Martin Volk

List of Publications by Year
in descending order

90 papers	4,642 citations	87888 38 h-index	110387 64 g-index
104 all docs	104 docs citations	104 times ranked	5593 citing authors

#	Article	IF	Citations
1	Towards systematic analyses of ecosystem service trade-offs and synergies: Main concepts, methods and the road ahead. Ecosystem Services, 2017, 28, 264-272.	5.4	306
2	Environmental decision support systems (EDSS) development â€“ Challenges and best practices. Environmental Modelling and Software, 2011, 26, 1389-1402.	4.5	251
3	Introduction to <scp>SWAT</scp>+, A Completely Restructured Version of the Soil and Water Assessment Tool. Journal of the American Water Resources Association, 2017, 53, 115-130.	2.4	205
4	Application of the Soil and Water Assessment Tool (SWAT) to predict the impact of alternative management practices on water quality and quantity. Agricultural Water Management, 2009, 96, 1207-1217.	5.6	198
5	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.	6.3	194
6	The comparison index: A tool for assessing the accuracy of image segmentation. International Journal of Applied Earth Observation and Geoinformation, 2007, 9, 311-321.	2.8	174
7	Using precipitation data ensemble for uncertainty analysis in SWAT streamflow simulation. Journal of Hydrology, 2012, 414-415, 413-424.	5.4	154
8	Towards the implementation of the European Water Framework Directive?. Land Use Policy, 2009, 26, 580-588.	5.6	149
9	Assessment of Different Representations of Spatial Variability on SWAT Model Performance. Transactions of the ASABE, 2010, 53, 1433-1443.	1.1	136
10	Optimization-based trade-off analysis of biodiesel crop production for managing an agricultural catchment. Environmental Modelling and Software, 2013, 48, 98-112.	4.5	130
11	A review of multi-criteria optimization techniques for agricultural land use allocation. Environmental Modelling and Software, 2018, 105, 79-93.	4.5	108
12	Integrated ecological-economic modelling of water pollution abatement management options in the Upper Ems River Basin. Ecological Economics, 2008, 66, 66-76.	5.7	105
13	SWAT plant growth modification for improved modeling of perennial vegetation in the tropics. Ecological Modelling, 2013, 269, 98-112.	2.5	104
14	The impact of Best Management Practices on simulated streamflow and sediment load in a Central Brazilian catchment. Journal of Environmental Management, 2013, 127, S24-S36.	7.8	101
15	A global agenda for advancing freshwater biodiversity research. Ecology Letters, 2022, 25, 255-263.	6.4	95
16	Multifunctionality assessments â€“ More than assessing multiple ecosystem functions and services? A quantitative literature review. Ecological Indicators, 2019, 103, 226-235.	6.3	89
17	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, 834-849.	2.7	82
18	Blind spots in ecosystem services research and challenges for implementation. Regional Environmental Change, 2019, 19, 2151-2172.	2.9	77

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19	On the Nexus of the Spatial Dynamics of Global Urbanization and the Age of the City. PLoS ONE, 2016, 11, e0160471.	2.5	75
20	Assessing the ecosystem services supplied by freshwater flows in Mediterranean agroecosystems. Agricultural Water Management, 2012, 105, 21-31.	5.6	72
21	Evolutionary algorithms for species distribution modelling: A review in the context of machine learning. Ecological Modelling, 2019, 392, 179-195.	2.5	72
22	Development of a gridâ€based version of the SWAT landscape model. Hydrological Processes, 2015, 29, 900-914.	2.6	68
23	Influence of different nitrateâ€“N monitoring strategies on load estimation as a base for model calibration and evaluation. Environmental Monitoring and Assessment, 2010, 171, 513-527.	2.7	61
24	Simulating Landscape Sediment Transport Capacity by Using a Modified SWAT Model. Journal of Environmental Quality, 2014, 43, 55-66.	2.0	60
25	Plant functional traits shape multiple ecosystem services, their tradeâ€offs and synergies in grasslands. Journal of Applied Ecology, 2020, 57, 1535-1550.	4.0	56
26	Constraints in multi-objective optimization of land use allocation â€“ Repair or penalize?. Environmental Modelling and Software, 2019, 118, 241-251.	4.5	54
27	Modeling Water Quality in Watersheds: From Here to the Next Generation. Water Resources Research, 2020, 56, e2020WR027721.	4.2	54
28	Improved simulation of river water and groundwater exchange in an alluvial plain using the SWAT model. Hydrological Processes, 2016, 30, 187-202.	2.6	53
29	A pragmatic approach for soil erosion risk assessment within policy hierarchies. Land Use Policy, 2010, 27, 997-1009.	5.6	52
30	Assessing the Benefits of Forested Riparian Zones: A Qualitative Index of Riparian Integrity Is Positively Associated with Ecological Status in European Streams. Water (Switzerland), 2020, 12, 1178.	2.7	49
31	Placing soil-genesis and transport processes into a landscape context: A multiscale terrain-analysis approach. Journal of Plant Nutrition and Soil Science, 2008, 171, 419-430.	1.9	47
32	Challenges of simulating complex environmental systems at the landscape scale: A controversial dialogue between two cups of espresso. Ecological Modelling, 2009, 220, 3481-3489.	2.5	47
33	Land use change in a 200â€year period and its effect on blue and green water flow in two Slovenian Mediterranean catchmentsâ€”lessons for the future. Hydrological Processes, 2013, 27, 3964-3980.	2.6	46
34	Simulating Land Management Options to Reduce Nitrate Pollution in an Agricultural Watershed Dominated by an Alluvial Aquifer. Journal of Environmental Quality, 2014, 43, 67-74.	2.0	46
35	A new multiscale approach for monitoring vegetation using remote sensing-based indicators in laboratory, field, and landscape. Environmental Monitoring and Assessment, 2013, 185, 1215-1235.	2.7	44
36	Separating the effects of changes in land cover and climate: a hydro-meteorological analysis of the past 60 yr in Saxony, Germany. Hydrology and Earth System Sciences, 2014, 18, 389-405.	4.9	43

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37	On characterizing the temporal dominance patterns of model parameters and processes. Hydrological Processes, 2016, 30, 2255-2270.	2.6	43
38	Pimp Your Landscape: A Tool for Qualitative Evaluation of the Effects of Regional Planning Measures on Ecosystem Services. Environmental Management, 2010, 46, 953-968.	2.7	42
39	Developing stakeholder-driven scenarios on land sharing and land sparing â€“ Insights from five European case studies. Journal of Environmental Management, 2019, 241, 488-500.	7.8	42
40	Simulation of a Low-Gradient Coastal Plain Watershed Using the SWAT Landscape Model. Transactions of the ASABE, 2010, 53, 1445-1456.	1.1	41
41	Meso-scale landscape analysis based on landscape balance investigations: problems and hierarchical approaches for their resolution. Ecological Modelling, 2003, 168, 251-265.	2.5	38
42	Application of a model-based rainfall-runoff database as efficient tool for flood risk management. Hydrology and Earth System Sciences, 2013, 17, 3159-3169.	4.9	34
43	Trade-offs between plant species richness and carbon storage in the context of afforestation â€“ Examples from afforestation scenarios in the Mulde Basin, Germany. Ecological Indicators, 2017, 73, 139-155.	6.3	33
44	Modelling Tools to Analyze and Assess the Ecological Impact of Hydropower Dams. Water (Switzerland), 2018, 10, 259.	2.7	30
45	SWAT: Agricultural water and nonpoint source pollution management at a watershed scale. Agricultural Water Management, 2016, 175, 1-3.	5.6	29
46	A SDSS-based Ecological-economic Modelling Approach for Integrated River Basin Management on Different Scale Levels â€“ The Project FLUMAGIS. Water Resources Management, 2007, 21, 2049-2061.	3.9	28
47	Integrative assessment of climate change for fast-growing urban areas: Measurement and recommendations for future research. PLoS ONE, 2017, 12, e0189451.	2.5	28
48	Squaring the Circle? Combining Models, Indicators, Experts and End-Users in Integrated Land-Use Management Support Tools. Environmental Management, 2010, 46, 829-833.	2.7	27
49	Integrated nutrient transport modelling with respect to the implementation of the European WFD: The WeiÃŸe Elster Case Study, Germany. Water S A, 2019, 34, 490.	0.4	27
50	Modelling ecosystem services â€“ Challenges and promising future directions. Sustainability of Water Quality and Ecology, 2013, 1-2, 3-9.	2.0	25
51	Input variable selection with a simple genetic algorithm for conceptual species distribution models: A case study of river pollution in Ecuador. Environmental Modelling and Software, 2017, 92, 269-316.	4.5	25
52	Small Patches of Riparian Woody Vegetation Enhance Biodiversity of Invertebrates. Water (Switzerland), 2020, 12, 3070.	2.7	23
53	Including stakeholdersâ€™ perspectives on ecosystem services in multifunctionality assessments. Ecosystems and People, 2020, 16, 354-368.	3.2	23
54	Title is missing!. Landscape Ecology, 2002, 17, 1-12.	4.2	21

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55	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.	2.9	21
56	Linking the Remote Sensing of Geodiversity and Traits Relevant to Biodiversityâ€"Part II: Geomorphology, Terrain and Surfaces. Remote Sensing, 2020, 12, 3690.	4.0	20
57	Monitoring strategies and scale-appropriate hydrologic and biogeochemical modelling for natural resource management: Conclusions and recommendations from a session held at the iEMSs 2008. Environmental Modelling and Software, 2011, 26, 538-542.	4.5	19
58	Spatio-temporal change of ecosystem services as a key to understand natural resource utilization in Southern Chile. Regional Environmental Change, 2017, 17, 2477-2493.	2.9	19
59	Effective map scales for soil transport processes and related process domains â€" Statistical and spatial characterization of their scale-specific inaccuracies. Geoderma, 2015, 247-248, 151-160.	5.1	17
60	Delineating floodplain and upland areas for hydrologic models: a comparison of methods. Hydrological Processes, 2016, 30, 4367-4383.	2.6	17
61	Water Quality Is a Poor Predictor of Recreational Hotspots in England. PLoS ONE, 2016, 11, e0166950.	2.5	17
62	Improving the Applicability of the SWAT Model to Simulate Flow and Nitrate Dynamics in a Flat Data-Scarce Agricultural Region in the Mediterranean. Water (Switzerland), 2020, 12, 3479.	2.7	16
63	Using the Soil and Water Assessment Tool to Simulate the Pesticide Dynamics in the Data Scarce Guayas River Basin, Ecuador. Water (Switzerland), 2020, 12, 696.	2.7	16
64	Analysing spatio-temporal process and parameter dynamics in models to characterise contrasting catchments. Journal of Hydrology, 2019, 570, 863-874.	5.4	15
65	Expanding temporal resolution in landscape transformations: Insights from a landsat-based case study in Southern Chile. Ecological Indicators, 2017, 75, 132-144.	6.3	13
66	Assessment of ecological function indicators related to nitrate under multiple human stressors in a large watershed. Ecological Indicators, 2020, 111, 106016.	6.3	13
67	Remote Sensing of Geomorphodiversity Linked to Biodiversityâ€"Part III: Traits, Processes and Remote Sensing Characteristics. Remote Sensing, 2022, 14, 2279.	4.0	13
68	Bringing the sharing-sparing debate down to the groundâ€"Lessons learnt for participatory scenario development. Land Use Policy, 2020, 91, 104262.	5.6	12
69	Considering scale within optimization procedures for water management decisions: Balancing environmental flows and human needs. Environmental Modelling and Software, 2021, 139, 104991.	4.5	12
70	Large-scale identification of hot spots for soil carbon demand under climate change and bioenergy production. Journal of Plant Nutrition and Soil Science, 2015, 178, 199-208.	1.9	11
71	Assessment of Socio-Economic and Climate Change Impacts on Water Resources in Four European Lagoon Catchments. Environmental Management, 2019, 64, 701-720.	2.7	11
72	Considering spatial distribution and functionality of forests in a modeling framework for river basin management. Forest Ecology and Management, 2007, 248, 17-25.	3.2	10

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73	Using Stakeholder Preferences to Identify Optimal Land Use Configurations. Frontiers in Water, 2020, 2, .	2.3	10
74	Using crowdsourced images to study selected cultural ecosystem services and their relationships with species richness and carbon sequestration. Ecosystem Services, 2022, 54, 101411.	5.4	10
75	A Bayesian Belief Network learning tool integrates multi-scale effects of riparian buffers on stream invertebrates. Science of the Total Environment, 2022, 810, 152146.	8.0	9
76	Combining biophysical optimization with economic preference analysis for agricultural land-use allocation. Ecology and Society, 2021, 26, .	2.3	8
77	Response of endangered bird species to land-use changes in an agricultural landscape in Germany. Regional Environmental Change, 2022, 22, 1.	2.9	8
78	Development and applications of the SWAT model to support sustainable river basin management on different scales. Sustainability of Water Quality and Ecology, 2016, 8, 1-3.	2.0	7
79	Ecoservices and multifunctional landscapes: Balancing the benefits of integrated ES-based water resources, agricultural and forestry production systems. Ecohydrology and Hydrobiology, 2018, 18, 262-268.	2.3	7
80	The Art of Scientific Performance. Trends in Ecology and Evolution, 2018, 33, 805-809.	8.7	7
81	Riparian reforestation on the landscape scale: Navigating tradeâ€offs among agricultural production, ecosystem functioning and biodiversity. Journal of Applied Ecology, 2022, 59, 1456-1471.	4.0	7
82	Landscape balance. , 2001, , 163-202.		6
83	Applying Optimization to Support Adaptive Water Management of Rivers. Water (Switzerland), 2021, 13, 1281.	2.7	4
84	Surveying Ground Water Level Using Remote Sensing: An Example over the Seco and Hondo Creek Watershed in Texas. Ground Water Monitoring and Remediation, 2006, 26, 94-102.	0.8	3
85	Scales and spatio-temporal dimensions in landscape research. , 2001, , 137-162.		3
86	â€œPimp your landscapeâ€•â€“ an interactive land-use planning support tool. WIT Transactions on the Built Environment, 2008, , .	0.0	3
87	The clam and the dam: A Bayesian belief network approach to environmental flow assessment in a data scarce region. Science of the Total Environment, 2022, 810, 151315.	8.0	3
88	TALE - Towards multifunctional agricultural landscapes in Europe: Assessing and governing synergies between biodiversity and ecosystem services. Impact, 2018, 2018, 39-41.	0.1	2
89	Quantifying the proportion of tile-drained land in large river basins. Physics and Chemistry of the Earth, 2011, 36, 591-598.	2.9	1
90	Changes in land management and nitrogen balance at different scales in the WeiÃŸe Elster river basin, Germany. Desalination and Water Treatment, 2010, 19, 219-225.	1.0	0