

Miska Luoto

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

143
papers

8,120
citations

41
h-index

87
g-index

160
ext. papers

10,025
ext. citations

6.2
avg, IF

6.35
L-index

#	Paper	IF	Citations
143	Impacts of permafrost degradation on infrastructure. <i>Nature Reviews Earth & Environment</i> , 2022 , 3, 24-38	30.2	18
142	New high-resolution estimates of the permafrost thermal state and hydrothermal conditions over the Northern Hemisphere. <i>Earth System Science Data</i> , 2022 , 14, 865-884	10.5	4
141	From white to green: Snow cover loss and increased vegetation productivity in the European Alps. <i>Science</i> , 2022 , 376, 1119-1122	33.3	3
140	Global maps of soil temperature.. <i>Global Change Biology</i> , 2021 ,	11.4	8
139	Maintaining forest cover to enhance temperature buffering under future climate change. <i>Science of the Total Environment</i> , 2021 , 810, 151338	10.2	3
138	Topographic Wetness Index as a Proxy for Soil Moisture: The Importance of Flow-Routing Algorithm and Grid Resolution. <i>Water Resources Research</i> , 2021 , 57, e2021WR029871	5.4	1
137	Cryogenic land surface processes shape vegetation biomass patterns in northern European tundra. <i>Communications Earth & Environment</i> , 2021 , 2,	6.1	1
136	ForestTemp - Sub-canopy microclimate temperatures of European forests. <i>Global Change Biology</i> , 2021 , 27, 6307-6319	11.4	5
135	Decadal Changes in Soil and Atmosphere Temperature Differences Linked With Environment Shifts Over Northern Eurasia. <i>Journal of Geophysical Research F: Earth Surface</i> , 2021 , 126, e2020JF005865	3.8	3
134	Observed Decrease in Soil and Atmosphere Temperature Coupling in Recent Decades Over Northern Eurasia. <i>Geophysical Research Letters</i> , 2021 , 48, e2021GL092500	4.9	
133	Snow information is required in subcontinental scale predictions of mountain plant distributions. <i>Global Ecology and Biogeography</i> , 2021 , 30, 1502-1513	6.1	1
132	Statistical upscaling of ecosystem CO fluxes across the terrestrial tundra and boreal domain: Regional patterns and uncertainties. <i>Global Change Biology</i> , 2021 , 27, 4040-4059	11.4	25
131	Environmental Controls of InSAR-Based Periglacial Ground Dynamics in a Sub-Arctic Landscape. <i>Journal of Geophysical Research F: Earth Surface</i> , 2021 , 126, e2021JF006175	3.8	1
130	Consistent trait-environment relationships within and across tundra plant communities. <i>Nature Ecology and Evolution</i> , 2021 , 5, 458-467	12.3	4
129	Significant shallow depth soil warming over Russia during the past 40 years. <i>Global and Planetary Change</i> , 2021 , 197, 103394	4.2	4
128	Dwarf Shrubs Impact Tundra Soils: Drier, Colder, and Less Organic Carbon. <i>Ecosystems</i> , 2021 , 24, 1378-1392	3.9	6
127	Exposing wind stress as a driver of fine-scale variation in plant communities. <i>Journal of Ecology</i> , 2021 , 109, 2121-2136	6	4

126	Forest microclimates and climate change: Importance, drivers and future research agenda. <i>Global Change Biology</i> , 2021 , 27, 2279-2297	11.4	47
125	Fine-grained climate velocities reveal vulnerability of protected areas to climate change. <i>Scientific Reports</i> , 2020 , 10, 1678	4.9	8
124	Can Topographic Variation in Climate Buffer against Climate Change-Induced Population Declines in Northern Forest Birds?. <i>Diversity</i> , 2020 , 12, 56	2.5	3
123	Monitoring biodiversity in the Anthropocene using remote sensing in species distribution models. <i>Remote Sensing of Environment</i> , 2020 , 239, 111626	13.2	70
122	Climate limitation at the cold edge: contrasting perspectives from species distribution modelling and a transplant experiment. <i>Ecography</i> , 2020 , 43, 637-647	6.5	16
121	Scale dependence of ecological assembly rules: Insights from empirical datasets and joint species distribution modelling. <i>Journal of Ecology</i> , 2020 , 108, 1967-1977	6	12
120	High potential for loss of permafrost landforms in a changing climate. <i>Environmental Research Letters</i> , 2020 , 15, 104065	6.2	10
119	Fine-scale tundra vegetation patterns are strongly related to winter thermal conditions. <i>Nature Climate Change</i> , 2020 , 10, 1143-1148	21.4	22
118	Decreasing snow cover alters functional composition and diversity of Arctic tundra. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 21480-21487	11.5	16
117	The effect of summer drought on the predictability of local extinctions in a butterfly metapopulation. <i>Conservation Biology</i> , 2020 , 34, 1503-1511	6	15
116	SoilTemp: A global database of near-surface temperature. <i>Global Change Biology</i> , 2020 , 26, 6616-6629	11.4	47
115	Snow is an important control of plant community functional composition in oroarctic tundra. <i>Oecologia</i> , 2019 , 191, 601-608	2.9	3
114	New insights into the environmental factors controlling the ground thermal regime across the Northern Hemisphere: a comparison between permafrost and non-permafrost areas. <i>Cryosphere</i> , 2019 , 13, 693-707	5.5	21
113	Assessing sampling coverage of species distribution in biodiversity databases. <i>Journal of Vegetation Science</i> , 2019 , 30, 620-632	3.1	7
112	Are drivers of microbial diatom distributions context dependent in human-impacted and pristine environments?. <i>Ecological Applications</i> , 2019 , 29, e01917	4.9	2
111	A comprehensive evaluation of predictive performance of 33 species distribution models at species and community levels. <i>Ecological Monographs</i> , 2019 , 89, e01370	9	135
110	Global buffering of temperatures under forest canopies. <i>Nature Ecology and Evolution</i> , 2019 , 3, 744-749	12.3	168
109	Lost at high latitudes: Arctic and endemic plants under threat as climate warms. <i>Diversity and Distributions</i> , 2019 , 25, 809-821	5	24

108	Influence of microclimate and geomorphological factors on alpine vegetation in the Western Swiss Alps. <i>Earth Surface Processes and Landforms</i> , 2019 , 44, 3093-3107	3.7	19
107	Identifying multidisciplinary research gaps across Arctic terrestrial gradients. <i>Environmental Research Letters</i> , 2019 , 14, 124061	6.2	14
106	Circumpolar permafrost maps and geohazard indices for near-future infrastructure risk assessments. <i>Scientific Data</i> , 2019 , 6, 190037	8.2	31
105	Estimating fractional cover of tundra vegetation at multiple scales using unmanned aerial systems and optical satellite data. <i>Remote Sensing of Environment</i> , 2019 , 224, 119-132	13.2	50
104	Machine-learning based reconstructions of primary and secondary climate variables from North American and European fossil pollen data. <i>Scientific Reports</i> , 2019 , 9, 15805	4.9	11
103	Water as a resource, stress and disturbance shaping tundra vegetation. <i>Oikos</i> , 2019 , 128, 811-822	4	21
102	Monthly microclimate models in a managed boreal forest landscape. <i>Agricultural and Forest Meteorology</i> , 2018 , 250-251, 147-158	5.8	50
101	Productivity, biodiversity, and pathogens influence the global hunter-gatherer population density. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, 1232-1237	11.5	49
100	The current state of CO ₂ flux chamber studies in the Arctic tundra: A review. <i>Progress in Physical Geography</i> , 2018 , 42, 162-184	3.5	27
99	The importance of snow in species distribution models of arctic vegetation. <i>Ecography</i> , 2018 , 41, 1024-1037	10.37	41
98	Abrupt high-latitude climate events and decoupled seasonal trends during the Eemian. <i>Nature Communications</i> , 2018 , 9, 2851	17.4	22
97	Statistical Forecasting of Current and Future Circum-Arctic Ground Temperatures and Active Layer Thickness. <i>Geophysical Research Letters</i> , 2018 , 45, 4889-4898	4.9	48
96	Biogeophysical controls on soil-atmosphere thermal differences: implications on warming Arctic ecosystems. <i>Environmental Research Letters</i> , 2018 , 13, 074003	6.2	26
95	Modelling soil moisture in a high-latitude landscape using LiDAR and soil data. <i>Earth Surface Processes and Landforms</i> , 2018 , 43, 1019-1031	3.7	29
94	Tundra Trait Team: A database of plant traits spanning the tundra biome. <i>Global Ecology and Biogeography</i> , 2018 , 27, 1402-1411	6.1	27
93	Degrading permafrost puts Arctic infrastructure at risk by mid-century. <i>Nature Communications</i> , 2018 , 9, 5147	17.4	181
92	Snow cover is a neglected driver of Arctic biodiversity loss. <i>Nature Climate Change</i> , 2018 , 8, 997-1001	21.4	50
91	Models of Arctic-alpine refugia highlight importance of climate and local topography. <i>Polar Biology</i> , 2017 , 40, 489-502	2	7

90	Revealing topoclimatic heterogeneity using meteorological station data. <i>International Journal of Climatology</i> , 2017 , 37, 544-556	3.5	33
89	Improving forecasts of arctic-alpine refugia persistence with landscape-scale variables. <i>Geografiska Annaler, Series A: Physical Geography</i> , 2017 , 99, 2-14	1.1	6
88	The need for large-scale distribution data to estimate regional changes in species richness under future climate change. <i>Diversity and Distributions</i> , 2017 , 23, 1393-1407	5	25
87	Statistical modelling predicts almost complete loss of major periglacial processes in Northern Europe by 2100. <i>Nature Communications</i> , 2017 , 8, 515	17.4	19
86	Unravelling direct and indirect effects of hierarchical factors driving microbial stream communities. <i>Journal of Biogeography</i> , 2017 , 44, 2376-2385	4.1	14
85	Drivers of high-latitude plant diversity hotspots and their congruence. <i>Biological Conservation</i> , 2017 , 212, 288-299	6.2	6
84	Holocene fen bog transitions, current status in Finland and future perspectives. <i>Holocene</i> , 2017 , 27, 752-764	2.6	28
83	The effect of topography on arctic-alpine aboveground biomass and NDVI patterns. <i>International Journal of Applied Earth Observation and Geoinformation</i> , 2017 , 56, 44-53	7.3	33
82	Influence of patch size and connectivity on beach and dune species in land-uplift coasts. <i>Plant Ecology and Diversity</i> , 2016 , 9, 35-44	2.2	3
81	What we use is not what we know: environmental predictors in plant distribution models. <i>Journal of Vegetation Science</i> , 2016 , 27, 1308-1322	3.1	105
80	The direct and indirect effects of watershed land use and soil type on stream water metal concentrations. <i>Water Resources Research</i> , 2016 , 52, 7711-7725	5.4	19
79	Arctic shrubification mediates the impacts of warming climate on changes to tundra vegetation. <i>Environmental Research Letters</i> , 2016 , 11, 124028	6.2	13
78	Stream diatom assemblages as predictors of climate. <i>Freshwater Biology</i> , 2016 , 61, 876-886	3.1	7
77	Past climate-driven range shifts and population genetic diversity in arctic plants. <i>Journal of Biogeography</i> , 2016 , 43, 461-470	4.1	36
76	Calibrating aquatic microfossil proxies with regression-tree ensembles: Cross-validation with modern chironomid and diatom data. <i>Holocene</i> , 2016 , 26, 1040-1048	2.6	6
75	Impact of biotic interactions on biodiversity varies across a landscape. <i>Journal of Biogeography</i> , 2016 , 43, 2412-2423	4.1	11
74	Climate is an important driver for stream diatom distributions. <i>Global Ecology and Biogeography</i> , 2016 , 25, 198-206	6.1	27
73	The regional species richness and genetic diversity of Arctic vegetation reflect both past glaciations and current climate. <i>Global Ecology and Biogeography</i> , 2016 , 25, 430-442	6.1	33

72	The mossy north: an inverse latitudinal diversity gradient in European bryophytes. <i>Scientific Reports</i> , 2016 , 6, 25546	4.9	54
71	Contrasting effects of biotic interactions on richness and distribution of vascular plants, bryophytes and lichens in an arctic-alpine landscape. <i>Polar Biology</i> , 2016 , 39, 649-657	2	17
70	Primary succession, disturbance and productivity drive complex species richness patterns on land uplift beaches. <i>Journal of Vegetation Science</i> , 2015 , 26, 267-277	3.1	32
69	Human population dynamics in Europe over the Last Glacial Maximum. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 8232-7	11.5	106
68	Successful translocation of the threatened Clouded Apollo butterfly (<i>Parnassius mnemosyne</i>) and metapopulation establishment in southern Finland. <i>Biological Conservation</i> , 2015 , 190, 51-59	6.2	18
67	Geomorphological factors predict water quality in boreal rivers. <i>Earth Surface Processes and Landforms</i> , 2015 , 40, 1989-1999	3.7	31
66	A stable, genetically determined colour dimorphism in the dung beetle <i>Aphodius depressus</i> : patterns and mechanisms. <i>Ecological Entomology</i> , 2015 , 40, 575-584	2.1	
65	Spatial modelling of stream water quality along an urban-rural gradient. <i>Geografiska Annaler, Series A: Physical Geography</i> , 2015 , 97, 819-834	1.1	2
64	Disjunct populations of European vascular plant species keep the same climatic niches. <i>Global Ecology and Biogeography</i> , 2015 , 24, 1401-1412	6.1	26
63	Determinants of sediment properties and organic matter in beach and dune environments based on boosted regression trees. <i>Earth Surface Processes and Landforms</i> , 2015 , 40, 1137-1145	3.7	6
62	The effects of local, buffer zone and geographical variables on lake plankton metacommunities. <i>Hydrobiologia</i> , 2015 , 743, 175-188	2.4	11
61	Biotic interactions boost spatial models of species richness. <i>Ecography</i> , 2015 , 38, 913-921	6.5	47
60	Reconstructing palaeoclimatic variables from fossil pollen using boosted regression trees: comparison and synthesis with other quantitative reconstruction methods. <i>Quaternary Science Reviews</i> , 2014 , 88, 69-81	3.9	30
59	Incorporating dominant species as proxies for biotic interactions strengthens plant community models. <i>Journal of Ecology</i> , 2014 , 102, 767-775	6	53
58	Integrating climate and local factors for geomorphological distribution models. <i>Earth Surface Processes and Landforms</i> , 2014 , 39, 1729-1740	3.7	21
57	Predictability in species distributions: a global analysis across organisms and ecosystems. <i>Global Ecology and Biogeography</i> , 2014 , 23, 1264-1274	6.1	21
56	Outcomes of biotic interactions are dependent on multiple environmental variables. <i>Journal of Vegetation Science</i> , 2014 , 25, 1024-1032	3.1	46
55	Potential for extreme loss in high-latitude Earth surface processes due to climate change. <i>Geophysical Research Letters</i> , 2014 , 41, 3914-3924	4.9	21

54	Arctic-alpine vegetation biomass is driven by fine-scale abiotic heterogeneity. <i>Geografiska Annaler, Series A: Physical Geography</i> , 2014 , 96, n/a-n/a	1.1	8
53	Earth surface processes drive the richness, composition and occurrence of plant species in an arctic-alpine environment. <i>Journal of Vegetation Science</i> , 2014 , 25, 45-54	3.1	40
52	The meso-scale drivers of temperature extremes in high-latitude Fennoscandia. <i>Climate Dynamics</i> , 2014 , 42, 237-252	4.2	19
51	2.6 Statistical Methods for Geomorphic Distribution Modeling 2013 , 59-73		19
50	Vegetation Mediates Soil Temperature and Moisture in Arctic-Alpine Environments. <i>Arctic, Antarctic, and Alpine Research</i> , 2013 , 45, 429-439	1.8	43
49	Horizontal, but not vertical, biotic interactions affect fine-scale plant distribution patterns in a low-energy system. <i>Ecology</i> , 2013 , 94, 671-82	4.6	47
48	Using unclassified continuous remote sensing data to improve distribution models of red-listed plant species. <i>Biodiversity and Conservation</i> , 2013 , 22, 1731-1754	3.4	17
47	Geomorphological disturbance is necessary for predicting fine-scale species distributions. <i>Ecography</i> , 2013 , 36, 800-808	6.5	34
46	Testing species distribution models across space and time: high latitude butterflies and recent warming. <i>Global Ecology and Biogeography</i> , 2013 , 22, 1293-1303	6.1	83
45	Biotic interactions drive species occurrence and richness in dynamic beach environments. <i>Plant Ecology</i> , 2013 , 214, 1455-1466	1.7	29
44	The role of biotic interactions in shaping distributions and realised assemblages of species: implications for species distribution modelling. <i>Biological Reviews</i> , 2013 , 88, 15-30	13.5	931
43	Local temperatures inferred from plant communities suggest strong spatial buffering of climate warming across Northern Europe. <i>Global Change Biology</i> , 2013 , 19, 1470-81	11.4	152
42	Soil moisture's underestimated role in climate change impact modelling in low-energy systems. <i>Global Change Biology</i> , 2013 , 19, 2965-75	11.4	73
41	Does the interpolation accuracy of species distribution models come at the expense of transferability?. <i>Ecography</i> , 2012 , 35, 276-288	6.5	162
40	Dispersal ability links to cross-scale species diversity patterns across the Eurasian Arctic tundra. <i>Global Ecology and Biogeography</i> , 2012 , 21, 851-860	6.1	35
39	Inclusion of explicit measures of geodiversity improve biodiversity models in a boreal landscape. <i>Biodiversity and Conservation</i> , 2012 , 21, 3487-3506	3.4	65
38	A North European pollen-climate calibration set: analysing the climatic responses of a biological proxy using novel regression tree methods. <i>Quaternary Science Reviews</i> , 2012 , 45, 95-110	3.9	36
37	ENVIRONMENTAL DETERMINANTS OF WATER QUALITY IN BOREAL RIVERS BASED ON PARTITIONING METHODS. <i>River Research and Applications</i> , 2012 , 28, 1034-1046	2.3	31

36	Distance decay of similarity in freshwater communities: do macro- and microorganisms follow the same rules?. <i>Global Ecology and Biogeography</i> , 2012 , 21, 365-375	6.1	216
35	Climate change and the future distributions of aquatic macrophytes across boreal catchments. <i>Journal of Biogeography</i> , 2011 , 38, 383-393	4.1	60
34	Inclusion of local environmental conditions alters high-latitude vegetation change predictions based on bioclimatic models. <i>Polar Biology</i> , 2011 , 34, 883-897	2	22
33	Novel theoretical insights into geomorphic process–environment relationships using simulated response curves. <i>Earth Surface Processes and Landforms</i> , 2011 , 36, 363-371	3.7	17
32	Selection of den sites by wolves in boreal forests in Finland. <i>Journal of Zoology</i> , 2010 , 281, 99-104	2	20
31	Recent vegetation changes at the high-latitude tree line ecotone are controlled by geomorphological disturbance, productivity and diversity. <i>Global Ecology and Biogeography</i> , 2010 , 19, 810-821	6.1	101
30	Assessing the vulnerability of European butterflies to climate change using multiple criteria. <i>Biodiversity and Conservation</i> , 2010 , 19, 695-723	3.4	59
29	Applying probabilistic projections of climate change with impact models: a case study for sub-arctic palusa mires in Fennoscandia. <i>Climatic Change</i> , 2010 , 99, 515-534	4.5	52
28	Predicted insect diversity declines under climate change in an already impoverished region. <i>Journal of Insect Conservation</i> , 2010 , 14, 485-498	2.1	38
27	Assessing spatial uncertainty in predictive geomorphological mapping: A multi-modelling approach. <i>Computers and Geosciences</i> , 2010 , 36, 355-361	4.5	14
26	The performance of state-of-the-art modelling techniques depends on geographical distribution of species. <i>Ecological Modelling</i> , 2009 , 220, 3512-3520	3	116
25	Statistical consensus methods for improving predictive geomorphology maps. <i>Computers and Geosciences</i> , 2009 , 35, 615-625	4.5	36
24	Relative importance of habitat area, connectivity, management and local factors for vascular plants: spring ephemerals in boreal semi-natural grasslands. <i>Biodiversity and Conservation</i> , 2009 , 18, 1067-1085	3.4	14
23	Carnivore-livestock conflicts: determinants of wolf (<i>Canis lupus</i>) depredation on sheep farms in Finland. <i>Biodiversity and Conservation</i> , 2009 , 18, 3503-3517	3.4	45
22	Species traits explain recent range shifts of Finnish butterflies. <i>Global Change Biology</i> , 2009 , 15, 732-743	11.4	219
21	Inclusion of soil data improves the performance of bioclimatic envelope models for insect species distributions in temperate Europe. <i>Journal of Biogeography</i> , 2009 , 36, 1459-1473	4.1	34
20	Some like it hot: microclimatic variation affects the abundance and movements of a critically endangered dung beetle. <i>Insect Conservation and Diversity</i> , 2009 , 2, 232-241	3.8	21
19	Evaluation of consensus methods in predictive species distribution modelling. <i>Diversity and Distributions</i> , 2009 , 15, 59-69	5	778

18	Interaction of geomorphic and ecologic features across altitudinal zones in a subarctic landscape. <i>Geomorphology</i> , 2009 , 112, 324-333	4.3	41
17	Disregarding topographical heterogeneity biases species turnover assessments based on bioclimatic models. <i>Global Change Biology</i> , 2008 , 14, 483-494	11.4	120
16	Modelling the occurrence of threatened plant species in taiga landscapes: methodological and ecological perspectives. <i>Journal of Biogeography</i> , 2008 , 35, 1888-1905	4.1	35
15	Threat spots and environmental determinants of red-listed plant, butterfly and bird species in boreal agricultural environments. <i>Biodiversity and Conservation</i> , 2008 , 17, 3289-3305	3.4	12
14	A comparison of predictive methods in modelling the distribution of periglacial landforms in Finnish Lapland. <i>Earth Surface Processes and Landforms</i> , 2008 , 33, 2241-2254	3.7	41
13	The importance of biotic interactions for modelling species distributions under climate change. <i>Global Ecology and Biogeography</i> , 2007 , 16, 743-753	6.1	794
12	Landscape scale determinants of periglacial features in subarctic Finland: a grid-based modelling approach. <i>Permafrost and Periglacial Processes</i> , 2007 , 18, 115-127	4.2	31
11	Methods and uncertainties in bioclimatic envelope modelling under climate change. <i>Progress in Physical Geography</i> , 2006 , 30, 751-777	3.5	679
10	Scale matters: A multi-resolution study of the determinants of patterned ground activity in subarctic Finland. <i>Geomorphology</i> , 2006 , 80, 282-294	4.3	30
9	Determinants of the biogeographical distribution of butterflies in boreal regions. <i>Journal of Biogeography</i> , 2006 , 33, 1764-1778	4.1	94
8	Uncertainty of bioclimate envelope models based on the geographical distribution of species. <i>Global Ecology and Biogeography</i> , 2005 , 14, 575-584	6.1	150
7	Species differ in their responses to wind: The underexplored link between species fine-scale occurrences and variation in wind stress. <i>Journal of Vegetation Science</i> , e13093	3.1	1
6	Snow is an important control of plant community functional composition		1
5	Woody plants constructing tundra soils		1
4	Truncated denitrifiers dominate the denitrification pathway in tundra soil metagenomes		5
3	New high-resolution estimates of the permafrost thermal state and hydrothermal conditions over the Northern Hemisphere		6
2	The activity and functions of subarctic soil microbial communities vary across vegetation types		1
1	Warm range margin of boreal bryophytes and lichens not directly limited by temperatures. <i>Journal of Ecology</i> ,	6	3

