Graham K Macdonald

List of Publications by Year
in descending order

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48 papers	6,642 citations	185998 28 h-index	205818 48 g-index
59 all docs	59 docs citations	59 times ranked	9991 citing authors

#	Article	IF	Citations
1	Climate variation explains a third of global crop yield variability. Nature Communications, 2015, 6, 5989.	5.8	1,138
2	Agronomic phosphorus imbalances across the world's croplands. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 3086-3091.	3.3	654
3	Leverage points for improving global food security and the environment. Science, 2014, 345, 325-328.	6.0	584
4	The Global Foodâ€Energyâ€Water Nexus. Reviews of Geophysics, 2018, 56, 456-531.	9.0	446
5	An index-based framework for assessing patterns and trends in river fragmentation and flow regulation by global dams at multiple scales. Environmental Research Letters, 2015, 10, 015001.	2.2	439
6	Greenhouse gas emissions intensity of globalÂcroplands. Nature Climate Change, 2017, 7, 63-68.	8.1	414
7	Untangling the Environmentalist's Paradox: Why Is Human Well-being Increasing as Ecosystem Services Degrade?. BioScience, 2010, 60, 576-589.	2.2	358
8	Social-ecological and technological factors moderate the value of urban nature. Nature Sustainability, 2019, 2, 29-38.	11.5	293
9	The persistent threat of emerging plant disease pandemics to global food security. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	261
10	Integrating legacy soil phosphorus into sustainable nutrient management strategies for future food, bioenergy and water security. Nutrient Cycling in Agroecosystems, 2016, 104, 393-412.	1.1	199
11	Realizing Resilient Food Systems. BioScience, 2016, 66, 600-610.	2.2	186
12	Rethinking Agricultural Trade Relationships in an Era of Globalization. BioScience, 2015, 65, 275-289.	2.2	179
13	Progress towards sustainable intensification in China challenged by land-use change. Nature Sustainability, 2018, 1, 304-313.	11.5	151
14	Environmental health impacts of feeding crops to farmed fish. Environment International, 2016, 91, 201-214.	4.8	138
15	The influence of time, soil characteristics, and landâ€use history on soil phosphorus legacies: a global metaâ€analysis. Global Change Biology, 2012, 18, 1904-1917.	4.2	107
16	A tradeoff frontier for global nitrogen use and cereal production. Environmental Research Letters, 2014, 9, 054002.	2.2	100
17	Leveraging total factor productivity growth for sustainable and resilient farming. Nature Sustainability, 2019, 2, 22-28.	11.5	93
18	Big data has big potential for applications to climate change adaptation. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 10729-10732.	3.3	91

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19	Feeding the Corn Belt: Opportunities for phosphorus recycling in U.S. agriculture. Science of the Total Environment, 2016, 542, 1117-1126.	3.9	84
20	Embodied phosphorus and the global connections of United States agriculture. Environmental Research Letters, 2012, 7, 044024.	2.2	62
21	Global Opportunities to Increase Agricultural Independence Through Phosphorus Recycling. Earth's Future, 2019, 7, 370-383.	2.4	62
22	The influence of crop and chemical fertilizer combinations on greenhouse gas emissions: A partial life-cycle assessment of fertilizer production and use in China. Resources, Conservation and Recycling, 2021, 168, 105303.	5.3	62
23	Phosphorus Accumulation in Saint Lawrence River Watershed Soils: A Century-Long Perspective. Ecosystems, 2009, 12, 621-635.	1.6	50
24	Land-Use Legacies Are Important Determinants of Lake Eutrophication in the Anthropocene. PLoS ONE, 2011, 6, e15913.	1.1	46
25	Variability in ecosystem service measurement: a pollination service case study. Frontiers in Ecology and the Environment, 2013, 11, 414-422.	1.9	41
26	Flows in Agro-food Networks (FAN): An agent-based model to simulate local agricultural material flows. Agricultural Systems, 2020, 180, 102718.	3.2	38
27	Quantifying the foodshed: a systematic review of urban food flow and local food self-sufficiency research. Environmental Research Letters, 2021, 16, 023003.	2.2	37
28	Food system resilience to phosphorus shortages on a telecoupled planet. Nature Sustainability, 2022, 5, 114-122.	11.5	31
29	Guiding phosphorus stewardship for multiple ecosystem services. Ecosystem Health and Sustainability, 2016, 2, .	1.5	30
30	Watershed Buffering of Legacy Phosphorus Pressure at a Regional Scale: A Comparison Across Space and Time. Ecosystems, 2019, 22, 91-109.	1.6	27
31	Rural-urban connectivity and agricultural land management across the Global South. Global Environmental Change, 2020, 60, 101982.	3.6	25
32	The Legacy of Agricultural Reclamation on Channel and Pool Networks of Bay of Fundy Salt Marshes. Estuaries and Coasts, 2010, 33, 151-160.	1.0	23
33	Eating on an interconnected planet. Environmental Research Letters, 2013, 8, 021002.	2.2	21
34	Co-benefits and Trade-Offs From Agro-Food System Redesign for Circularity: A Case Study With the FAN Agent-Based Model. Frontiers in Sustainable Food Systems, 2020, 4, .	1.8	19
35	The U.S. consumer phosphorus footprint: where do nitrogen and phosphorus diverge?. Environmental Research Letters, 2020, 15, 105022.	2.2	19
36	Phosphorus and land-use changes are significant drivers of cladoceran community composition and diversity: an analysis over spatial and temporal scales. Canadian Journal of Fisheries and Aquatic Sciences, 2010, 67, 1262-1273.	0.7	17

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37	Socio-environmental consideration of phosphorus flows in the urban sanitation chain of contrasting cities. Regional Environmental Change, 2018, 18, 1387-1401.	1.4	17
38	Extrinsic vs. Intrinsic Regimes Shifts in Shallow Lakes: Long-Term Response of Cyanobacterial Blooms to Historical Catchment Phosphorus Loading and Climate Warming. Frontiers in Ecology and Evolution, 2017, 5, .	1.1	15
39	Geospatial Land Price Data: A Public Good for Global Change Science and Policy. BioScience, 2018, 68, 481-484.	2.2	15
40	Diverse adaptation strategies helped local food producers cope with initial challenges of the Covid-19 pandemic: Lessons from QuÃ©bec, Canada. Journal of Rural Studies, 2022, 90, 124-133.	2.1	15
41	Pathways to sustainable intensification through crop water management. Environmental Research Letters, 2016, 11, 091001.	2.2	14
42	Creating space for sustainability literacy: the case of student-centered symposia. International Journal of Sustainability in Higher Education, 2018, 19, 839-855.	1.6	12
43	Food, trade, and the environment. Environmental Research Letters, 2018, 13, 100201.	2.2	8
44	Growing pains: Small-scale farmer responses to an urban rooftop farming and online marketplace enterprise in MontrÃ©al, Canada. Agriculture and Human Values, 2021, 38, 677-692.	1.7	7
45	Provincial nitrogen footprints highlight variability in drivers of reactive nitrogen emissions in Canada. Environmental Research Letters, 2021, 16, 095007.	2.2	6
46	Reply to Comment on â€˜An index-based framework for assessing patterns and trends in river fragmentation and flow regulation by global dams at multiple scalesâ€™. Environmental Research Letters, 2017, 12, 038002.	2.2	5
47	Examining the Sensitivity of Global CO₂ Emissions to Trade Restrictions over Multiple Years. Environmental Science and Technology Letters, 2022, 9, 293-298.	3.9	2
48	Geographic versus institutional drivers of nitrogen footprints: a comparison of two urban universities. Environmental Research Letters, 2020, 15, 045008.	2.2	1