

# Oswaldo E Sala

## List of Publications by Citations

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112  
papers

14,301  
citations

54  
h-index

119  
g-index

124  
ext. papers

16,180  
ext. citations

7.7  
avg, IF

6.38  
L-index

#	Paper	IF	Citations
112	Consequences of changing biodiversity. <i>Nature</i> , <b>2000</b> , 405, 234-42	50.4	2638
111	Biotic Control over the Functioning of Ecosystems. <i>Science</i> , <b>1997</b> , 277, 500-504	33.3	804
110	Convergence across biomes to a common rain-use efficiency. <i>Nature</i> , <b>2004</b> , 429, 651-4	50.4	786
109	The origins of C4 grasslands: integrating evolutionary and ecosystem science. <i>Science</i> , <b>2010</b> , 328, 587-91	33.3	698
108	Hierarchy of responses to resource pulses in arid and semi-arid ecosystems. <i>Oecologia</i> , <b>2004</b> , 141, 211-20	10.9	660
107	Ecological forecasts: an emerging imperative. <i>Science</i> , <b>2001</b> , 293, 657-60	33.3	634
106	Patch structure, dynamics and implications for the functioning of arid ecosystems. <i>Trends in Ecology and Evolution</i> , <b>1999</b> , 14, 273-277	10.9	496
105	Habitat loss, trophic collapse, and the decline of ecosystem services. <i>Ecology</i> , <b>2006</b> , 87, 1915-24	4.6	368
104	Legacies of precipitation fluctuations on primary production: theory and data synthesis. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , <b>2012</b> , 367, 3135-44	5.8	352
103	Multidimensional evaluation of managed relocation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2009</b> , 106, 9721-4	11.5	286
102	Ecosystem Consequences of Changing Biodiversity. <i>BioScience</i> , <b>1998</b> , 48, 45-52	5.7	276
101	A rainout shelter design for intercepting different amounts of rainfall. <i>Oecologia</i> , <b>2002</b> , 133, 95-101	2.9	255
100	Grassland Precipitation-Use Efficiency Varies Across a Resource Gradient. <i>Ecosystems</i> , <b>1999</b> , 2, 64-68	3.9	221
99	PATTERNS AND CONTROLS OF PRIMARY PRODUCTION IN THE PATAGONIAN STEPPE: A REMOTE SENSING APPROACH*. <i>Ecology</i> , <b>2002</b> , 83, 307-319	4.6	179
98	Vegetation structure constrains primary production response to water availability in the Patagonian steppe. <i>Ecology</i> , <b>2006</b> , 87, 952-62	4.6	175
97	Characterizing differences in precipitation regimes of extreme wet and dry years: implications for climate change experiments. <i>Global Change Biology</i> , <b>2015</b> , 21, 2624-2633	11.4	169
96	Managed Relocation: Integrating the Scientific, Regulatory, and Ethical Challenges. <i>BioScience</i> , <b>2012</b> , 62, 732-743	5.7	169

95	Competition, Facilitation, Seed Distribution and the Origin of Patches in a Patagonian Steppe. <i>Oikos</i> , <b>1994</b> , 70, 26	4	163
94	Enhanced precipitation variability decreases grass- and increases shrub-productivity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2015</b> , 112, 12735-40	11.5	149
93	Inter-annual variation in primary production of a semi-arid grassland related to previous-year production. <i>Journal of Vegetation Science</i> , <b>2001</b> , 12, 137-142	3.1	148
92	Precipitation legacies in desert grassland primary production occur through previous-year tiller density. <i>Ecology</i> , <b>2013</b> , 94, 435-43	4.6	137
91	Ecosystem responses to changes in plant functional type composition: An example from the Patagonian steppe. <i>Journal of Vegetation Science</i> , <b>1996</b> , 7, 381-390	3.1	132
90	Effects of Global Changes on Above- and Belowground Biodiversity in Terrestrial Ecosystems: Implications for Ecosystem Functioning. <i>BioScience</i> , <b>2000</b> , 50, 1089	5.7	130
89	Impacts of solar ultraviolet-B radiation on terrestrial ecosystems of Tierra del Fuego (southern Argentina). An overview of recent progress. <i>Journal of Photochemistry and Photobiology B: Biology</i> , <b>2001</b> , 62, 67-77	6.7	129
88	Functional traits of graminoids in semi-arid steppes: a test of grazing histories. <i>Journal of Applied Ecology</i> , <b>2004</b> , 41, 653-663	5.8	128
87	SEED DISTRIBUTION CONSTRAINS THE DYNAMICS OF THE PATAGONIAN STEPPE. <i>Ecology</i> , <b>1997</b> , 78, 93-100	4.6	127
86	Carbon and nitrogen dynamics across a natural precipitation gradient in Patagonia, Argentina. <i>Journal of Vegetation Science</i> , <b>2002</b> , 13, 351-360	3.1	119
85	Directional climate change and potential reversal of desertification in arid and semiarid ecosystems. <i>Global Change Biology</i> , <b>2012</b> , 18, 151-163	11.4	116
84	Current Distribution of Ecosystem Functional Types in Temperate South America. <i>Ecosystems</i> , <b>2001</b> , 4, 683-698	3.9	115
83	Differential Controls of Water Input on Litter Decomposition and Nitrogen Dynamics in the Patagonian Steppe. <i>Ecosystems</i> , <b>2006</b> , 9, 128-141	3.9	114
82	Effect of woody-plant encroachment on livestock production in North and South America. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2014</b> , 111, 12948-53	11.5	104
81	FUNCTIONAL AND STRUCTURAL CONVERGENCE OF TEMPERATE GRASSLAND AND SHRUBLAND ECOSYSTEMS <b>1998</b> , 8, 194-206		103
80	Higher effect of plant species diversity on productivity in natural than artificial ecosystems. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2008</b> , 105, 6087-90	11.5	95
79	Pushing precipitation to the extremes in distributed experiments: recommendations for simulating wet and dry years. <i>Global Change Biology</i> , <b>2017</b> , 23, 1774-1782	11.4	93
78	Rangeland ecosystem services: shifting focus from supply to reconciling supply and demand. <i>Frontiers in Ecology and the Environment</i> , <b>2015</b> , 13, 44-51	5.5	90

77	Patch structure and dynamics in a Patagonian arid steppe. <i>Plant Ecology</i> , <b>1994</b> , 111, 127-135		90
76	Solar UV-B decreases decomposition in herbaceous plant litter in Tierra del Fuego, Argentina: potential role of an altered decomposer community. <i>Global Change Biology</i> , <b>2003</b> , 9, 1465-1474	11.4	89
75	Water Losses in the Patagonian Steppe: A Modelling Approach. <i>Ecology</i> , <b>1995</b> , 76, 510-520	4.6	89
74	Effects of grazing on seedling establishment: the role of seed and safe-site availability. <i>Journal of Vegetation Science</i> , <b>1990</b> , 1, 353-358	3.1	84
73	Few multiyear precipitation-reduction experiments find a shift in the productivity-precipitation relationship. <i>Global Change Biology</i> , <b>2016</b> , 22, 2570-81	11.4	84
72	Sheep Grazing Decreases Organic Carbon and Nitrogen Pools in the Patagonian Steppe: Combination of Direct and Indirect Effects. <i>Ecosystems</i> , <b>2009</b> , 12, 686-697	3.9	83
71	Six years of solar UV-B manipulations affect growth of Sphagnum and vascular plants in a Tierra del Fuego peatland. <i>New Phytologist</i> , <b>2003</b> , 160, 379-389	9.8	81
70	Changes in belowground biodiversity during ecosystem development. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2019</b> , 116, 6891-6896	11.5	78
69	Enhanced interannual precipitation variability increases plant functional diversity that in turn ameliorates negative impact on productivity. <i>Ecology Letters</i> , <b>2015</b> , 18, 1293-300	10	78
68	Plant functional types and ecological strategies in Patagonian forbs. <i>Journal of Vegetation Science</i> , <b>1993</b> , 4, 839-846	3.1	78
67	Legacy effects in linked ecological-geomorphic systems of drylands. <i>Frontiers in Ecology and the Environment</i> , <b>2015</b> , 13, 13-19	5.5	74
66	Methods of Estimating Aboveground Net Primary Productivity <b>2000</b> , 31-43		74
65	Asynchrony among local communities stabilises ecosystem function of metacommunities. <i>Ecology Letters</i> , <b>2017</b> , 20, 1534-1545	10	72
64	Global change effects on plant communities are magnified by time and the number of global change factors imposed. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2019</b> , 116, 17867-17873	11.5	69
63	Size of Precipitation Pulses Controls Nitrogen Transformation and Losses in an Arid Patagonian Ecosystem. <i>Ecosystems</i> , <b>2010</b> , 13, 575-585	3.9	69
62	Response of dominant grass and shrub species to water manipulation: an ecophysiological basis for shrub invasion in a Chihuahuan Desert grassland. <i>Oecologia</i> , <b>2012</b> , 169, 373-83	2.9	68
61	Climate change will increase savannas at the expense of forests and treeless vegetation in tropical and subtropical Americas. <i>Journal of Ecology</i> , <b>2014</b> , 102, 1363-1373	6	62
60	Effect of interannual precipitation variability on dryland productivity: A global synthesis. <i>Global Change Biology</i> , <b>2019</b> , 25, 269-276	11.4	57

59	Water controls on nitrogen transformations and stocks in an arid ecosystem. <i>Ecosphere</i> , <b>2013</b> , 4, art11	3.1	53
58	Soil animal responses to moisture availability are largely scale, not ecosystem dependent: insight from a cross-site study. <i>Global Change Biology</i> , <b>2014</b> , 20, 2631-43	11.4	52
57	Responses to solar ultraviolet-B radiation in a shrub-dominated natural ecosystem of Tierra del Fuego (southern Argentina). <i>Global Change Biology</i> , <b>2001</b> , 7, 467-478	11.4	52
56	Regional grassland productivity responses to precipitation during multiyear above- and below-average rainfall periods. <i>Global Change Biology</i> , <b>2018</b> , 24, 1935-1951	11.4	51
55	Beyond desertification: new paradigms for dryland landscapes. <i>Frontiers in Ecology and the Environment</i> , <b>2015</b> , 13, 4-12	5.5	50
54	Grassland-woodland transitions: determinants and consequences for ecosystem functioning and provisioning of services. <i>Journal of Ecology</i> , <b>2014</b> , 102, 1357-1362	6	48
53	Understory bamboo flowering provides a very narrow light window of opportunity for canopy-tree recruitment in a neotropical forest of Misiones, Argentina. <i>Forest Ecology and Management</i> , <b>2011</b> , 262, 1360-1369	3.9	47
52	Enhanced precipitation variability effects on water losses and ecosystem functioning: differential response of arid and mesic regions. <i>Climatic Change</i> , <b>2015</b> , 131, 213-227	4.5	46
51	Sensitivity of primary production to precipitation across the United States. <i>Ecology Letters</i> , <b>2020</b> , 23, 527-536	10	45
50	Differential sensitivities of grassland structural components to changes in precipitation mediate productivity response in a desert ecosystem. <i>Functional Ecology</i> , <b>2014</b> , 28, 1292-1298	5.6	40
49	Responses of a desert nematode community to changes in water availability. <i>Ecosphere</i> , <b>2015</b> , 6, art44	3.1	37
48	Automated rainfall manipulation system: a reliable and inexpensive tool for ecologists. <i>Ecosphere</i> , <b>2013</b> , 4, art18	3.1	35
47	Inhibition of Nitrification Alters Carbon Turnover in the Patagonian Steppe. <i>Ecosystems</i> , <b>2006</b> , 9, 1257-1265	3.9	35
46	Cascading events in linked ecological and socioeconomic systems. <i>Frontiers in Ecology and the Environment</i> , <b>2007</b> , 5, 221-224	5.5	34
45	Are Existing Global Scenarios Consistent with Ecological Feedbacks?. <i>Ecosystems</i> , <b>2005</b> , 8, 143-152	3.9	33
44	Preference for different inorganic nitrogen forms among plant functional types and species of the Patagonian steppe. <i>Oecologia</i> , <b>2013</b> , 173, 1075-81	2.9	32
43	Reduction of solar UV-B mediates changes in the Sphagnum capitulum microenvironment and the peatland microfungus community. <i>Oecologia</i> , <b>2004</b> , 140, 480-90	2.9	32
42	Bridging historical and ecological approaches in biogeography. <i>Australian Systematic Botany</i> , <b>2006</b> , 19, 1	1	31

41	Ecological consequences of a massive flowering event of bamboo ( <i>Chusquea culeou</i> ) in a temperate forest of Patagonia, Argentina. <i>Journal of Vegetation Science</i> , <b>2009</b> , 20, 424-432	3.1	29
40	Aggregate measures of ecosystem services: can we take the pulse of nature?. <i>Frontiers in Ecology and the Environment</i> , <b>2005</b> , 3, 56-59	5.5	29
39	Drought suppresses soil predators and promotes root herbivores in mesic, but not in xeric grasslands. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2019</b> , 116, 12883-12888	11.5	28
38	Global patterns and climatic controls of belowground net carbon fixation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 20038-20043	11.5	28
37	Traversing the Wasteland: A Framework for Assessing Ecological Threats to Drylands. <i>BioScience</i> , <b>2020</b> , 70, 35-47	5.7	27
36	Rangeland Ecosystem Services: Nature's Supply and Humans' Demand <b>2017</b> , 467-489		25
35	The Interactive Role of Wind and Water in Functioning of Drylands: What Does the Future Hold?. <i>BioScience</i> , <b>2018</b> , 68, 670-677	5.7	23
34	An Integrated View of Complex Landscapes: A Big Data-Model Integration Approach to Transdisciplinary Science. <i>BioScience</i> , <b>2018</b> , 68, 653-669	5.7	22
33	Granivory rates by rodents, insects, and birds at different microsites in the Patagonian steppe. <i>Ecography</i> , <b>2002</b> , 25, 417-427	6.5	21
32	Controls on nitrification in a water-limited ecosystem: experimental inhibition of ammonia-oxidising bacteria in the Patagonian steppe. <i>Soil Biology and Biochemistry</i> , <b>2003</b> , 35, 1609-1613	7.5	20
31	Groundwater recharge in desert playas: current rates and future effects of climate change. <i>Environmental Research Letters</i> , <b>2018</b> , 13, 014025	6.2	18
30	Now is the Time for Action: Transitions and Tipping Points in Complex Environmental Systems. <i>Environment</i> , <b>2010</b> , 52, 38-45	2.8	18
29	Global-change drivers of ecosystem functioning modulated by natural variability and saturating responses. <i>Global Change Biology</i> , <b>2017</b> , 23, 503-511	11.4	17
28	Land degradation and climate change: a sin of omission?. <i>Frontiers in Ecology and the Environment</i> , <b>2013</b> , 11, 283-283	5.5	16
27	Solar UVB and warming affect decomposition and earthworms in a fen ecosystem in Tierra del Fuego, Argentina. <i>Global Change Biology</i> , <b>2009</b> , 15, 2493-2502	11.4	16
26	Climate Change Impacts on South American Rangelands. <i>Rangelands</i> , <b>2008</b> , 30, 34-39	1.1	16
25	Effects of plant species traits on ecosystem processes: experiments in the Patagonian steppe. <i>Ecology</i> , <b>2012</b> , 93, 227-34	4.6	14
24	Nematode exclusion and recovery in experimental soil microcosms. <i>Soil Biology and Biochemistry</i> , <b>2017</b> , 108, 78-83	7.5	13

23	Grasses have larger response than shrubs to increased nitrogen availability: A fertilization experiment in the Patagonian steppe. <i>Journal of Arid Environments</i> , <b>2014</b> , 102, 17-20	2.5	13
22	Direct and indirect effects of solar ultraviolet-B radiation on long-term decomposition. <i>Global Change Biology</i> , <b>2005</b> , 11, 051006062331002-???	11.4	10
21	Body size structure of soil fauna along geographic and temporal gradients of precipitation in grasslands. <i>Soil Biology and Biochemistry</i> , <b>2020</b> , 140, 107638	7.5	10
20	Biophysical controls over concentration and depth distribution of soil organic carbon and nitrogen in desert playas. <i>Journal of Geophysical Research G: Biogeosciences</i> , <b>2016</b> , 121, 3019-3029	3.7	10
19	Woody Plant Encroachment has a Larger Impact than Climate Change on Dryland Water Budgets. <i>Scientific Reports</i> , <b>2020</b> , 10, 8112	4.9	9
18	Growth responses to ultraviolet-B radiation of two <i>Carex</i> species dominating an Argentinian fen ecosystem. <i>Basic and Applied Ecology</i> , <b>2004</b> , 5, 153-162	3.2	9
17	Structural heterogeneity and productivity of a tall fescue pasture grazed rotationally by cattle at four stocking densities. <i>Grassland Science</i> , <b>2008</b> , 54, 9-16	1.3	8
16	Ecto- and endoparasitic nematodes respond differently across sites to changes in precipitation. <i>Oecologia</i> , <b>2020</b> , 193, 761-771	2.9	8
15	Interactions among resource partitioning, sampling effect, and facilitation on the biodiversity effect: a modeling approach. <i>Oecologia</i> , <b>2014</b> , 174, 559-66	2.9	7
14	Root herbivory controls the effects of water availability on the partitioning between above- and below-ground grass biomass. <i>Functional Ecology</i> , <b>2020</b> , 34, 2403-2410	5.6	7
13	A Concept Map of Evolutionary Biology to Promote Meaningful Learning in Biology. <i>American Biology Teacher</i> , <b>2019</b> , 81, 79-87	0.3	6
12	Achieving a sustainable biosphere: An international endeavour. <i>Trends in Ecology and Evolution</i> , <b>1992</b> , 7, 324-6	10.9	5
11	Determinants of Biodiversity Change: Ecological Tools for Building Scenarios <sup>1</sup> . <i>Ecology</i> , <b>2006</b> , 87, 1875-1876	4.76	4
10	Foundations and Frontiers of Ecosystem Science: Legacy of a Classic Paper (Odum 1969). <i>Ecosystems</i> , <b>2019</b> , 22, 1160-1172	3.9	4
9	Why Coordinated Distributed Experiments Should Go Global. <i>BioScience</i> , <b>2021</b> , 71, 918-927	5.7	3
8	How Scientists Can Help End the Land-Use Conflict. <i>BioScience</i> , <b>2016</b> , 66, 915-915	5.7	1
7	Playa-Wetlands Effects on Dryland Biogeochemistry: Space and Time Interactions. <i>Journal of Geophysical Research G: Biogeosciences</i> , <b>2018</b> , 123, 1879-1887	3.7	1
6	The sustainability publication gap and its implications. <i>Current Opinion in Environmental Sustainability</i> , <b>2019</b> , 39, 39-43	7.2	1

- 5 Woody-plant encroachment: Precipitation, herbivory and grass-competition interact to affect shrub recruitment.. *Ecological Applications*, **2022**, e2536 4.9 1
- 4 VEGETATION STRUCTURE CONSTRAINS PRIMARY PRODUCTION RESPONSE TO WATER AVAILABILITY IN THE PATAGONIAN STEPPE **2006**, 87, 952 1
- 3 Connectivity: insights from the U.S. Long Term Ecological Research Network. *Ecosphere*, **2021**, 12, e03433.1 1
- 2 Ecological maturity and stability of nematode communities in response to precipitation manipulations in grasslands. *Applied Soil Ecology*, **2022**, 170, 104263 5 0
- 1 Plant Species Richness in Multiyear Wet and Dry Periods in the Chihuahuan Desert. *Climate*, **2021**, 9, 1303.1 0