cycle and its associated issues. Global Environmental Change, 2021, 69, 102282.	3.6	16
20	Potential CO2 removal from enhanced weathering by ecosystem responses to powdered rock. Nature Geoscience, 2021, 14, 545-549.	5.4	69
21	Operationalizing the net-negative carbon economy. Nature, 2021, 596, 377-383.	13.7	87
22	The effect of global change on soil phosphatase activity. Global Change Biology, 2021, 27, 5989-6003.	4.2	59
23	Areas of global importance for conserving terrestrial biodiversity, carbon and water. Nature Ecology and Evolution, 2021, 5, 1499-1509.	3.4	147
24	Reconciling regional nitrogen boundaries with global food security. Nature Food, 2021, 2, 700-711.	6.2	51
25	Conserving the Cerrado and Amazon biomes of Brazil protects the soy economy from damaging warming. World Development, 2021, 146, 105582.	2.6	22
26	Chinaâ€™s future food demand and its implications for trade and environment. Nature Sustainability, 2021, 4, 1042-1051.	11.5	112
27	Anthropogenic global shifts in biospheric N and P concentrations and ratios and their impacts on biodiversity, ecosystem productivity, food security, and human health. Global Change Biology, 2020, 26, 1962-1985.	4.2	138
28	Drivers of change in Chinaâ€™s energy-related CO ₂ emissions. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 29-36.	3.3	174
29	Global priority areas for ecosystem restoration. Nature, 2020, 586, 724-729.	13.7	489
30	Verifiable soil organic carbon modelling to facilitate regional reporting of cropland carbon change: A test case in the Czech Republic. Journal of Environmental Management, 2020, 274, 111206.	3.8	6
31	Spatial variation in biodiversity loss across China under multiple environmental stressors. Science Advances, 2020, 6, .	4.7	64
32	Could Global Intensification of Nitrogen Fertilisation Increase Immunogenic Proteins and Favour the Spread of Coeliac Pathology?. Foods, 2020, 9, 1602.	1.9	9
33	Bending the curve of terrestrial biodiversity needs an integrated strategy. Nature, 2020, 585, 551-556.	13.7	413
34	Heterogeneous Compute Clusters and Massive Environmental Simulations Based on the EPIC Model. Modelling, 2020, 1, 215-224.	0.8	5
35	Innovation can accelerate the transition towards a sustainable food system. Nature Food, 2020, 1, 266-272.	6.2	285
36	Increasing atmospheric CO2 concentrations correlate with declining nutritional status of European forests. Communications Biology, 2020, 3, 125.	2.0	58

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37	The global cropland-sparing potential of high-yield farming. Nature Sustainability, 2020, 3, 281-289.	11.5	121
38	Historical CO₂ emissions from land use and land cover change and their uncertainty. Biogeosciences, 2020, 17, 4075-4101.	1.3	112
39	Mapping the yields of lignocellulosic bioenergy crops from observations at the global scale. Earth System Science Data, 2020, 12, 789-804.	3.7	26
40	The sensitivity of the costs of reducing emissions from deforestation and degradation (REDD) to future socioeconomic drivers and its implications for mitigation policy design. Mitigation and Adaptation Strategies for Global Change, 2019, 24, 1123-1141.	1.0	8
41	Modelling the drivers of a widespread shift to sustainable diets. Nature Sustainability, 2019, 2, 725-735.	11.5	91
42	Expanding the Soy Moratorium to Brazilâ€™s Cerrado. Science Advances, 2019, 5, eaav7336.	4.7	102
43	A Framework for Global Twenty-First Century Scenarios and Models of Biological Invasions. BioScience, 2019, 69, 697-710.	2.2	38
44	Citizen science and the United Nations Sustainable Development Goals. Nature Sustainability, 2019, 2, 922-930.	11.5	378
45	Fix the broken food system in three steps. Nature, 2019, 569, 181-183.	13.7	66
46	Flobsionâ€"Flexible Option with Benefit Sharing. International Journal of Financial Studies, 2019, 7, 22.	1.1	2
47	On the financial viability of negative emissions. Nature Communications, 2019, 10, 1783.	5.8	59
48	The bioelements, the elementome, and the biogeochemical niche. Ecology, 2019, 100, e02652.	1.5	139
49	Flexible Options for Greenhouse Gas-Emitting Energy Producer. Energies, 2019, 12, 3792.	1.6	1
50	Contribution of the land sector to a 1.5 Â°C world. Nature Climate Change, 2019, 9, 817-828.	8.1	301
51	Escaping the climate policy uncertainty trap: options contracts for REDD+. Climate Policy, 2018, 18, 1227-1234.	2.6	20
52	How to spend a dwindling greenhouse gas budget. Nature Climate Change, 2018, 8, 7-10.	8.1	119
53	Impacts and Uncertainties of +2Â°C of Climate Change and Soil Degradation on European Crop Calorie Supply. Earth's Future, 2018, 6, 373-395.	2.4	33
54	Structural change as a key component for agricultural non-CO2 mitigation efforts. Nature Communications, 2018, 9, 1060.	5.8	52

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55	Spatially explicit life cycle impact assessment for soil erosion from global crop production. Ecosystem Services, 2018, 30, 220-227.	2.3	25
56	Reducing US Coal Emissions Can Boost Employment. Joule, 2018, 2, 2633-2648.	11.7	48
57	Practice and perspectives in the validation of resource management models. Nature Communications, 2018, 9, 5359.	5.8	50
58	Resource nexus perspectives towards the United Nations Sustainable Development Goals. Nature Sustainability, 2018, 1, 737-743.	11.5	236
59	Modeling Global Trade in Phosphate Rock within a Partial Equilibrium Framework. Sustainability, 2018, 10, 1550.	1.6	3
60	Future environmental and agricultural impacts of Brazilâ€™s Forest Code. Environmental Research Letters, 2018, 13, 074021.	2.2	51
61	Global exposure and vulnerability to multi-sector development and climate change hotspots. Environmental Research Letters, 2018, 13, 055012.	2.2	162
62	Global and regional phosphorus budgets in agricultural systems and their implications for phosphorus-use efficiency. Earth System Science Data, 2018, 10, 1-18.	3.7	106
63	Plant invasion is associated with higher plantâ€“soil nutrient concentrations in nutrientâ€poor environments. Global Change Biology, 2017, 23, 1282-1291.	4.2	147
64	Economic Development and Forest Cover: Evidence from Satellite Data. Scientific Reports, 2017, 7, 40678.	1.6	56
65	Pathways for balancing CO2 emissions and sinks. Nature Communications, 2017, 8, 14856.	5.8	122
66	A dataset of forest biomass structure for Eurasia. Scientific Data, 2017, 4, 170070.	2.4	68
67	Comment on â€œThe extent of forest in dryland biomesâ€. Science, 2017, 358, .	6.0	26
68	Reducing greenhouse gas emissions in agriculture without compromising food security?. Environmental Research Letters, 2017, 12, 105004.	2.2	172
69	Shifting from a fertilization-dominated to a warming-dominated period. Nature Ecology and Evolution, 2017, 1, 1438-1445.	3.4	167
70	A global dataset of crowdsourced land cover and land use reference data. Scientific Data, 2017, 4, 170075.	2.4	112
71	Land-use futures in the shared socio-economic pathways. Global Environmental Change, 2017, 42, 331-345.	3.6	645
72	$$hbox {CO}_2$$ CO 2 -intensive power generation and REDD-based emission offsets with a benefit-sharing mechanism. Energy Systems, 2017, 8, 857-883.	1.8	4

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73	The marker quantification of the Shared Socioeconomic Pathway 2: A middle-of-the-road scenario for the 21st century. Global Environmental Change, 2017, 42, 251-267.	3.6	590
74	The Shared Socioeconomic Pathways and their energy, land use, and greenhouse gas emissions implications: An overview. Global Environmental Change, 2017, 42, 153-168.	3.6	2,966
75	Increasing gap in human height between rich and poor countries associated to their different intakes of N and P. Scientific Reports, 2017, 7, 17671.	1.6	13
76	The landâ€potential knowledge system (landpks): mobile apps and collaboration for optimizing climate change investments. Ecosystem Health and Sustainability, 2016, 2, .	1.5	32
77	Assessing the INDCsâ€™ land use, land use change, and forest emission projections. Carbon Balance and Management, 2016, 11, 26.	1.4	78
78	Dynamics of the land use, land use change, and forestry sink in the European Union: the impacts of energy and climate targets for 2030. Climatic Change, 2016, 138, 253-266.	1.7	29
79	Assessing the land resourceâ€"food price nexus of the Sustainable Development Goals. Science Advances, 2016, 2, e1501499.	4.7	162
80	Uncertainty in soil data can outweigh climate impact signals in global crop yield simulations. Nature Communications, 2016, 7, 11872.	5.8	179
81	Reducing emissions from agriculture to meet the 2ÂÂ°C target. Global Change Biology, 2016, 22, 3859-3864.	4.2	267
82	Regional aspects of modelling burned areas in Europe. International Journal of Wildland Fire, 2016, 25, 811.	1.0	13
83	Fair pricing of REDD-based emission offsets under risk preferences and benefit-sharing. Energy Policy, 2016, 96, 193-205.	4.2	7
84	Forest fires and adaptation options in Europe. Regional Environmental Change, 2016, 16, 21-30.	1.4	74
85	Biophysical and economic limits to negative CO2 emissions. Nature Climate Change, 2016, 6, 42-50.	8.1	973
86	New feed sources key to ambitious climate targets. Carbon Balance and Management, 2015, 10, 26.	1.4	51
87	Projected Shifts in Coffea arabica Suitability among Major Global Producing Regions Due to Climate Change. PLoS ONE, 2015, 10, e0124155.	1.1	214
88	Systemic trade risk of critical resources. Science Advances, 2015, 1, e1500522.	4.7	30
89	Mapping global cropland and field size. Global Change Biology, 2015, 21, 1980-1992.	4.2	404
90	Harnessing the power of volunteers, the internet and Google Earth to collect and validate global spatial information using Geo-Wiki. Technological Forecasting and Social Change, 2015, 98, 324-335.	6.2	66

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91	Development of a global hybrid forest mask through the synergy of remote sensing, crowdsourcing and FAO statistics. Remote Sensing of Environment, 2015, 162, 208-220.	4.6	97
92	The dynamic soil organic carbon mitigation potential of European cropland. Global Environmental Change, 2015, 35, 269-278.	3.6	34
93	Climate change mitigation through livestock system transitions. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 3709-3714.	3.3	407
94	African crop yield reductions due to increasingly unbalanced Nitrogen and Phosphorus consumption. Global Change Biology, 2014, 20, 1278-1288.	4.2	67
95	A calibration procedure to improve global rice yield simulations with EPIC. Ecological Modelling, 2014, 273, 128-139.	1.2	60
96	BECCS in South Koreaâ€"Analyzing the negative emissions potential of bioenergy as a mitigation tool. Renewable Energy, 2014, 61, 102-108.	4.3	45
97	Woody biomass energy potential in 2050. Energy Policy, 2014, 66, 19-31.	4.2	262
98	Cattle ranching intensification in Brazil can reduce global greenhouse gas emissions by sparing land from deforestation. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 7236-7241.	3.3	182
99	Global wheat production potentials and management flexibility under the representative concentration pathways. Global and Planetary Change, 2014, 122, 107-121.	1.6	110
100	How effective are the sustainability criteria accompanying the European Union 2020 biofuel targets?. GCB Bioenergy, 2013, 5, 306-314.	2.5	31
101	Global bioenergy scenarios â€" Future forest development, land-use implications, and trade-offs. Biomass and Bioenergy, 2013, 57, 86-96.	2.9	110
102	Human-induced nitrogenâ€"phosphorus imbalances alter natural and managed ecosystems across the globe. Nature Communications, 2013, 4, 2934.	5.8	1,013
103	The phosphorus trilemma. Nature Geoscience, 2013, 6, 897-898.	5.4	103
104	Optimal mitigation strategies with negative emission technologies and carbon sinks under uncertainty. Climatic Change, 2013, 118, 73-87.	1.7	32
105	Crop Productivity and the Global Livestock Sector: Implications for Land Use Change and Greenhouse Gas Emissions. American Journal of Agricultural Economics, 2013, 95, 442-448.	2.4	102
106	Pan-European crop modelling with EPIC: Implementation, up-scaling and regional crop yield validation. Agricultural Systems, 2013, 120, 61-75.	3.2	127
107	Downgrading Recent Estimates of Land Available for Biofuel Production. Environmental Science & Technology, 2013, 47, 130128103203003.	4.6	34
108	Beyond vulnerability assessment. Nature Climate Change, 2013, 3, 942-943.	8.1	9

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109	Biomass use, production, feed efficiencies, and greenhouse gas emissions from global livestock systems. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 20888-20893.	3.3	867
110	Impacts of incentives to reduce emissions from deforestation on global species extinctions. Nature Climate Change, 2012, 2, 350-355.	8.1	99
111	Renewables and climate change mitigation: Irreversible energy investment under uncertainty and portfolio effects. Energy Policy, 2012, 40, 59-68.	4.2	105
112	Geo-Wiki: An online platform for improving global land cover. Environmental Modelling and Software, 2012, 31, 110-123.	1.9	249
113	Robust Energy Portfolios Under Climate Policy and Socioeconomic Uncertainty. Environmental Modeling and Assessment, 2012, 17, 39-49.	1.2	6
114	Cropland for sub-Saharan Africa: A synergistic approach using five land cover data sets. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	87
115	A new hybrid land cover dataset for Russia: a methodology for integrating statistics, remote sensing and in situ information. Journal of Land Use Science, 2011, 6, 245-259.	1.0	70
116	Impacts of population growth, economic development, and technical change on global food production and consumption. Agricultural Systems, 2011, 104, 204-215.	3.2	226
117	The European nitrogen cycle: commentary on Schulze et al., Global Change Biology (2010) 16, pp. 1451-1469. Global Change Biology, 2011, 17, 2754-2757.	4.2	0
118	Global land-use implications of first and second generation biofuel targets. Energy Policy, 2011, 39, 5690-5702.	4.2	586
119	A dynamic CVaRâ€portfolio approach using real options: an application to energy investments. European Transactions on Electrical Power, 2011, 21, 1825-1841.	1.0	17
120	A framework for structuring the global forest monitoring landscape in the REDD+ era. Environmental Science and Policy, 2011, 14, 127-139.	2.4	22
121	Options on low-cost abatement and investment in the energy sector: new perspectives on REDD. Environment and Development Economics, 2011, 16, 507-525.	1.3	13
122	Highlighting continued uncertainty in global land cover maps for the user community. Environmental Research Letters, 2011, 6, 044005.	2.2	161
123	BECCS in South Korea - An Analysis of Negative Emissions Potential for Bioenergy as a Mitigation Tool. , 2011, , .		1
124	Terrestrial ecosystem management for climate change mitigation. Current Opinion in Environmental Sustainability, 2010, 2, 271-276.	3.1	44
125	Comparison of global land cover products: community remote sensing to validate areas of high disagreement. , 2010, , .		0
126	Carbon Calculations to Considerâ€"Response. Science, 2010, 327, 781-781.	6.0	8

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127	Bioenergy: Counting on Incentivesâ€"Response. Science, 2010, 327, 1200-1201.	6.0	7
128	Agriculture and resource availability in a changing world: The role of irrigation. Water Resources Research, 2010, 46, .	1.7	124
129	A high-resolution assessment on global nitrogen flows in cropland. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 8035-8040.	3.3	470
130	A dynamic CVaR-portfolio approach using real options: An application to energy investments. , 2009, , .		1
131	Fixing a Critical Climate Accounting Error. Science, 2009, 326, 527-528.	6.0	399
132	A new thinking for renewable energy model: Remote sensing-based renewable energy model. International Journal of Energy Research, 2009, 33, 778-786.	2.2	13
133	On fair, effective and efficient REDD mechanism design. Carbon Balance and Management, 2009, 4, 11.	1.4	47
134	An assessment of monitoring requirements and costs of 'Reduced Emissions from Deforestation and Degradation'. Carbon Balance and Management, 2009, 4, 7.	1.4	69
135	Methanol production by gasification using a geographically explicit model. Biomass and Bioenergy, 2009, 33, 745-751.	2.9	59
136	Impact of climate policy uncertainty on the adoption of electricity generating technologies. Energy Policy, 2009, 37, 733-743.	4.2	104
137	Geo-Wiki.Org: The Use of Crowdsourcing to Improve Global Land Cover. Remote Sensing, 2009, 1, 345-354.	1.8	284
138	Large-scale biomass for energy, with considerations and cautions: an editorial comment. Climatic Change, 2008, 87, 335-342.	1.7	30
139	Optimal location of wood gasification plants for methanol production with heat recovery. International Journal of Energy Research, 2008, 32, 1080-1091.	2.2	107
140	Investment under market and climate policy uncertainty. Applied Energy, 2008, 85, 708-721.	5.1	235
141	Assessing the effects of CO2 price caps on electricity investmentsâ€"A real options analysis. Energy Policy, 2008, 36, 3974-3981.	4.2	98
142	Valuing Weather Observation Systems For Forest Fire Management. IEEE Systems Journal, 2008, 2, 349-357.	2.9	16
143	A Conceptual Framework for Assessing the Benefits of a Global Earth Observation System of Systems. IEEE Systems Journal, 2008, 2, 338-348.	2.9	35
144	Adaptive dynamics and technological change. Technovation, 2008, 28, 335-348.	4.2	21

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145	Global cost estimates of reducing carbon emissions through avoided deforestation. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 10302-10307.	3.3	442
146	A global forest growing stock, biomass and carbon map based on FAO statistics. Silva Fennica, 2008, 42, .	0.5	218
147	An integrated CVaR and real options approach to investments in the energy sector. Journal of Energy Markets, 2008, 1, 61-85.	0.2	30
148	Geographically explicit global modeling of land-use change, carbon sequestration, and biomass supply. Technological Forecasting and Social Change, 2007, 74, 1057-1082.	6.2	83
149	Site identification for carbon sequestration in Latin America: A grid-based economic approach. Forest Policy and Economics, 2006, 8, 636-651.	1.5	35
150	A spatial comparison of four satellite derived 1km global land cover datasets. International Journal of Applied Earth Observation and Geoinformation, 2006, 8, 246-255.	1.4	165
151	Predicting the deforestation-trend under different carbon-prices. Carbon Balance and Management, 2006, 1, 15.	1.4	69
152	Global Supply of Biomass for Energy and Carbon Sequestration from Afforestation/Reforestation Activities. Mitigation and Adaptation Strategies for Global Change, 2006, 11, 1003-1021.	1.0	21
153	Learning and climate change. Climate Policy, 2006, 6, 585-589.	2.6	20
154	Real options and the value of generation capacity in the German electricity market. Review of Financial Economics, 2005, 14, 297-310.	0.6	27
155	Forecasting electricity spot-prices using linear univariate time-series models. Applied Energy, 2004, 77, 87-106.	5.1	247
156	Clashing strategic cultures and climate policy. Climate Policy, 2004, 4, 347-357.	2.6	0
157	Negative emissions from BioEnergy use, carbon capture and sequestration (BECS)â€"the case of biomass production by sustainable forest management from semi-natural temperate forests. Biomass and Bioenergy, 2003, 24, 285-296.	2.9	86
158	Capping the Cost of Compliance with the Kyoto Protocol and Recycling Revenues into Land-Use Projects. Scientific World Journal, The, 2001, 1, 271-280.	0.8	4
159	Predicting the Deforestation - Trend Under Different Carbon - Prices. SSRN Electronic Journal, 0, , .	0.4	4
160	Effects of Low-Cost Offsets on Energy Investment - New Perspectives on REDD. SSRN Electronic Journal, 0, , .	0.4	6