Ralf Seppelt

List of Publications by Citations

134 papers	7,447 citations	47 h-index	85 g-index
151 ext. papers	8,795 ext. citations	6 avg, IF	6.04 L-index

#	Paper	IF	Citations
134	Characterising performance of environmental models. *Environmental Modelling and Software*, **2013**, 40, 1-20	5.2	941
133	A quantitative review of ecosystem service studies: approaches, shortcomings and the road ahead. *Journal of Applied Ecology*, **2011**, 48, 630-636	5.8	637
132	Linking biodiversity, ecosystem services, and human well-being: three challenges for designing research for sustainability. *Current Opinion in Environmental Sustainability*, **2015**, 14, 76-85	7.2	405
131	Exploring indicators for quantifying surface urban heat islands of European cities with MODIS land surface temperatures. *Remote Sensing of Environment*, **2011**, 115, 3175-3186	13.2	256
130	Advancing sustainability through mainstreaming a social□ecological systems perspective. *Current Opinion in Environmental Sustainability*, **2015**, 14, 144-149	7.2	211
129	Spatial and temporal trends of global pollination benefit. *PLoS ONE*, **2012**, 7, e35954	3.7	208
128	Analysis of historic changes in regional ecosystem service provisioning using land use data. *Ecological Indicators*, **2011**, 11, 676-687	5.8	193
127	Synergies, Trade-offs, and Losses of Ecosystem Services in Urban Regions: an Integrated Multiscale Framework Applied to the Leipzig-Halle Region, Germany. *Ecology and Society*, **2012**, 17,	4.1	192
126	Towards systematic analyses of ecosystem service trade-offs and synergies: Main concepts, methods and the road ahead. *Ecosystem Services*, **2017**, 28, 264-272	6.1	168
125	Identifying trade-offs between ecosystem services, land use, and biodiversity: a plea for combining scenario analysis and optimization on different spatial scales. *Current Opinion in Environmental Sustainability*, **2013**, 5, 458-463	7.2	150
124	Solutions for sustaining natural capital and ecosystem services. *Ecological Indicators*, **2012**, 21, 1-6	5.8	138
123	Form follows function? Proposing a blueprint for ecosystem service assessments based on reviews and case studies. *Ecological Indicators*, **2012**, 21, 145-154	5.8	137
122	Global impacts of future cropland expansion and intensification on agricultural markets and biodiversity. *Nature Communications*, **2019**, 10, 2844	17.4	135
121	Mapping global land system archetypes. *Global Environmental Change*, **2013**, 23, 1637-1647	10.1	113
120	Optimization methodology for land use patterns using spatially explicit landscape models. *Ecological Modelling*, **2002**, 151, 125-142	3	109
119	A methodology for the design and development of integrated models for policy support. *Environmental Modelling and Software*, **2011**, 26, 266-279	5.2	107
118	Omnipresent Sprawl? A Review of Urban Simulation Models with Respect to Urban Shrinkage. *Environment and Planning B: Planning and Design*, **2010**, 37, 265-283		106

117	Optimization-based trade-off analysis of biodiesel crop production for managing an agricultural catchment. *Environmental Modelling and Software*, **2013**, 48, 98-112	5.2	104
116	Analysis of pattern–process interactions based on landscape models—Overview, general concepts, and methodological issues. *Ecological Modelling*, **2006**, 199, 505-516	3	101
115	Meta-studies in land use science: Current coverage and prospects. *Ambio*, **2016**, 45, 15-28	6.5	91
114	Multiscale scenarios for nature futures. *Nature Ecology and Evolution*, **2017**, 1, 1416-1419	12.3	90
113	Will your paper be used in a meta-analysis? Make the reach of your research broader and longer lasting. *Methods in Ecology and Evolution*, **2017**, 8, 777-784	7.7	85
112	When, Where, and How Nature Matters for Ecosystem Services: Challenges for the Next Generation of Ecosystem Service Models. *BioScience*, **2017**, 67, 820-833	5.7	83
111	Priorities to Advance Monitoring of Ecosystem Services Using Earth Observation. *Trends in Ecology and Evolution*, **2017**, 32, 416-428	10.9	80
110	Modeling and simulating residential mobility in a shrinking city using an agent-based approach. *Environmental Modelling and Software*, **2010**, 25, 1225-1240	5.2	75
109	Pathways to bridge the biophysical realism gap in ecosystem services mapping approaches. *Ecological Indicators*, **2017**, 74, 241-260	5.8	74
108	Closing global knowledge gaps: Producing generalized knowledge from case studies of social-ecological systems. *Global Environmental Change*, **2018**, 50, 1-14	10.1	73
107	EDITOR'S CHOICE: REVIEW: Effects of land use on plant diversity—A global meta-analysis. *Journal of Applied Ecology*, **2014**, 51, 1690-1700	5.8	72
106	Conventional land-use intensification reduces species richness and increases production: A global meta-analysis. *Global Change Biology*, **2019**, 25, 1941-1956	11.4	68
105	Relationships Between Ecosystem Services: Comparing Methods for Assessing Tradeoffs and Synergies. *Ecological Economics*, **2018**, 150, 96-106	5.6	68
104	How can we make progress with decision support systems in landscape and river basin management? Lessons learned from a comparative analysis of four different decision support systems. *Environmental Management*, **2010**, 46, 834-49	3.1	67
103	Values in socio-environmental modelling: Persuasion for action or excuse for inaction. *Environmental Modelling and Software*, **2014**, 53, 207-212	5.2	65
102	Evaluating cost-effectiveness of conservation management actions in an agricultural landscape on a regional scale. *Biological Conservation*, **2007**, 136, 117-127	6.2	62
101	Evaluation of water-energy balance frameworks to predict the sensitivity of streamflow to climate change. *Hydrology and Earth System Sciences*, **2012**, 16, 1419-1433	5.5	61
100	Optimizing landscape configuration to enhance habitat suitability for species with contrasting habitat requirements. *Ecological Modelling*, **2006**, 198, 277-292	3	61

99	Importance of spatial structures in advancing hydrological sciences. *Water Resources Research*, **2006**, 42,	5.4	61
98	Model-Based Estimation of Collision Risks of Predatory Birds with Wind Turbines. *Ecology and Society*, **2012**, 17,	4.1	60
97	Spatially explicit modelling of transgenic maize pollen dispersal and cross-pollination. *Journal of Theoretical Biology*, **2003**, 225, 241-55	2.3	60
96	Synchronized peak-rate years of global resources use. *Ecology and Society*, **2014**, 19,	4.1	58
95	Integrating ecosystem service bundles and socio-environmental conditions □A national scale analysis from Germany. *Ecosystem Services*, **2017**, 28, 273-282	6.1	55
94	Scenario analysis and management options for sustainable river basin management: Application of the Elbe DSS. *Environmental Modelling and Software*, **2009**, 24, 26-43	5.2	54
93	Assessing ecosystem services for informing land-use decisions: a problem-oriented approach. *Ecology and Society*, **2015**, 20,	4.1	52
92	Adapting agricultural land management to climate change: a regional multi-objective optimization approach. *Landscape Ecology*, **2013**, 28, 2029-2047	4.3	50
91	Levers and leverage points for pathways to sustainability. *People and Nature*, **2020**, 2, 693-717	5.9	50
90	Comparing Raster Map Comparison Algorithms for Spatial Modeling and Analysis. *Photogrammetric Engineering and Remote Sensing*, **2005**, 71, 975-984	1.6	49
89	Blind spots in ecosystem services research and challenges for implementation. *Regional Environmental Change*, **2019**, 19, 2151-2172	4.3	49
88	Realigning the land-sharing/land-sparing debate to match conservation needs: considering diversity scales and land-use history. *Landscape Ecology*, **2014**, 29, 941-948	4.3	47
87	Design, implementation and test of a serious online game for exploring complex relationships of sustainable land management and human well-being. *Environmental Modelling and Software*, **2015**, 65, 58-66	5.2	47
86	Challenges of simulating complex environmental systems at the landscape scale: A controversial dialogue between two cups of espresso. *Ecological Modelling*, **2009**, 220, 3481-3489	3	45
85	A generic tool for optimising land-use patterns and landscape structures. *Environmental Modelling and Software*, **2007**, 22, 1801-1804	5.2	45
84	Uncertainty of Monetary Valued Ecosystem Services - Value Transfer Functions for Global Mapping. *PLoS ONE*, **2016**, 11, e0148524	3.7	45
83	Harmonizing Biodiversity Conservation and Productivity in the Context of Increasing Demands on Landscapes. *BioScience*, **2016**, 66, 890-896	5.7	44
82	The concerns of the young protesters are justified: A statement by Scientists for Future concerning the protests for more climate protection. *Gaia*, **2019**, 28, 79-87	1.4	42

81	Optimization methodology for land use patterns–evaluation based on multiscale habitat pattern comparison. *Ecological Modelling*, **2003**, 168, 217-231	3	42
80	Simulating Demography and Housing Demand in an Urban Region under Scenarios of Growth and Shrinkage. *Environment and Planning B: Planning and Design*, **2012**, 39, 229-246		41
79	Winter distribution of blue crab Callinectes sapidus in Chesapeake Bay: application and cross-validation of a two-stage generalized additive model. *Marine Ecology - Progress Series*, **2005**, 299, 239-255	2.6	41
78	A new multiscale approach for monitoring vegetation using remote sensing-based indicators in laboratory, field, and landscape. *Environmental Monitoring and Assessment*, **2013**, 185, 1215-35	3.1	36
77	Landscape composition, configuration, and trophic interactions shape arthropod communities in rice agroecosystems. *Journal of Applied Ecology*, **2018**, 55, 2461-2472	5.8	36
76	Accounting for geographical variation in species–area relationships improves the prediction of plant species richness at the global scale. *Journal of Biogeography*, **2014**, 41, 261-273	4.1	35
75	Assessing the propagation of uncertainties in multi-objective optimization for agro-ecosystem adaptation to climate change. *Environmental Modelling and Software*, **2015**, 66, 27-35	5.2	34
74	Spatial Optimization of Best Management Practices to Attain Water Quality Targets. *Water Resources Management*, **2014**, 28, 1485-1499	3.7	30
73	Flow of genetic information through agricultural ecosystems: a generic modelling framework with application to pesticide-resistance weeds and genetically modified crops. *Ecological Modelling*, **2004**, 174, 55-66	3	30
72	It was an artefact not the result–A note on systems dynamic model development tools. *Environmental Modelling and Software*, **2005**, 20, 1543-1548	5.2	29
71	Do drivers of biodiversity change differ in importance across marine and terrestrial systems - Or is it just different research communities' perspectives?. *Science of the Total Environment*, **2017**, 574, 191-203	10.2	25
70	Modelling food security: Bridging the gap between the micro and the macro scale. *Global Environmental Change*, **2020**, 63, 102085	10.1	23
69	Constraints in multi-objective optimization of land use allocation–Repair or penalize?. *Environmental Modelling and Software*, **2019**, 118, 241-251	5.2	21
68	Mapping and analysing historical indicators of ecosystem services in Germany. *Ecological Indicators*, **2017**, 75, 101-110	5.8	20
67	Investigating potential transferability of place-based research in land system science. *Environmental Research Letters*, **2016**, 11, 095002	6.2	19
66	Land Management and Ecosystem Services How Collaborative Research Programmes Can Support Better Policies. *Gaia*, **2012**, 21, 55-63	1.4	19
65	Empowering peer reviewers with a checklist to improve transparency. *Nature Ecology and Evolution*, **2018**, 2, 929-935	12.3	18
64	Exploring resilience with agent-based models: State of the art, knowledge gaps and recommendations for coping with multidimensionality. *Ecological Complexity*, **2019**, 40, 100718	2.6	17

63	Mapping water quality-related ecosystem services: concepts and applications for nitrogen retention and pesticide risk reduction. *International Journal of Biodiversity Science, Ecosystem Services & Management*, **2012**, 8, 35-49		17
62	Applications of optimum control theory to agroecosystem modelling. *Ecological Modelling*, **1999**, 121, 161-183	3	17
61	Deciphering the Biodiversity-Production Mutualism in the Global Food Security Debate. *Trends in Ecology and Evolution*, **2020**, 35, 1011-1020	10.9	17
60	Large scale land acquisitions and REDD+: a synthesis of conflicts and opportunities. *Environmental Research Letters*, **2017**, 12, 035010	6.2	16
59	Regional-scale effects override the influence of fine-scale landscape heterogeneity on rice arthropod communities. *Agriculture, Ecosystems and Environment*, **2017**, 246, 269-278	5.7	15
58	Chapter Two Good Modelling Practice. *Developments in Integrated Environmental Assessment*, **2008**, 3, 15-31		15
57	Water Quality Is a Poor Predictor of Recreational Hotspots in England. *PLoS ONE*, **2016**, 11, e0166950	3.7	15
56	Towards a bridging concept for undesirable resilience in social-ecological systems. *Global Sustainability*, **2020**, 3,	5.4	15
55	Inclusion, Transparency, and Enforcement: How the EU-Mercosur Trade Agreement Fails the Sustainability Test. *One Earth*, **2020**, 3, 268-272	8.1	14
54	Regionalised optimum control problems for agroecosystem management. *Ecological Modelling*, **2000**, 131, 121-132	3	14
53	Land Use Options – Strategies and Adaptation to Global Change – Terrestrial Environmental Research. *Gaia*, **2009**, 18, 77-80	1.4	14
52	Why do forest products become less available?A pan-tropical comparison of drivers of forest-resource degradation. *Environmental Research Letters*, **2016**, 11, 125010	6.2	13
51	Resilience trinity: safeguarding ecosystem functioning and services across three different time horizons and decision contexts. *Oikos*, **2020**, 129, 445-456	4	12
50	How range residency and long-range perception change encounter rates. *Journal of Theoretical Biology*, **2020**, 498, 110267	2.3	12
49	A bird's eye view over ecosystem services in Natura 2000 sites across Europe. *Ecosystem Services*, **2018**, 30, 287-298	6.1	12
48	Modelling approaches to compare sorption and degradation of metsulfuron-methyl in laboratory micro-lysimeter and batch experiments. *Pest Management Science*, **2003**, 59, 1276-90	4.6	12
47	Land use impacts of demographic change – lessons from Eastern German urban regions. *NATO Science for Peace and Security Series C: Environmental Security*, **2008**, 329-344	0.3	12
46	Simulation of forest tree species' bud burst dates for different climate scenarios: chilling requirements and photo-period may limit bud burst advancement. *International Journal of Biometeorology*, **2016**, 60, 1711-1726	3.7	11

45	Identifying Agricultural Frontiers for Modeling Global Cropland Expansion. *One Earth*, **2020**, 3, 504-514	8.1	10
44	Crop asynchrony stabilizes food production. *Nature*, **2020**, 588, E7-E12	50.4	10
43	Scale-specific Hyperspectral Remote Sensing Approach in Environmental Research. *Photogrammetrie, Fernerkundung, Geoinformation*, **2012**, 2012, 589-601		9
42	**2003**,		9
41	Consequences of multiple imputation of missing standard deviations and sample sizes in meta-analysis. *Ecology and Evolution*, **2020**, 10, 11699-11712	2.8	8
40	Assumptions in ecosystem service assessments: Increasing transparency for conservation. *Ambio*, **2021**, 50, 289-300	6.5	7
39	Land-use intensity mediates ecosystem service tradeoffs across regional social-ecological systems. *Ecosystems and People*, **2021**, 17, 264-278	4.3	7
38	Sustainable development goals: Monitor ecosystem services from space. *Nature*, **2015**, 525, 33	50.4	6
37	Focus on cross-scale feedbacks in global sustainable land management. *Environmental Research Letters*, **2018**, 13, 090402	6.2	6
36	Information content of global ecosystem service databases and their suitability for decision advice. *Ecosystem Services*, **2018**, 32, 22-40	6.1	6
35	ABMland - a Tool for Agent-Based Model Development on Urban Land Use Change. *Jasss*, **2012**, 15,	4.8	6
34	The Art of Scientific Performance. *Trends in Ecology and Evolution*, **2018**, 33, 805-809	10.9	6
33	Dynamic Spatio-temporal Landscape Models. *Landscape Series*, **2007**, 273-296	0.2	6
32	Making environmental assessments of biomass production systems comparable worldwide. *Environmental Research Letters*, **2016**, 11, 034005	6.2	5
31	Assessing land-use effects on European plant diversity using a biome-specific countryside species–area model. *Diversity and Distributions*, **2017**, 23, 1193-1203	5	4
30	Simulating invasions in fragmented habitats: theoretical considerations, a simple example and some general implications. *Ecological Complexity*, **2005**, 2, 219-231	2.6	4
29	Distinguishing anthropogenic and natural contributions to coproduction of national crop yields globally. *Scientific Reports*, **2021**, 11, 10821	4.9	4
28	Managing resources of a limited planet □Or, how to organise an environmentally friendly congress. *Environmental Modelling and Software*, **2013**, 46, 299-303	5.2	3

27	Searching for Win-Win Archetypes in the Food-Biodiversity Challenge: A Response to Fischer et al. *Trends in Ecology and Evolution*, **2017**, 32, 630-632	10.9	3
26	Ecosystem Services: Understanding Drivers, Opportunities, and Risks to Move Towards Sustainable Land Management and Governance **2019**, 401-403		3
25	How does nature contribute to human mobility? A conceptual framework and qualitative analysis. *Ecology and Society*, **2019**, 24,	4.1	3
24	Hierarchical dynamic programming and applications in ecosystem management. *Environmental Modelling and Software*, **2001**, 16, 377-386	5.2	2
23	Trade-Offs and Synergies Between Biodiversity Conservation and Productivity in the Context of Increasing Demands on Landscapes **2019**, 251-256		2
22	More farms, less specialized landscapes, and higher crop diversity stabilize food supplies. *Environmental Research Letters*, **2021**, 16, 055015	6.2	2
21	Models of natural pest control: Towards predictions across agricultural landscapes. *Biological Control*, **2021**, 163, 104761	3.8	2
20	6th International Congress on Environmental Modelling and Software (iEMSs): Managing Resources of a Limited Planet: Pathways and Visions under Uncertainty A congress report. *Environmental Modelling and Software*, **2013**, 43, 160-162	5.2	1
19	Landscape heterogeneity filters functional traits of rice arthropods in tropical agroecosystems.. *Ecological Applications*, **2022**, e2560	4.9	1
18	Mapping Land System Archetypes to Understand Drivers of Ecosystem Service Risks **2019**, 69-75		1
17	Spatial Patterns of Ecosystem Service Bundles in Germany **2019**, 279-283		1
16	Hybrid Low Level Petri Nets in Environmental Modeling Development Platform and Case Studies **2001**, 181-201		1
15	Harmonise and integrate heterogeneous areal data with the R package arealDB. *Environmental Modelling and Software*, **2020**, 133, 104799	5.2	1
14	Aligning agri-environmental subsidies and environmental needs: a comparative analysis between the US and EU. *Environmental Research Letters*, **2021**, 16, 054067	6.2	1
13	It all about politics: Migration and resource conflicts in the global south. *World Development*, **2022** , 157, 105938	5.5	1
12	Rice Ecosystem Services in South-East Asia: The LEGATO Project, Its Approaches and Main Results with a Focus on Biocontrol Services **2019**, 373-382		0
11	Crop diversity effects on temporal agricultural production stability across European regions. *Regional Environmental Change*, **2021**, 21, 1	4.3	0
10	Synchronized Peak Rate Years of Global Resources Use Imply Critical Trade-Offs in Appropriation of Natural Resources and Ecosystem Services **2019**, 301-307		0

9	Introduction to Part III: Trade-Offs and Synergies Among Ecosystem Services **2019**, 245-249		0
8	Ecosystem service coproduction across the zones of biosphere reserves in Europe. *Ecosystems and People*, **2021**, 17, 491-506	4.3	0
7	The rise and fall of biodiversity in literature: A comprehensive quantification of historical changes in the use of vernacular labels for biological taxa in Western creative literature. *People and Nature*, **2021**, 3, 1093	5.9	0
6	Transformation archetypes in global food systems. *Sustainability Science*,1	6.4	0
5	Response to Kabisch and Colleagues. *BioScience*, **2018**, 68, 167-168	5.7	
4	Landscape Optimization: Applications of a Spatial Ecosystem Model **2004**, 301-326		
3	Quantitative aspects of sustainable agriculture. *Mathematics and Computers in Simulation*, **1996**, 42, 263-269	3.5	
2	Agroecosystem Management **2006**, 413-439		
1	Landscape-Scale Resource Management. *Applied Ecology and Environmental Management*, **2011**, 457-476		