

# Wouter Buytaert

## List of Publications by Year in descending order

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Version: 2024-02-01

122  
papers

8,380  
citations

50170

46  
h-index

49773

87  
g-index

164  
all docs

164  
docs citations

164  
times ranked

9199  
citing authors

#	ARTICLE	IF	CITATIONS
1	Citizens AND Hydrology (CANDHY): conceptualizing a transdisciplinary framework for citizen science addressing hydrological challenges. <i>Hydrological Sciences Journal</i> , 2022, 67, 2534-2551.	1.2	33
2	The effect of natural infrastructure on water erosion mitigation in the Andes. <i>Soil</i> , 2022, 8, 133-147.	2.2	12
3	Ecohydrology and ecosystem services of a natural and an artificial bofedal wetland in the central Andes. <i>Science of the Total Environment</i> , 2022, 838, 155968.	3.9	12
4	Sachet water in Ghana: A spatiotemporal analysis of the recent upward trend in consumption and its relationship with changing household characteristics, 2010–2017. <i>PLoS ONE</i> , 2022, 17, e0265167.	1.1	5
5	A user-centred design framework for disaster risk visualisation. <i>International Journal of Disaster Risk Reduction</i> , 2022, 77, 103067.	1.8	8
6	Ensuring consideration of water quality in nexus approaches in the science–practice continuum: reply to discussion of “Water quality: the missing dimension of water in the water–energy–food nexus?”. <i>Hydrological Sciences Journal</i> , 2022, 67, 1291-1293.	1.2	0
7	Mitigating flood risk using low-cost sensors and citizen science: A proof-of-concept study from western Nepal. <i>Journal of Flood Risk Management</i> , 2021, 14, e12675.	1.6	20
8	Water quality: the missing dimension of water in the water–energy–food nexus. <i>Hydrological Sciences Journal</i> , 2021, 66, 745-758.	1.2	15
9	A methodology to downscale water demand data with application to the Andean region (Ecuador). <i>Tj ETQq1 1 0.784314 rgBT /Overlo</i>	1.2	1
10	Modeling the Impacts of Urban Flood Risk Management on Social Inequality. <i>Water Resources Research</i> , 2021, 57, e2020WR029024.	1.7	19
11	Technical note: Hydrology modelling R packages – a unified analysis of models and practicalities from a user perspective. <i>Hydrology and Earth System Sciences</i> , 2021, 25, 3937-3973.	1.9	17
12	Knowledge gaps in our perceptual model of Great Britain's hydrology. <i>Hydrological Processes</i> , 2021, 35, e14288.	1.1	22
13	Influence of land use on hydro-physical soil properties of Andean páramos and its effect on streamflow buffering. <i>Catena</i> , 2021, 202, 105227.	2.2	18
14	Designing citizen science for water and ecosystem services management in data-poor regions: Challenges and opportunities. <i>Current Research in Environmental Sustainability</i> , 2021, 3, 100059.	1.7	3
15	Addressing water security through nature-based solutions. , 2021, , 37-62.		1
16	Global to regional scale evaluation of adaptation measures to reduce the future water gap. <i>Environmental Modelling and Software</i> , 2020, 124, 104578.	1.9	13
17	Thermal niche traits of high alpine plant species and communities across the tropical Andes and their vulnerability to global warming. <i>Journal of Biogeography</i> , 2020, 47, 408-420.	1.4	61
18	From present to future development pathways in fragile mountain landscapes. <i>Environmental Science and Policy</i> , 2020, 114, 606-613.	2.4	8

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19	An Open Data and Citizen Science Approach to Building Resilience to Natural Hazards in a Data-Scarce Remote Mountainous Part of Nepal. <i>Sustainability</i> , 2020, 12, 9448.	1.6	3
20	A concerted research effort to advance the hydrological understanding of tropical páramos. <i>Hydrological Processes</i> , 2020, 34, 4609-4627.	1.1	32
21	Applying Citizen Science for Sustainable Development: Rainfall Monitoring in Western Nepal. <i>Frontiers in Water</i> , 2020, 2, .	1.0	8
22	Project Narratives: Investigating Participatory Conservation in the Peruvian Andes. <i>Development and Change</i> , 2020, 51, 1067-1097.	2.0	2
23	Moving beyond the Technology: A Socio-technical Roadmap for Low-Cost Water Sensor Network Applications. <i>Environmental Science &amp; Technology</i> , 2020, 54, 9145-9158.	4.6	23
24	Tailoring Infographics on Water Resources Through Iterative, User-Centered Design: A Case Study in the Peruvian Andes. <i>Water Resources Research</i> , 2020, 56, e2019WR026694.	1.7	9
25	A Technical Evaluation of Lidar-Based Measurement of River Water Levels. <i>Water Resources Research</i> , 2020, 56, e2019WR026810.	1.7	34
26	A framework for understanding water-related multi-hazards in a sustainable development context. <i>Progress in Physical Geography</i> , 2020, 44, 267-284.	1.4	5
27	The power to define resilience in social-hydrological systems: Toward a power-sensitive resilience framework. <i>Wiley Interdisciplinary Reviews: Water</i> , 2019, 6, e1377.	2.8	34
28	Potential contributions of pre-Inca infiltration infrastructure to Andean water security. <i>Nature Sustainability</i> , 2019, 2, 584-593.	11.5	59
29	Twenty-three unsolved problems in hydrology (UPH) – a community perspective. <i>Hydrological Sciences Journal</i> , 2019, 64, 1141-1158.	1.2	474
30	Improving water resources management using participatory monitoring in a remote mountainous region of Nepal. <i>Journal of Hydrology: Regional Studies</i> , 2019, 23, 100604.	1.0	12
31	Effects of winter and summer-time irrigation over Gangetic Plain on the mean and intra-seasonal variability of Indian summer monsoon. <i>Climate Dynamics</i> , 2019, 53, 3147-3166.	1.7	10
32	The development and intersection of highland-coastal scale frames: a case study of water governance in central Peru. <i>Journal of Environmental Policy and Planning</i> , 2019, 21, 373-390.	1.5	7
33	Evaluation of GPM-era Global Satellite Precipitation Products over Multiple Complex Terrain Regions. <i>Remote Sensing</i> , 2019, 11, 2936.	1.8	74
34	Predicting Shallow Groundwater Tables for Sloping Highland Aquifers. <i>Water Resources Research</i> , 2019, 55, 11088-11100.	1.7	18
35	Sensitivity analysis of the parameter-efficient distributed (PED) model for discharge and sediment concentration estimation in degraded humid landscapes. <i>Land Degradation and Development</i> , 2019, 30, 151-165.	1.8	5
36	The LOTUS: A Journey to Value-Based, Patient-Centered Care. <i>Creative Nursing</i> , 2019, 25, 17-24.	0.2	0

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37	Modelado hidrológico de un páramo andino venezolano con afloramientos rocosos usando TOPMODEL. <i>Maskana</i> , 2019, 10, 54-63.	0.5	0
38	Rapid decline of snow and ice in the tropical Andes – Impacts, uncertainties and challenges ahead. <i>Earth-Science Reviews</i> , 2018, 176, 195-213.	4.0	203
39	Citizen science for hydrological risk reduction and resilience building. <i>Wiley Interdisciplinary Reviews: Water</i> , 2018, 5, e1262.	2.8	104
40	A spatio-temporal land use and land cover reconstruction for India from 1960–2010. <i>Scientific Data</i> , 2018, 5, 180159.	2.4	19
41	Exploring a water data, evidence, and governance theory. <i>Water Security</i> , 2018, 4-5, 19-25.	1.2	8
42	Population growth, land use and land cover transformations, and water quality nexus in the Upper Ganga River basin. <i>Hydrology and Earth System Sciences</i> , 2018, 22, 4745-4770.	1.9	67
43	Land-use change may exacerbate climate change impacts on water resources in the Ganges basin. <i>Hydrology and Earth System Sciences</i> , 2018, 22, 1411-1435.	1.9	18
44	High-resolution hydrometeorological data from a network of headwater catchments in the tropical Andes. <i>Scientific Data</i> , 2018, 5, 180080.	2.4	36
45	Water sensor network applications: Time to move beyond the technical?. <i>Hydrological Processes</i> , 2018, 32, 2612-2615.	1.1	13
46	Including Farmer Irrigation Behavior in a Sociohydrological Modeling Framework With Application in North India. <i>Water Resources Research</i> , 2018, 54, 4849-4866.	1.7	31
47	Citizen Science and Low-Cost Sensors for Integrated Water Resources Management. <i>Advances in Chemical Pollution, Environmental Management and Protection</i> , 2018, 3, 1-33.	0.3	11
48	Toward mountains without permanent snow and ice. <i>Earth's Future</i> , 2017, 5, 418-435.	2.4	324
49	The role of rating curve uncertainty in real-time flood forecasting. <i>Water Resources Research</i> , 2017, 53, 4197-4213.	1.7	36
50	Research Priorities for the Conservation and Sustainable Governance of Andean Forest Landscapes. <i>Mountain Research and Development</i> , 2017, 37, 323.	0.4	41
51	Contribution of occult precipitation to the water balance of páramo ecosystems in the Colombian Andes. <i>Hydrological Processes</i> , 2017, 31, 4440-4449.	1.1	22
52	Glacial melt content of water use in the tropical Andes. <i>Environmental Research Letters</i> , 2017, 12, 114014.	2.2	77
53	Climate Change Adaptation Strategies – An Upstream-Downstream Perspective. <i>Mountain Research and Development</i> , 2017, 37, 240.	0.4	0
54	Comparative Ground Validation of IMERG and TMPA at Variable Spatiotemporal Scales in the Tropical Andes. <i>Journal of Hydrometeorology</i> , 2017, 18, 2469-2489.	0.7	60

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55	From patches to richness: assessing the potential impact of landscape transformation on biodiversity. <i>Ecosphere</i> , 2017, 8, e02004.	1.0	13
56	User-driven design of decision support systems for polycentric environmental resources management. <i>Environmental Modelling and Software</i> , 2017, 88, 58-73.	1.9	65
57	HESS Opinions: A conceptual framework for assessing socio-hydrological resilience under change. <i>Hydrology and Earth System Sciences</i> , 2017, 21, 3655-3670.	1.9	46
58	Socio-hydrological modelling: a review asking &quot;why,ÂwhatÂandÂhow?&quot;. <i>Hydrology and Earth System Sciences</i> , 2016, 20, 443-478.	1.9	151
59	The use of semi-structured interviews for the characterisation of farmer irrigation practices. <i>Hydrology and Earth System Sciences</i> , 2016, 20, 1911-1924.	1.9	51
60	Accounting for dependencies in regionalized signatures for predictions in ungauged catchments. <i>Hydrology and Earth System Sciences</i> , 2016, 20, 887-901.	1.9	17
61	Land use can offset climate change induced increases in erosion in Mediterranean watersheds. <i>Catena</i> , 2016, 143, 244-255.	2.2	34
62	Impacts of land use on the hydrological response of tropical Andean catchments. <i>Hydrological Processes</i> , 2016, 30, 4074-4089.	1.1	111
63	Regionalization of landâ€use impacts on streamflow using a network of paired catchments. <i>Water Resources Research</i> , 2016, 52, 6710-6729.	1.7	34
64	Environmental data visualisation for non-scientific contexts: Literature review and design framework. <i>Environmental Modelling and Software</i> , 2016, 85, 299-318.	1.9	85
65	Multiregional Satellite Precipitation Products Evaluation over Complex Terrain. <i>Journal of Hydrometeorology</i> , 2016, 17, 1817-1836.	0.7	123
66	A comparative analysis of ecosystem services valuation approaches for application at the local scale and in data scarce regions. <i>Ecosystem Services</i> , 2016, 22, 250-259.	2.3	141
67	Citizen Science for Water Resources Management: Toward Polycentric Monitoring and Governance?. <i>Journal of Water Resources Planning and Management - ASCE</i> , 2016, 142, .	1.3	72
68	Highâ€resolution satelliteâ€gauge merged precipitation climatologies of the Tropical Andes. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 1190-1207.	1.2	75
69	Projected increases in the annual flood pulse of the Western Amazon. <i>Environmental Research Letters</i> , 2016, 11, 014013.	2.2	42
70	Environmental Virtual Observatories (EVOs): prospects for knowledge co-creation and resilience in the Information Age. <i>Current Opinion in Environmental Sustainability</i> , 2016, 18, 40-48.	3.1	60
71	fuse: An R package for ensemble Hydrological Modelling. <i>Journal of Open Source Software</i> , 2016, 1, 52.	2.0	8
72	rnfa: An R package to Retrieve, Filter and Visualize Data from the UK National River Flow Archive. <i>R Journal</i> , 2016, 8, 102.	0.7	11

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73	An open and extensible framework for spatially explicit land use change modelling: the lulcc R package. <i>Geoscientific Model Development</i> , 2015, 8, 3215-3229.	1.3	51
74	A Comparative Analysis of TRMM's Rain Gauge Data Merging Techniques at the Daily Time Scale for Distributed Rainfall's Runoff Modeling Applications. <i>Journal of Hydrometeorology</i> , 2015, 16, 2153-2168.	0.7	60
75	Web technologies for environmental Big Data. <i>Environmental Modelling and Software</i> , 2015, 63, 185-198.	1.9	184
76	Citizen science in hydrology and water resources: opportunities for knowledge generation, ecosystem service management, and sustainable development. <i>Frontiers in Earth Science</i> , 2014, 2, .	0.8	329
77	Impact of modellers' decisions on hydrological a priori predictions. <i>Hydrology and Earth System Sciences</i> , 2014, 18, 2065-2085.	1.9	25
78	Coupling a land-surface model with a crop growth model to improve ET flux estimations in the Upper Ganges basin, India. <i>Hydrology and Earth System Sciences</i> , 2014, 18, 4223-4238.	1.9	23
79	A Comparative Performance Analysis of TRMM 3B42 (TMPA) Versions 6 and 7 for Hydrological Applications over Andean's Amazon River Basins. <i>Journal of Hydrometeorology</i> , 2014, 15, 581-592.	0.7	149
80	Modelling the hydrological impacts of rural land use change. <i>Hydrology Research</i> , 2014, 45, 737-754.	1.1	44
81	Historical and future land-cover changes in the Upper Ganges basin of India. <i>International Journal of Remote Sensing</i> , 2014, 35, 3150-3176.	1.3	28
82	Addressing sources of uncertainty in runoff projections for a data scarce catchment in the Ecuadorian Andes. <i>Climatic Change</i> , 2014, 125, 221-235.	1.7	18
83	Improving parameter priors for data-scarce estimation problems. <i>Water Resources Research</i> , 2013, 49, 6090-6095.	1.7	7
84	A critical assessment of the JULES land surface model hydrology for humid tropical environments. <i>Hydrology and Earth System Sciences</i> , 2013, 17, 1113-1132.	1.9	35
85	Diverging Responses of Tropical Andean Biomes under Future Climate Conditions. <i>PLoS ONE</i> , 2013, 8, e63634.	1.1	126
86	Water for cities: The impact of climate change and demographic growth in the tropical Andes. <i>Water Resources Research</i> , 2012, 48, .	1.7	160
87	Web-Based Environmental Simulation: Bridging the Gap between Scientific Modeling and Decision-Making. <i>Environmental Science &amp; Technology</i> , 2012, 46, 1971-1976.	4.6	38
88	Assessment of the Impacts of Climate Change on Mountain Hydrology: Development of a Methodology Through a Case Study in the Andes of Peru. <i>Mountain Research and Development</i> , 2012, 32, 385.	0.4	5
89	Glaciers in Patagonia: Controversy and prospects. <i>Eos</i> , 2012, 93, 212-212.	0.1	10
90	Hydrological regime of remote catchments with extreme gradients under accelerated change: the Baker basin in Patagonia. <i>Hydrological Sciences Journal</i> , 2012, 57, 1530-1542.	1.2	32

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91	On virtual observatories and modelled realities (or why discharge must be treated as a virtual) Tj ETQq1 1 0.784314 rgBT /Overlock 10 T	1.9	34
92	Assessment and Management of Water Resources in Developing, Semi-arid and Arid Regions. Water Resources Management, 2012, 26, 841-844.	1.9	26
93	Temporal dynamics of model parameter sensitivity for computationally expensive models with the Fourier amplitude sensitivity test. Water Resources Research, 2011, 47, .	1.7	111
94	Evaluation of precipitation products over complex mountainous terrain: A water resources perspective. Advances in Water Resources, 2011, 34, 1222-1231.	1.7	140
95	Climate change and mountain water resources: overview and recommendations for research, management and policy. Hydrology and Earth System Sciences, 2011, 15, 471-504.	1.9	476
96	Potential impacts of climate change on the environmental services of humid tropical alpine regions. Global Ecology and Biogeography, 2011, 20, 19-33.	2.7	331
97	Identifying controls of the rainfall-runoff response of small catchments in the tropical Andes (Ecuador). Journal of Hydrology, 2011, 407, 164-174.	2.3	90
98	Models as multiple working hypotheses: hydrological simulation of tropical alpine wetlands. Hydrological Processes, 2011, 25, 1784-1799.	1.1	99
99	Uncertainties in climate change projections and regional downscaling in the tropical Andes: implications for water resources management. Hydrology and Earth System Sciences, 2010, 14, 1247-1258.	1.9	176
100	Repeated glacial-lake outburst floods in Patagonia: an increasing hazard?. Natural Hazards, 2010, 54, 469-481.	1.6	146
101	Comparative predictions of discharge from an artificial catchment (Chicken Creek) using sparse data. Hydrology and Earth System Sciences, 2009, 13, 2069-2094.	1.9	97
102	A data assimilation approach to discharge estimation from space. Hydrological Processes, 2009, 23, 3641-3649.	1.1	132
103	Regionalization as a learning process. Water Resources Research, 2009, 45, .	1.7	55
104	Predicting climate change impacts on water resources in the tropical Andes: Effects of GCM uncertainty. Geophysical Research Letters, 2009, 36, .	1.5	113
105	Why can't we do better than Topmodel?. Hydrological Processes, 2008, 22, 4175-4179.	1.1	33
106	Comment on "Human impacts on headwater fluvial systems in the northern and central Andes" (Carol) Tj ETQq0 0 0 rgBT /Overlock 4	1.1	4
107	Regional variability of volcanic ash soils in south Ecuador: The relation with parent material, climate and land use. Catena, 2007, 70, 143-154.	2.2	50
108	The effects of afforestation and cultivation on water yield in the Andean páramo. Forest Ecology and Management, 2007, 251, 22-30.	1.4	171

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109	Space-time rainfall variability in the Paute basin, Ecuadorian Andes. <i>Hydrological Processes</i> , 2007, 21, 3316-3327.	1.1	132
110	Agro-climatic suitability mapping for crop production in the Bolivian Altiplano: A case study for quinoa. <i>Agricultural and Forest Meteorology</i> , 2006, 139, 399-412.	1.9	92
111	Description and classification of nonallophanic Andosols in south Ecuadorian alpine grasslands (páramo). <i>Geomorphology</i> , 2006, 73, 207-221.	1.1	69
112	Spatial and temporal rainfall variability in mountainous areas: A case study from the south Ecuadorian Andes. <i>Journal of Hydrology</i> , 2006, 329, 413-421.	2.3	346
113	Comment on "Modelling the effect of soil and water conservation practices in Tigray, Ethiopia" [Agric. Ecosyst. Environ. 105 (2005) 29-40]. <i>Agriculture, Ecosystems and Environment</i> , 2006, 114, 407-411.	2.5	22
114	Human impact on the hydrology of the Andean páramos. <i>Earth-Science Reviews</i> , 2006, 79, 53-72.	4.0	423
115	The effect of land-use changes on the hydrological behaviour of Histic Andosols in south Ecuador. <i>Hydrological Processes</i> , 2005, 19, 3985-3997.	1.1	115
116	Clay mineralogy of the soils in the south Ecuadorian páramo region. <i>Geoderma</i> , 2005, 127, 114-129.	2.3	47
117	The use of the linear reservoir concept to quantify the impact of changes in land use on the hydrology of catchments in the Andes. <i>Hydrology and Earth System Sciences</i> , 2004, 8, 108-114.	1.9	69
118	The advantages of the use of open source software in geosciences. <i>Communications in Agricultural and Applied Biological Sciences</i> , 2003, 68, 35-8.	0.0	0
119	Impact of land use changes on the hydrological properties of volcanic ash soils in South Ecuador. <i>Soil Use and Management</i> , 2002, 18, 94-100.	2.6	46
120	A regional assessment of climate change impact on water resources in the tropical Andes. , 0, , .		1
121	Predicting flow in ungauged catchments using correlated information sources. , 0, , .		8
122	Land-use change may exacerbate climate change impacts on water resources in the Ganges basin. <i>Hydrology and Earth System Sciences Discussions</i> , 0, , 1-33.	0.0	1