Navin Ramankutty

List of Publications by Year
in descending order

125 papers	53,626 citations	9234 74 h-index	17546 121 g-index
131 all docs	131 docs citations	131 times ranked	48449 citing authors

#	Article	IF	Citations
1	Global Consequences of Land Use. Science, 2005, 309, 570-574.	6.0	9,451
2	Solutions for a cultivated planet. Nature, 2011, 478, 337-342.	13.7	5,821
3	MODIS Collection 5 global land cover: Algorithm refinements and characterization of new datasets. Remote Sensing of Environment, 2010, 114, 168-182.	4.6	2,752
4	Influence of extreme weather disasters on global crop production. Nature, 2016, 529, 84-87.	13.7	2,233
5	Closing yield gaps through nutrient and water management. Nature, 2012, 490, 254-257.	13.7	2,055
6	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.	4.2	1,718
7	Estimating historical changes in global land cover: Croplands from 1700 to 1992. Global Biogeochemical Cycles, 1999, 13, 997-1027.	1.9	1,647
8	Comparing the yields of organic and conventional agriculture. Nature, 2012, 485, 229-232.	13.7	1,463
9	Tropical forests were the primary sources of new agricultural land in the 1980s and 1990s. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 16732-16737.	3.3	1,355
10	An oscillation in the global climate system of period 65â€“70 years. Nature, 1994, 367, 723-726.	13.7	1,329
11	Farming the planet: 1. Geographic distribution of global agricultural lands in the year 2000. Global Biogeochemical Cycles, 2008, 22, .	1.9	1,328
12	Putting people in the map: anthropogenic biomes of the world. Frontiers in Ecology and the Environment, 2008, 6, 439-447.	1.9	1,308
13	Farming the planet: 2. Geographic distribution of crop areas, yields, physiological types, and net primary production in the year 2000. Global Biogeochemical Cycles, 2008, 22, .	1.9	1,259
14	Recent patterns of crop yield growth and stagnation. Nature Communications, 2012, 3, 1293.	5.8	1,146
15	An integrated biosphere model of land surface processes, terrestrial carbon balance, and vegetation dynamics. Global Biogeochemical Cycles, 1996, 10, 603-628.	1.9	1,106
16	Carbon emissions from land use and land-cover change. Biogeosciences, 2012, 9, 5125-5142.	1.3	839
17	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.	1.9	680
18	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

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19	Anthropogenic transformation of the biomes, 1700 to 2000. Global Ecology and Biogeography, 2010, 19, 589-606.	2.7	641
20	Testing the performance of a dynamic global ecosystem model: Water balance, carbon balance, and vegetation structure. Global Biogeochemical Cycles, 2000, 14, 795-825.	1.9	608
21	Agriculture production as a major driver of the Earth system exceeding planetary boundaries. Ecology and Society, 2017, 22, .	1.0	576
22	Trends in Global Agricultural Land Use: Implications for Environmental Health and Food Security. Annual Review of Plant Biology, 2018, 69, 789-815.	8.6	559
23	Geographic distribution of major crops across the world. Global Biogeochemical Cycles, 2004, 18, n/a-n/a.	1.9	545
24	Global crop yield response to extreme heat stress under multiple climate change futures. Environmental Research Letters, 2014, 9, 034011.	2.2	474
25	The global distribution of cultivable lands: current patterns and sensitivity to possible climate change. Global Ecology and Biogeography, 2002, 11, 377-392.	2.7	468
26	Amazonia revealed: forest degradation and loss of ecosystem goods and services in the Amazon Basin. Frontiers in Ecology and the Environment, 2007, 5, 25-32.	1.9	439
27	Crop planting dates: an analysis of global patterns. Global Ecology and Biogeography, 2010, 19, 607-620.	2.7	431
28	The role of pasture and soybean in deforestation of the Brazilian Amazon. Environmental Research Letters, 2010, 5, 024002.	2.2	416
29	Mind the gap: how do climate and agricultural management explain the â€˜yield gapâ€™ of croplands around the world?. Global Ecology and Biogeography, 2010, 19, 769-782.	2.7	408
30	A Synthesis of Information on Rapid Land-cover Change for the Period 1981â€“2000. BioScience, 2005, 55, 115.	2.2	367
31	Hidden linkages between urbanization and food systems. Science, 2016, 352, 943-945.	6.0	355
32	Climate variability and crop production in Tanzania. Agricultural and Forest Meteorology, 2011, 151, 449-460.	1.9	354
33	Characterizing patterns of global land use: An analysis of global croplands data. Global Biogeochemical Cycles, 1998, 12, 667-685.	1.9	335
34	Characterizing the Spatial Patterns of Global Fertilizer Application and Manure Production. Earth Interactions, 2010, 14, 1-22.	0.7	335
35	Carbon payback times for crop-based biofuel expansion in the tropics: the effects of changing yield and technology. Environmental Research Letters, 2008, 3, 034001.	2.2	333
36	Challenges to estimating carbon emissions from tropical deforestation. Global Change Biology, 2007, 13, 51-66.	4.2	323

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37	Biogeophysical effects of land use on climate: Model simulations of radiative forcing and large-scale temperature change. Agricultural and Forest Meteorology, 2007, 142, 216-233.	1.9	316
38	A global data set of the extent of irrigated land from 1900 to 2005. Hydrology and Earth System Sciences, 2015, 19, 1521-1545.	1.9	301
39	How do weather and climate influence cropping area and intensity?. Global Food Security, 2015, 4, 46-50.	4.0	299
40	Many shades of grayâ€"The context-dependent performance of organic agriculture. Science Advances, 2017, 3, e1602638.	4.7	294
41	How much of the world's food do smallholders produce?. Global Food Security, 2018, 17, 64-72.	4.0	274
42	Subnational distribution of average farm size and smallholder contributions to global food production. Environmental Research Letters, 2016, 11, 124010.	2.2	271
43	Global trends in visibility: implications for dust sources. Atmospheric Chemistry and Physics, 2007, 7, 3309-3339.	1.9	222
44	Biogeophysical effects of historical land cover changes simulated by six Earth system models of intermediate complexity. Climate Dynamics, 2006, 26, 587-600.	1.7	220
45	Land cover change over the last three centuries due to human activities: The availability of new global data sets. Geo Journal, 2004, 61, 335-344.	1.7	206
46	Modeling the hydrological impact of land-use change in West Africa. Journal of Hydrology, 2007, 337, 258-268.	2.3	183
47	Cropland/pastureland dynamics and the slowdown of deforestation in Latin America. Environmental Research Letters, 2015, 10, 034017.	2.2	182
48	Green Surprise? How Terrestrial Ecosystems Could Affect Earth's Climate. Frontiers in Ecology and the Environment, 2003, 1, 38.	1.9	181
49	Estimating historical changes in land cover:North American croplands from 1850 to 1992. Global Ecology and Biogeography, 1999, 8, 381-396.	2.7	180
50	Urban agriculture and food security: A critique based on an assessment of urban land constraints. Global Food Security, 2015, 4, 8-15.	4.0	164
51	Physiology on a Landscape Scale: Plant-Animal Interactions. Integrative and Comparative Biology, 2002, 42, 431-453.	0.9	157
52	Ten facts about land systems for sustainability. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	157
53	People on the Land: Changes in Global Population and Croplands during the 20thCentury. Ambio, 2002, 31, 251-257.	2.8	155
54	Changes in yield variability of major crops for 1981â€"2010 explained by climate change. Environmental Research Letters, 2016, 11, 034003.	2.2	155

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55	What is this thing called organic? â€“ How organic farming is codified in regulations. Food Policy, 2017, 68, 10-20.	2.8	139
56	Urban agriculture: a global analysis of the space constraint to meet urban vegetable demand. Environmental Research Letters, 2014, 9, 064025.	2.2	125
57	Direct human influence on atmospheric CO2 seasonality from increased cropland productivity. Nature, 2014, 515, 398-401.	13.7	118
58	The challenge of feeding the world while conserving half the planet. Nature Sustainability, 2018, 1, 409-412.	11.5	118
59	Climate volatility and poverty vulnerability in Tanzania. Global Environmental Change, 2011, 21, 46-55.	3.6	111
60	Higher yields and more biodiversity on smaller farms. Nature Sustainability, 2021, 4, 651-657.	11.5	108
61	Implications for global warming of intercycle solar irradiance variations. Nature, 1992, 360, 330-333.	13.7	107
62	Trends and Variability in U.S. Corn Yields Over the Twentieth Century. Earth Interactions, 2005, 9, 1-29.	0.7	107
63	Global market integration increases likelihood that a future African Green Revolution could increase crop land use and CO ₂ emissions. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 13799-13804.	3.3	107
64	Abrupt changes in rainfall during the twentieth century. Geophysical Research Letters, 2007, 34, .	1.5	106
65	Reconciling apparent inconsistencies in estimates of terrestrial CO2 sources and sinks. Tellus, Series B: Chemical and Physical Meteorology, 2003, 55, 345-363.	0.8	105
66	Improved global cropland data as an essential ingredient for food security. Global Food Security, 2015, 4, 37-45.	4.0	103
67	Calculating Climate Effects on Birds and Mammals: Impacts on Biodiversity, Conservation, Population Parameters, and Global Community Structure1. American Zoologist, 2000, 40, 597-630.	0.7	102
68	Livestock policy for sustainable development. Nature Food, 2020, 1, 160-165.	6.2	97
69	Green surprise? How terrestrial ecosystems could affect earthâ€™s climate. Frontiers in Ecology and the Environment, 2003, 1, 38-44.	1.9	96
70	Prevailing Myths About Agricultural Abandonment and Forest Regrowth in the United States. Annals of the American Association of Geographers, 2010, 100, 502-512.	3.0	95
71	Leveraging total factor productivity growth for sustainable and resilient farming. Nature Sustainability, 2019, 2, 22-28.	11.5	93
72	Detection of cropland field parcels from Landsat imagery. Remote Sensing of Environment, 2017, 201, 165-180.	4.6	92

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73	Urbanization and the loss of prime farmland: a case study in the Calgaryâ€"Edmonton corridor of Alberta. Regional Environmental Change, 2015, 15, 881-893.	1.4	84
74	Our share of the planetary pie. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 12585-12586.	3.3	82
75	Synchronized failure of global crop production. Nature Ecology and Evolution, 2019, 3, 780-786.	3.4	75
76	Long-term variations of climate and carbon fluxes over the Amazon basin. Geophysical Research Letters, 2002, 29, 33-1-33-4.	1.5	71
77	The Need for Improved Maps of Global Cropland. Eos, 2013, 94, 31-32.	0.1	66
78	The global divide in data-driven farming. Nature Sustainability, 2021, 4, 154-160.	11.5	65
79	Functional connectivity of the worldâ€™s protected areas. Science, 2022, 376, 1101-1104.	6.0	62
80	Diagnosing the uncertainty and detectability of emission reductions for REDD + under current capabilities: an example for Panama. Environmental Research Letters, 2011, 6, 024005.	2.2	59
81	From Miami to Madison: Investigating the relationship between climate and terrestrial net primary production. Global Biogeochemical Cycles, 2007, 21, .	1.9	58
82	Global option space for organic agriculture is delimited by nitrogen availability. Nature Food, 2021, 2, 363-372.	6.2	58
83	Feedbacks between agriculture and climate: An illustration of the potential unintended consequences of human land use activities. Global and Planetary Change, 2006, 54, 79-93.	1.6	57
84	Mapping Asian Cropping Intensity With MODIS. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2014, 7, 3373-3379.	2.3	54
85	Market-mediated responses confound policies to limit deforestation from oil palm expansion in Malaysia and Indonesia. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 19193-19199.	3.3	54
86	Interactions between nitrogen deposition, land cover conversion, and climate change determine the contemporary carbon balance of Europe. Biogeosciences, 2010, 7, 2749-2764.	1.3	53
87	Land-use regime shifts: an analytical framework and agenda for future land-use research. Ecology and Society, 2016, 21, .	1.0	50
88	Investigation of Hydrological Variability in West Africa Using Land Surface Models. Journal of Climate, 2005, 18, 3173-3188.	1.2	49
89	Sustainable intensification in land systems: trade-offs, scales, and contexts. Current Opinion in Environmental Sustainability, 2019, 38, 37-43.	3.1	48
90	Producer and consumer responsibility for greenhouse gas emissions from agricultural productionâ€"a perspective from the Brazilian Amazon. Environmental Research Letters, 2009, 4, 044010.	2.2	47

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91	Can intensive farming save nature?. Frontiers in Ecology and the Environment, 2012, 10, 455-455.	1.9	41
92	Croplands in West Africa: A Geographically Explicit Dataset for Use in Models. Earth Interactions, 2004, 8, 1-22.	0.7	40
93	Increasing expansion of large-scale crop production onto deforested land in sub-Andean South America. Environmental Research Letters, 2018, 13, 084021.	2.2	37
94	Power tariffs for groundwater irrigation in India: A comparative analysis of the environmental, equity, and economic tradeoffs. World Development, 2020, 128, 104836.	2.6	31
95	Interactions between land systems and food systems. Current Opinion in Environmental Sustainability, 2019, 38, 60-67.	3.1	30
96	Is the recently reported 65- to 70-year surface-temperature oscillation the result of climatic noise?. Journal of Geophysical Research, 1995, 100, 13767.	3.3	27
97	A review of global gridded cropping system data products. Environmental Research Letters, 2021, 16, 093005.	2.2	26
98	A global assessment of the carbon cycle and temperature responses to major changes in future fire regime. Climatic Change, 2015, 133, 179-192.	1.7	25
99	Scienceâ€"graphic art partnerships to increase research impact. Communications Biology, 2019, 2, 295.	2.0	24
100	Mapping Crop Types, Irrigated Areas, and Cropping Intensities in Heterogeneous Landscapes of Southern India Using Multi-Temporal Medium-Resolution Imagery. Photogrammetric Engineering and Remote Sensing, 2012, 78, 815-827.	0.3	23
101	A multi-dimensional metric for facilitating sustainable food choices in campus cafeterias. Journal of Cleaner Production, 2016, 135, 1351-1362.	4.6	21
102	Agricultural land-use change in Kerala, India: Perspectives from above and below the canopy. Agriculture, Ecosystems and Environment, 2017, 245, 1-10.	2.5	21
103	Perennial Staple Crops: Yields, Distribution, and Nutrition in the Global Food System. Frontiers in Sustainable Food Systems, 2020, 4, .	1.8	19
104	People on the land: changes in global population and croplands during the 20th century. Ambio, 2002, 31, 251-7.	2.8	18
105	Tradeâ€offs in the performance of alternative farming systems. Agricultural Economics (United) Tj ETQq1 1 0.784314 rgBT /Overlock 10	2.0	16
106	Low-frequency oscillation. Nature, 1994, 372, 508-509.	13.7	15
107	Implementation of aÂMarauding Insect Module (MIM, version 1.0) in the Integrated BIosphere Simulator (IBIS, version 2.6b4) dynamic vegetationâ€"land surface model. Geoscientific Model Development, 2016, 9, 1243-1261.	1.3	14
108	Modeling Global and Regional Net Primary Production under Elevated Atmospheric CO2: On a Potential Source of Uncertainty. Earth Interactions, 2006, 10, 1-20.	0.7	11

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109	Modelling long-term impacts of mountain pine beetle outbreaks on merchantable biomass, ecosystem carbon, albedo, and radiative forcing. Biogeosciences, 2016, 13, 5277-5295.	1.3	11
110	Shifts in the abiotic and biotic environment of cultivated sunflower under future climate change. OCL - Oilseeds and Fats, Crops and Lipids, 2019, 26, 9.	0.6	11
111	Land sparing or land sharing: context dependent. Frontiers in Ecology and the Environment, 2013, 11, 178-178.	1.9	10
112	The Conventional Versus Alternative Agricultural Divide: A Response to Garibaldi et al.. Trends in Ecology and Evolution, 2017, 32, 720-721.	4.2	10
113	An open-access dataset of crop production by farm size from agricultural censuses and surveys. Data in Brief, 2018, 19, 1970-1988.	0.5	8
114	Global agricultural land-use data for integrated assessment modeling. , 2007, , 252-265.		7
115	Land-Use Change and Global Food Production. , 2008, , 23-40.		7
116	Spatial Correlations Don't Predict Changes in Agricultural Ecosystem Services: A Canada-Wide Case Study. Frontiers in Sustainable Food Systems, 2020, 4, .	1.8	6
117	Investigating the Effects of Subgrid Cell Dynamic Heterogeneity on the Large-Scale Modeling of Albedo in Boreal Forests*. Earth Interactions, 2016, 20, 1-23.	0.7	5
118	Beyond productivism versus agroecology: lessons for sustainable food systems from Lovinsâ€™ soft path energy policies. Environmental Research Letters, 2021, 16, 091003.	2.2	5
119	Temperature Oscillations in the North Atlantic. Science, 2000, 289, 547b-548.	6.0	5
120	Carbon Cycling, Climate Regulation, and Disturbances in Canadian Forests: Scientific Principles for Management. Land, 2015, 4, 83-118.	1.2	4
121	On the relative importance of climatic and non-climatic factors in crop yield models. Climatic Change, 2022, 173, .	1.7	3
122	Latin American oil palm follows an unfamiliar route to avoid deforestation. Environmental Research Letters, 2017, 12, 041001.	2.2	1
123	The Impacts of Climate Change on Crop Yields in Tanzania: Comparing an Empirical and a Process-Based Model. , 2018, , 149-163.		0
124	Have Solar-Irradiance Variations Influenced Climate?. , 1994, , 493-506.		0
125	A 65â€“70 Year Oscillation in Observed Surface Temperatures. , 1996, , 305-316.		0