Rupert Seidl

List of Publications by Year
in descending order

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134 papers	15,422 citations	19657 61 h-index	18647 119 g-index
139 all docs	139 docs citations	139 times ranked	12731 citing authors

#	Article	IF	Citations
1	Climate change impacts, adaptive capacity, and vulnerability of European forest ecosystems. Forest Ecology and Management, 2010, 259, 698-709.	3.2	1,684
2	Forest disturbances under climate change. Nature Climate Change, 2017, 7, 395-402.	18.8	1,561
3	Increasing forest disturbances in Europe and their impact on carbon storage. Nature Climate Change, 2014, 4, 806-810.	18.8	799
4	Pervasive shifts in forest dynamics in a changing world. Science, 2020, 368, .	12.6	576
5	Natural disturbance impacts on ecosystem services and biodiversity in temperate and boreal forests. Biological Reviews, 2016, 91, 760-781.	10.4	483
6	Unraveling the drivers of intensifying forest disturbance regimes in Europe. Global Change Biology, 2011, 17, 2842-2852.	9.5	411
7	Î²-Diversity, Community Assembly, and Ecosystem Functioning. Trends in Ecology and Evolution, 2018, 33, 549-564.	8.7	374
8	REVIEW: Searching for resilience: addressing the impacts of changing disturbance regimes on forest ecosystem services. Journal of Applied Ecology, 2016, 53, 120-129.	4.0	353
9	Modelling natural disturbances in forest ecosystems: a review. Ecological Modelling, 2011, 222, 903-924.	2.5	318
10	Impacts of salvage logging on biodiversity: A metaâ€analysis. Journal of Applied Ecology, 2018, 55, 279-289.	4.0	252
11	Biodiversity and ecosystem functioning relations in European forests depend on environmental context. Ecology Letters, 2017, 20, 1414-1426.	6.4	244
12	Excess forest mortality is consistently linked to drought across Europe. Nature Communications, 2020, 11, 6200.	12.8	221
13	Disturbance legacies increase the resilience of forest ecosystem structure, composition, and functioning. Ecological Applications, 2014, 24, 2063-2077.	3.8	209
14	An individual-based process model to simulate landscape-scale forest ecosystem dynamics. Ecological Modelling, 2012, 231, 87-100.	2.5	207
15	Mapping the forest disturbance regimes of Europe. Nature Sustainability, 2021, 4, 63-70.	23.7	190
16	Climate variability drives recent tree mortality in Europe. Global Change Biology, 2017, 23, 4788-4797.	9.5	183
17	Canopy mortality has doubled in Europeâ€™s temperate forests over the last three decades. Nature Communications, 2018, 9, 4978.	12.8	182
18	Biodiversity along temperate forest succession. Journal of Applied Ecology, 2018, 55, 2756-2766.	4.0	175

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19	A walk on the wild side: Disturbance dynamics and the conservation and management of European mountain forest ecosystems. Forest Ecology and Management, 2017, 388, 120-131.	3.2	172
20	Reviewing the Science and Implementation of Climate Change Adaptation Measures in European Forestry. Forests, 2011, 2, 961-982.	2.1	169
21	Patterns and drivers of recent disturbances across the temperate forest biome. Nature Communications, 2018, 9, 4355.	12.8	167
22	Small beetle, largeâ€scale drivers: how regional and landscape factors affect outbreaks of the European spruce bark beetle. Journal of Applied Ecology, 2016, 53, 530-540.	4.0	161
23	Assessing trade-offs between carbon sequestration and timber production within a framework of multi-purpose forestry in Austria. Forest Ecology and Management, 2007, 248, 64-79.	3.2	160
24	Impact of bark beetle (Ips typographus L.) disturbance on timber production and carbon sequestration in different management strategies under climate change. Forest Ecology and Management, 2008, 256, 209-220.	3.2	147
25	Tree defence and bark beetles in a drying world: carbon partitioning, functioning and modelling. New Phytologist, 2020, 225, 26-36.	7.3	144
26	Are forest disturbances amplifying or canceling out climate change-induced productivity changes in European forests?. Environmental Research Letters, 2017, 12, 034027.	5.2	142
27	Climate change amplifies the interactions between wind and bark beetle disturbances in forest landscapes. Landscape Ecology, 2017, 32, 1485-1498.	4.2	140
28	The impacts of climate change and disturbance on spatioâ€temporal trajectories of biodiversity in a temperate forest landscape. Journal of Applied Ecology, 2017, 54, 28-38.	4.0	139
29	Remote sensing of forest insect disturbances: Current state and future directions. International Journal of Applied Earth Observation and Geoinformation, 2017, 60, 49-60.	2.8	134
30	Bark Beetle Outbreaks in Europe: State of Knowledge and Ways Forward for Management. Current Forestry Reports, 2021, 7, 138-165.	7.4	133
31	Changes of forest cover and disturbance regimes in the mountain forests of the Alps. Forest Ecology and Management, 2017, 388, 43-56.	3.2	124
32	The contribution of insects to global forest deadwood decomposition. Nature, 2021, 597, 77-81.	27.8	123
33	Climate change causes critical transitions and irreversible alterations of mountain forests. Global Change Biology, 2020, 26, 4013-4027.	9.5	120
34	Disturbances catalyze the adaptation of forest ecosystems to changing climate conditions. Global Change Biology, 2017, 23, 269-282.	9.5	110
35	The historical disturbance regime of mountain Norway spruce forests in the Western Carpathians and its influence on current forest structure and composition. Forest Ecology and Management, 2017, 388, 67-78.	3.2	103
36	Simulating wind disturbance impacts on forest landscapes: Tree-level heterogeneity matters. Environmental Modelling and Software, 2014, 51, 1-11.	4.5	101

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37	Adaptation options to reduce climate change vulnerability of sustainable forest management in the Austrian Alps. Canadian Journal of Forest Research, 2011, 41, 694-706.	1.7	98
38	Slow and fast drivers of the natural disturbance regime in Central European forest ecosystems. Forest Ecology and Management, 2013, 307, 293-302.	3.2	97
39	Modelling bark beetle disturbances in a large scale forest scenario model to assess climate change impacts and evaluate adaptive management strategies. Regional Environmental Change, 2009, 9, 101-119.	2.9	95
40	Tree species diversity mitigates disturbance impacts on the forest carbon cycle. Oecologia, 2015, 177, 619-630.	2.0	94
41	Climate change vulnerability of sustainable forest management in the Eastern Alps. Climatic Change, 2011, 106, 225-254.	3.6	93
42	Natural disturbances are spatially diverse but temporally synchronized across temperate forest landscapes in Europe. Global Change Biology, 2018, 24, 1201-1211.	9.5	93
43	Tree mortality submodels drive simulated longâ€term forest dynamics: assessing 15 models from the stand to global scale. Ecosphere, 2019, 10, e02616.	2.2	93
44	Globally consistent climate sensitivity of natural disturbances across boreal and temperate forest ecosystems. Ecography, 2020, 43, 967-978.	4.5	90
45	It takes a few to tango: changing climate and fire regimes can cause regeneration failure of two subalpine conifers. Ecology, 2018, 99, 966-977.	3.2	87
46	The impact of future forest dynamics on climate: interactive effects of changing vegetation and disturbance regimes. Ecological Monographs, 2017, 87, 665-684.	5.4	84
47	Evaluating the accuracy and generality of a hybrid patch model. Tree Physiology, 2005, 25, 939-951.	3.1	81
48	Modelling tree mortality by bark beetle infestation in Norway spruce forests. Ecological Modelling, 2007, 206, 383-399.	2.5	79
49	Largeâ€scale disturbance legacies and the climate sensitivity of primary Picea abies forests. Global Change Biology, 2018, 24, 2169-2181.	9.5	79
50	Invasive alien pests threaten the carbon stored in Europeâ€™s forests. Nature Communications, 2018, 9, 1626.	12.8	78
51	Biodiversityâ€“productivity relationships are key to nature-based climate solutions. Nature Climate Change, 2021, 11, 543-550.	18.8	77
52	Forest management under climatic and social uncertainty: Trade-offs between reducing climate change impacts and fostering adaptive capacity. Journal of Environmental Management, 2013, 114, 461-469.	7.8	74
53	Continental mapping of forest ecosystem functions reveals a high but unrealised potential for forest multifunctionality. Ecology Letters, 2018, 21, 31-42.	6.4	74
54	Key ecological research questions for Central European forests. Basic and Applied Ecology, 2018, 32, 3-25.	2.7	71

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55	Reconstructed forest age structure in Europe 1950â€“2010. Forest Ecology and Management, 2012, 286, 203-218.	3.2	70
56	The Shape of Ecosystem Management to Come: Anticipating Risks and Fostering Resilience. BioScience, 2014, 64, 1159-1169.	4.9	70
57	What drives the future supply of regulating ecosystem services in a mountain forest landscape?. Forest Ecology and Management, 2019, 445, 37-47.	3.2	70
58	Storm and fire disturbances in Europe: Distribution and trends. Global Change Biology, 2021, 27, 3605-3619.	9.5	69
59	Post-disturbance reorganization of forest ecosystems in a changing world. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	7.1	69
60	Climate change increases the drought risk in Central European forests: What are the options for adaptation?. LesnÃcky ÄŒasopis, 2014, 60, 5-18.	0.8	66
61	Is salvage logging effectively dampening bark beetle outbreaks and preserving forest carbon stocks?. Journal of Applied Ecology, 2020, 57, 67-76.	4.0	66
62	Spatial variability in tree regeneration after wildfire delays and dampens future bark beetle outbreaks. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 13075-13080.	7.1	65
63	Using Landsat time series for characterizing forest disturbance dynamics in the coupled human and natural systems of Central Europe. ISPRS Journal of Photogrammetry and Remote Sensing, 2017, 130, 453-463.	11.1	64
64	Coupling human and natural systems: Simulating adaptive management agents in dynamically changing forest landscapes. Global Environmental Change, 2015, 35, 475-485.	7.8	63
65	Effects of disturbance patterns and deadwood on the microclimate in European beech forests. Agricultural and Forest Meteorology, 2020, 291, 108066.	4.8	61
66	Post-disturbance recovery of forest cover and tree height differ with management in Central Europe. Landscape Ecology, 2019, 34, 2837-2850.	4.2	59
67	Concerns about reported harvests in European forests. Nature, 2021, 592, E15-E17.	27.8	56
68	Persistent impacts of the 2018 drought on forest disturbance regimes in Europe. Biogeosciences, 2021, 18, 5223-5230.	3.3	55
69	Multi-scale Drivers of Spatial Variation in Old-Growth Forest Carbon Density Disentangled with Lidar and an Individual-Based Landscape Model. Ecosystems, 2012, 15, 1321-1335.	3.4	54
70	Norway spruce at the trailing edge: the effect of landscape configuration and composition on climate resilience. Landscape Ecology, 2020, 35, 591-606.	4.2	54
71	Legacies of past land use have a stronger effect on forest carbon exchange than future climate change in a temperate forest landscape. Biogeosciences, 2018, 15, 5699-5713.	3.3	52
72	Tradeâ€offs between temporal stability and level of forest ecosystem services provisioning under climate change. Ecological Applications, 2018, 28, 1884-1896.	3.8	52

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73	Do bark beetle outbreaks amplify or dampen future bark beetle disturbances in Central Europe?. Journal of Ecology, 2021, 109, 737-749.	4.0	52
74	Disentangling the effects of compositional and structural diversity on forest productivity. Journal of Vegetation Science, 2017, 28, 649-658.	2.2	51
75	Simulating forest resilience: A review. Global Ecology and Biogeography, 2020, 29, 2082-2096.	5.8	51
76	An empirical, integrated forest biomass monitoring system. Environmental Research Letters, 2018, 13, 025004.	5.2	50
77	Harnessing Ecosystem Models and Multi-Criteria Decision Analysis for the Support of Forest Management. Environmental Management, 2010, 46, 850-861.	2.7	49
78	The effects of forest cover and disturbance on torrential hazards: large-scale evidence from the Eastern Alps. Environmental Research Letters, 2019, 14, 114032.	5.2	46
79	Increasing canopy mortality affects the future demographic structure of Europe's forests. One Earth, 2021, 4, 749-755.	6.8	46
80	Pervasive Growth Reduction in Norway Spruce Forests following Wind Disturbance. PLoS ONE, 2012, 7, e33301.	2.5	45
81	A disturbance-induced increase in tree species diversity facilitates forest productivity. Landscape Ecology, 2016, 31, 989-1004.	4.2	45
82	Modelling understorey dynamics in temperate forests under global changeâ€“Challenges and perspectives. Perspectives in Plant Ecology, Evolution and Systematics, 2018, 31, 44-54.	2.7	45
83	Post-disturbance recovery of forest carbon in a temperate forest landscape under climate change. Agricultural and Forest Meteorology, 2018, 263, 308-322.	4.8	44
84	Coupling a 3D patch model and a rockfall module to assess rockfall protection in mountain forests. Journal of Environmental Management, 2008, 87, 373-388.	7.8	43
85	Potential stocks and increments of woody biomass in the European Union under different management and climate scenarios. Carbon Balance and Management, 2013, 8, 2.	3.2	42
86	Harnessing landscape heterogeneity for managing future disturbance risks in forest ecosystems. Journal of Environmental Management, 2018, 209, 46-56.	7.8	42
87	Widespread regeneration failure in forests of Greater Yellowstone under scenarios of future climate and fire. Global Change Biology, 2021, 27, 4339-4351.	9.5	42
88	To Model or not to Model, That is no Longer the Question for Ecologists. Ecosystems, 2017, 20, 222-228.	3.4	41
89	Harnessing Deep Learning in Ecology: An Example Predicting Bark Beetle Outbreaks. Frontiers in Plant Science, 2019, 10, 1327.	3.6	41
90	Scaling issues in forest ecosystem management and how to address them with models. European Journal of Forest Research, 2013, 132, 653-666.	2.5	39

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91	Does conversion of even-aged, secondary coniferous forests affect carbon sequestration? A simulation study under changing environmental conditions. Silva Fennica, 2008, 42, .	1.3	38
92	Tackling unresolved questions in forest ecology: The past and future role of simulation models. Ecology and Evolution, 2021, 11, 3746-3770.	1.9	37
93	The sensitivity of current and future forest managers to climate-induced changes in ecological processes. Ambio, 2016, 45, 430-441.	5.5	35
94	Assessing the resilience of Norway spruce forests through a model-based reanalysis of thinning trials. Forest Ecology and Management, 2017, 388, 3-12.	3.2	35
95	Postâ€disturbance canopy recovery and the resilience of Europeâ€™s forests. Global Ecology and Biogeography, 2022, 31, 25-36.	5.8	35
96	Addressing biodiversity in a stakeholder-driven climate change vulnerability assessment of forest management. Forest Ecology and Management, 2009, 258, S158-S167.	3.2	34
97	How robust are future projections of forest landscape dynamics? Insights from a systematic comparison of four forest landscape models. Environmental Modelling and Software, 2020, 134, 104844.	4.5	34
98	The influence of climate change and canopy disturbances on landslide susceptibility in headwater catchments. Science of the Total Environment, 2020, 742, 140588.	8.0	34
99	Spatial configuration matters when removing windfelled trees to manage bark beetle disturbances in Central European forest landscapes. Journal of Environmental Management, 2020, 254, 109792.	7.8	32
100	Human or natural? Landscape context improves the attribution of forest disturbances mapped from Landsat in Central Europe. Remote Sensing of Environment, 2021, 262, 112502.	11.0	32
101	Reducing rotation age to address increasing disturbances in Central Europe: Potential and limitations. Forest Ecology and Management, 2020, 475, 118408.	3.2	31
102	Economic losses from natural disturbances in Norway spruce forests â€“ A quantification using Monte-Carlo simulations. Ecological Economics, 2021, 185, 107046.	5.7	31
103	The impact of land-use legacies and recent management on natural disturbance susceptibility in mountain forests. Forest Ecology and Management, 2021, 484, 118950.	3.2	30
104	Potentials and limitations of using large-scale forest inventory data for evaluating forest succession models. Ecological Modelling, 2009, 220, 133-147.	2.5	28
105	Forest structure following natural disturbances and early succession provides habitat for two avian flagship species, capercaillie (Tetrao urogallus) and hazel grouse (Tetrastes bonasia). Biological Conservation, 2018, 226, 81-91.	4.1	28
106	Ecology versus society: Impacts of bark beetle infestations on biodiversity and restorativeness in protected areas of Central Europe. Biological Conservation, 2021, 254, 108931.	4.1	26
107	The magnitude, direction, and tempo of forest change in Greater Yellowstone in a warmer world with more fire. Ecological Monographs, 2022, 92, e01485.	5.4	26
108	A generic model of thinning and stand density effects on forest growth, mortality and net increment. Annals of Forest Science, 2009, 66, 815-815.	2.0	25

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109	The response of canopy height diversity to natural disturbances in two temperate forest landscapes. Landscape Ecology, 2020, 35, 2101-2112.	4.2	24
110	Complex mountain terrain and disturbance history drive variation in forest aboveground live carbon density in the western Oregon Cascades, USA. Forest Ecology and Management, 2016, 366, 193-207.	3.2	23
111	Looking beyond the mean: Drivers of variability in postfire stand development of conifers in Greater Yellowstone. Forest Ecology and Management, 2018, 430, 460-471.	3.2	23
112	Can wildland fire management alter 21stâ€¢century subalpine fire and forests in Grand Teton National Park, Wyoming, <scp>USA</scp>?. Ecological Applications, 2020, 30, e02030.	3.8	21
113	Can we manage a future with more fire? Effectiveness of defensible space treatment depends on housing amount and configuration. Landscape Ecology, 2021, 36, 309-330.	4.2	21
114	Intensive ground vegetation growth mitigates the carbon loss after forest disturbance. Plant and Soil, 2017, 420, 239-252.	3.7	19
115	Forest structure, not climate, is the primary driver of functional diversity in northeastern North America. Science of the Total Environment, 2021, 762, 143070.	8.0	19
116	A scalable model of vegetation transitions using deep neural networks. Methods in Ecology and Evolution, 2019, 10, 879-890.	5.2	17
117	Modelling the multi-scaled nature of pest outbreaks. Ecological Modelling, 2019, 409, 108745.	2.5	16
118	Testing generalized allometries in allocation modeling within an individual-based simulation framework. Trees - Structure and Function, 2010, 24, 139-150.	1.9	15
119	Accelerating Mountain Forest Dynamics in the Alps. Ecosystems, 2022, 25, 603-617.	3.4	14
120	Mixing tree species at different spatial scales: The effect of alpha, beta and gamma diversity on disturbance impacts under climate change. Journal of Applied Ecology, 2021, 58, 1749-1763.	4.0	13
121	Using historical spy satellite photographs and recent remote sensing data to identify highâ€conservationâ€value forests. Conservation Biology, 2022, 36, .	4.7	13
122	The Management Response to Wind Disturbances in European Forests. Current Forestry Reports, 2021, 7, 167-180.	7.4	13
123	The long way back: Development of Central European mountain forests towards oldâ€growth conditions after cessation of management. Journal of Vegetation Science, 2021, 32, e13052.	2.2	12
124	Will forest dynamics continue to accelerate throughout the 21st century in the Northern Alps?. Global Change Biology, 2022, 28, 3260-3274.	9.5	11
125	Effects of stand edges on the structure, functioning, and diversity of a temperate mountain forest landscape. Ecosphere, 2021, 12, e03692.	2.2	10
126	Arthropod dark taxa provide new insights into diversity responses to bark beetle infestations. Ecological Applications, 2022, 32, e2516.	3.8	10

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127	From sink to source: changing climate and disturbance regimes could tip the 21st century carbon balance of an unmanaged mountain forest landscape. Forestry, 2023, 96, 399-409.	2.3	10
128	From mycelia to mastodons â€“ A general approach for simulating biotic disturbances in forest ecosystems. Environmental Modelling and Software, 2021, 138, 104977.	4.5	9
129	The potential role of an alien tree species in supporting forest restoration: Lessons from Shiretoko National Park, Japan. Forest Ecology and Management, 2021, 493, 119253.	3.2	9
130	Roadmap to develop a stress test for forest ecosystem services supply. One Earth, 2022, 5, 25-34.	6.8	9
131	Large-Scale Forest Modeling: Deducing Stand Density from Inventory Data. International Journal of Forestry Research, 2012, 2012, 1-13.	0.8	5
132	Identifying effective tree planting schemes to restore forest carbon and biodiversity in Shiretoko National Park, Japan. Restoration Ecology, 2023, 31, .	2.9	4
133	The impact of radioactive contamination on tree regeneration and forest development in the Chernobyl Exclusion Zone. Applied Vegetation Science, 2022, 25, .	1.9	1
134	Influence of Canopy Disturbances on Runoff and Landslide Disposition after Heavy Rainfall Events. , 0, , .		1