Esteban Gabriel JobbÃ¡gy

List of Publications by Year
in descending order

99 papers	14,771 citations	76326 40 h-index	42399 92 g-index
101 all docs	101 docs citations	101 times ranked	16550 citing authors

#	Article	IF	Citations
1	THE VERTICAL DISTRIBUTION OF SOIL ORGANIC CARBON AND ITS RELATION TO CLIMATE AND VEGETATION. , 2000, 10, 423-436.		3,759
2	Trading Water for Carbon with Biological Carbon Sequestration. Science, 2005, 310, 1944-1947.	12.6	1,014
3	The distribution of soil nutrients with depth: Global patterns and the imprint of plants. Biogeochemistry, 2001, 53, 51-77.	3.5	850
4	Ecosystem carbon loss with woody plant invasion of grasslands. Nature, 2002, 418, 623-626.	27.8	833
5	Effects of afforestation on water yield: a global synthesis with implications for policy. Global Change Biology, 2005, 11, 1565-1576.	9.5	822
6	Hydrologic regulation of plant rooting depth. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 10572-10577.	7.1	635
7	THE UPLIFT OF SOIL NUTRIENTS BY PLANTS: BIOGEOCHEMICAL CONSEQUENCES ACROSS SCALES. Ecology, 2004, 85, 2380-2389.	3.2	578
8	Legacies of precipitation fluctuations on primary production: theory and data synthesis. Philosophical Transactions of the Royal Society B: Biological Sciences, 2012, 367, 3135-3144.	4.0	471
9	A global metaâ€analysis of soil exchangeable cations, pH, carbon, and nitrogen with afforestation. Ecological Applications, 2009, 19, 2228-2241.	3.8	394
10	Protecting climate with forests. Environmental Research Letters, 2008, 3, 044006.	5.2	313
11	Rooting depth, water availability, and vegetation cover along an aridity gradient in Patagonia. Oecologia, 1996, 108, 503-511.	2.0	282
12	Ecological and environmental footprint of 50 years of agricultural expansion in Argentina. Global Change Biology, 2011, 17, 959-973.	9.5	208
13	PATTERNS AND CONTROLS OF PRIMARY PRODUCTION IN THE PATAGONIAN STEPPE: A REMOTE SENSING APPROACH*. Ecology, 2002, 83, 307-319.	3.2	198
14	CONTROLS OF GRASS AND SHRUB ABOVEGROUND PRODUCTION IN THE PATAGONIAN STEPPE. , 2000, 10, 541-549.		194
15	Global controls of forest line elevation in the northern and southern hemispheres. Global Ecology and Biogeography, 2000, 9, 253-268.	5.8	192
16	Groundwater use and salinization with grassland afforestation. Global Change Biology, 2004, 10, 1299-1312.	9.5	188
17	Land-use change and water losses: the case of grassland afforestation across a soil textural gradient in central Argentina. Global Change Biology, 2005, 11, 1101-1117.	9.5	186
18	Carbon sequestration in semi-arid rangelands: Comparison of Pinus ponderosa plantations and grazing exclusion in NW Patagonia. Journal of Arid Environments, 2006, 67, 142-156.	2.4	173

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19	From icy roads to salty streams. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 14487-14488.	7.1	171
20	Patterns and mechanisms of soil acidification in the conversion of grasslands to forests. Biogeochemistry, 2003, 64, 205-229.	3.5	162
21	Soil inorganic carbon storage pattern in China. Global Change Biology, 2008, 14, 2380-2387.	9.5	150
22	Nutrient uptake as a contributing explanation for deep rooting in arid and semi-arid ecosystems. Oecologia, 2004, 141, 620-628.	2.0	145
23	Potential for crop production increase in Argentina through closure of existing yield gaps. Field Crops Research, 2015, 184, 145-154.	5.1	144
24	Hydrological consequences of Eucalyptus afforestation in the Argentine Pampas. Water Resources Research, 2005, 41, .	4.2	141
25	Current Distribution of Ecosystem Functional Types in Temperate South America. Ecosystems, 2001, 4, 683-698.	3.4	135
26	FUNCTIONAL AND STRUCTURAL CONVERGENCE OF TEMPERATE GRASSLAND AND SHRUBLAND ECOSYSTEMS. , 1998, 8, 194-206.		131
27	Soil C and N changes with afforestation of grasslands across gradients of precipitation and plantation age. Ecological Applications, 2012, 22, 76-86.	3.8	123
28	Shifts in soil organic carbon for plantation and pasture establishment in native forests and grasslands of South America. Global Change Biology, 2012, 18, 3237-3251.	9.5	114
29	Ecohydrology in a humanâ€dominated landscape. Ecohydrology, 2009, 2, 383-389.	2.4	93
30	Two decades of Normalized Difference Vegetation Index changes in South America: identifying the imprint of global change. International Journal of Remote Sensing, 2004, 25, 2793-2806.	2.9	90
31	Vegetation structure is as important as climate for explaining ecosystem function across <scp>P</scp>atagonian rangelands. Journal of Ecology, 2014, 102, 1419-1428.	4.0	87
32	Long-term Satellite NDVI Data Sets: Evaluating Their Ability to Detect Ecosystem Functional Changes in South America. Sensors, 2008, 8, 5397-5425.	3.8	86
33	The effects of tree establishment on water and salt dynamics in naturally salt-affected grasslands. Oecologia, 2007, 152, 695-705.	2.0	70
34	Remote sensing estimates of supplementary water consumption by arid ecosystems of central Argentina. Journal of Hydrology, 2011, 397, 10-22.	5.4	70
35	Vegetation heterogeneity and diversity in flat and mountain landscapes of Patagonia (Argentina). Journal of Vegetation Science, 1996, 7, 599-608.	2.2	68
36	Continental fire density patterns in South America. Global Ecology and Biogeography, 2006, 15, 192-199.	5.8	68

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37	Land use change patterns in the RÃo de la Plata grasslands: The influence of phytogeographic and political boundaries. Agriculture, Ecosystems and Environment, 2009, 134, 287-292.	5.3	65
38	Setâ€asides can be better climate investment than corn ethanol. Ecological Applications, 2009, 19, 277-282.	3.8	62
39	Groundwater and soil chemical changes under phreatophytic tree plantations. Journal of Geophysical Research, 2007, 112, .	3.3	55
40	Agricultural acceleration of soil carbonate weathering. Global Change Biology, 2020, 26, 5988-6002.	9.5	55
41	Changes in hydrology and salinity accompanying a century of agricultural conversion in Argentina. , 2011, 21, 2367-2379.		47
42	Surface and groundwater dynamics in the sedimentary plains of the Western Pampas (Argentina). Ecohydrology, 2011, 4, 433-447.	2.4	46
43	Climate and groundwater effects on the establishment, growth and death of Prosopis caldenia trees in the Pampas (Argentina). Forest Ecology and Management, 2011, 262, 1766-1774.	3.2	43
44	Radiation budget changes with dry forest clearing in temperate <scp>A</scp>rgentina. Global Change Biology, 2013, 19, 1211-1222.	9.5	42
45	Stream acidification and base cation losses with grassland afforestation. Water Resources Research, 2008, 44, .	4.2	41
46	The ecohydrological imprint of deforestation in the semiarid Chaco: insights from the last forest remnants of a highly cultivated landscape. Hydrological Processes, 2016, 30, 2603-2616.	2.6	39
47	Forests and water in South America. Hydrological Processes, 2017, 31, 972-980.	2.6	37
48	Surface albedo raise in the South American Chaco: Combined effects of deforestation and agricultural changes. Agricultural and Forest Meteorology, 2017, 232, 118-127.	4.8	36
49	Tradeâ€offs in water and carbon ecosystem services with landâ€use changes in grasslands. Ecological Applications, 2016, 26, 1633-1644.	3.8	35
50	Litter is more effective than forest canopy reducing soil evaporation in Dry Chaco rangelands. Ecohydrology, 2017, 10, e1879.	2.4	35
51	Vegetation composition and structure changes following roller-chopping deforestation in central Argentina woodlands. Journal of Arid Environments, 2016, 133, 19-24.	2.4	33
52	Cultivating the dry forests of South America: Diversity of land users and imprints on ecosystem functioning. Journal of Arid Environments, 2015, 123, 47-59.	2.4	31
53	Stabilization of new carbon inputs rather than old carbon decomposition determines soil organic carbon shifts following woody or herbaceous vegetation transitions. Plant and Soil, 2016, 409, 99-116.	3.7	27
54	Charcoal production in the Argentine Dry Chaco: Where, how and who?. Energy for Sustainable Development, 2015, 27, 46-53.	4.5	26

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55	Better estimates of soil carbon from geographical data: a revised global approach. Mitigation and Adaptation Strategies for Global Change, 2019, 24, 355-372.	2.1	26
56	The imprint of crop choice on global nutrient needs. Environmental Research Letters, 2014, 9, 084014.	5.2	25
57	Precipitation event distribution in Central Argentina: spatial and temporal patterns. Ecohydrology, 2015, 8, 94-104.	2.4	24
58	Ecohydrological transformation in the Dry Chaco and the risk of dryland salinity: Following Australia's footsteps?. Ecohydrology, 2017, 10, e1822.	2.4	24
59	Ideas and perspectives: Strengthening the biogeosciences in environmental research networks. Biogeosciences, 2018, 15, 4815-4832.	3.3	24
60	Poplar Afforestation Effects on Grassland Structure and Composition in the Flooding Pampas. Rangeland Ecology and Management, 2005, 58, 474-479.	2.3	23
61	Salt leaching leads to drier soils in disturbed semiarid woodlands of central Argentina. Oecologia, 2013, 171, 1003-1012.	2.0	23
62	The imprint of humans on landscape patterns and vegetation functioning in the dry subtropics. Global Change Biology, 2013, 19, 441-458.	9.5	21
63	Grassland afforestation impact on primary productivity: a remote sensing approach. Applied Vegetation Science, 2013, 16, 390-403.	1.9	21
64	Rainwater harvesting in Dry Chaco: Regional distribution and local water balance. Journal of Arid Environments, 2015, 123, 93-102.	2.4	21
65	On the Fundamental Causes of High Environmental Alkalinity (pHÂâ‰¥Â9): An Assessment of Its Drivers and Global Distribution. Land Degradation and Development, 2017, 28, 1973-1981.	3.9	21
66	Influence of lowland forests on subsurface salt accumulation in shallow groundwater areas. AoB PLANTS, 2014, 6, plu054-plu054.	2.3	20
67	Livestock stations as foci of groundwater recharge and nitrate leaching in a sandy desert of the Central Monte, Argentina. Ecohydrology, 2014, 7, 600-611.	2.4	20
68	Productive performance of alternative land covers along aridity gradients: Ecological, agronomic and economic perspectives. Agricultural Systems, 2016, 149, 20-29.	6.1	19
69	Sowing date, genotype choice, and water environment control soybean yields in central Argentina. Crop Science, 2021, 61, 715-728.	1.8	19
70	Balancing agricultural and hydrologic risk in farming systems of the Chaco plains. Journal of Arid Environments, 2015, 123, 81-92.	2.4	18
71	Soil Physical Changes After Conversion of Woodlands to Pastures in Dry Chaco Rangelands (Argentina). Rangeland Ecology and Management, 2017, 70, 225-229.	2.3	18
72	Pine afforestation changes more strongly community structure than ecosystem functioning in grassland mountain streams. Ecological Indicators, 2015, 57, 366-375.	6.3	17

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73	Ecohydrology: Processes and Implications for Rangelands. Springer Series on Environmental Management, 2017, , 85-129.	0.3	17
74	Assessing the potential of wildfires as a sustainable bioenergy opportunity. GCB Bioenergy, 2012, 4, 634-641.	5.6	16
75	Shifting carbon pools along a plant cover gradient in woody encroached savannas of central Argentina. Forest Ecology and Management, 2014, 331, 71-78.	3.2	16
76	Soil volume and carbon storage shifts in drained and afforested wetlands of the ParanÃ¡ River Delta. Biogeochemistry, 2013, 112, 359-372.	3.5	15
77	Seasonal hydrologic buffer on continents: Patterns, drivers and ecological benefits. Advances in Water Resources, 2017, 102, 178-187.	3.8	15
78	Long-lasting floods buffer the thermal regime of the Pampas. Theoretical and Applied Climatology, 2018, 131, 111-120.	2.8	14
79	Contrasting hydrological seasonality with latitude in the South American Chaco: The roles of climate and vegetation activity. Journal of Hydrology, 2020, 587, 124933.	5.4	14
80	Forage production in natural and afforested grasslands of the Pampas: ecological complementarity and management opportunities. Agroforestry Systems, 2011, 83, 201-211.	2.0	12
81	Patterns and Controls of Primary Production in the Patagonian Steppe: A Remote Sensing Approach. Ecology, 2002, 83, 307.	3.2	11
82	Hydrological and productive impacts of recent landâ€use and landâ€cover changes in the semiarid Chaco: Understanding novel water excess in water scarce farmlands. Ecohydrology, 2020, 13, e2243.	2.4	11
83	Changes in water fluxes partition related to the replacement of native dry forests by crops in the Dry Chaco. Journal of Arid Environments, 2020, 183, 104281.	2.4	11
84	Carbon and Water Tradeoffs in Conversions to Forests and Shrublands. , 2007, , 237-246.		10
85	Spatio-temporal soil drying in southeastern South America: the importance of effective sampling frequency and observational errors on drydown time scale estimates. International Journal of Remote Sensing, 2020, 41, 7958-7992.	2.9	9
86	How do forage availability and climate control sheep reproductive performance?. Ecological Modelling, 2008, 217, 197-206.	2.5	8
87	Isotopic insights on continental water sources and transport in the mountains and plains of Southern South America. Isotopes in Environmental and Health Studies, 2020, 56, 586-605.	1.0	8
88	Plants versus streams: Their groundwaterâ€mediated competition at â€œEl Morro,â€•a developing catchment in the dry plains of Argentina. Hydrological Processes, 2021, 35, e14188.	2.6	8
89	Stealth invasions on the rise: rapid long-distance establishment of exotic pines in mountain grasslands of Argentina. Biological Invasions, 2020, 22, 2989-3001.	2.4	6
90	THE VERTICAL DISTRIBUTION OF SOIL ORGANIC CARBON AND ITS RELATION TO CLIMATE AND VEGETATION. , 2000, 10, 423.		6

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91	Forage Production of the Argentine Pampa Region Based on Land Use and Long-Term Normalized Difference Vegetation Index Data. Rangeland Ecology and Management, 2009, 62, 163-170.	2.3	5
92	Salt Accumulation and Redistribution in the Dry Plains of Southern South America: Lessons from Land Use Changes. , 2021, , 51-70.		5
93	Tree Plantation in South America and The Water Cycle: Impacts and Emergent Opportunities. , 2011, , 53-63.		5
94	Vegetation Productivity in Natural vs. Cultivated Systems along Water Availability Gradients in the Dry Subtropics. PLoS ONE, 2016, 11, e0168168.	2.5	4
95	Subsurface accumulation of CaCO3 and Clâ¯ from groundwater under black locust and poplar plantations. Journal of Forestry Research, 2019, 30, 1353-1361.	3.6	3
96	Late Holocene environmental and hydro-climatic variability inferred from a shallow lake record, blowout dunes, Argentinian western Pampas, South America. Journal of South American Earth Sciences, 2022, 116, 103826.	1.4	3
97	Co-invading ectomycorrhizal fungal succession in pine-invaded mountain grasslands. Fungal Ecology, 2022, 60, 101176.	1.6	3
98	Modeling soil chemical changes induced by grassland afforestation in a sedimentary plain with shallow groundwater. Geoderma, 2021, 400, 115158.	5.1	2
99	A regional PECS node built from place-based social-ecological sustainability research in Latin America and the Caribbean. Ecosystems and People, 2022, 18, 1-14.	3.2	1