

Ann Louise Heathwaite

List of Publications by Citations

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125
papers

5,992
citations

45
h-index

73
g-index

126
ext. papers

6,489
ext. citations

5.4
avg, IF

5.8
L-index

#	Paper	IF	Citations
125	Phosphorus Management at the Watershed Scale: A Modification of the Phosphorus Index. <i>Journal of Environmental Quality</i> , 2000 , 29, 130-144	3.4	265
124	Characterising phosphorus loss in surface and subsurface hydrological pathways. <i>Science of the Total Environment</i> , 2000 , 251-252, 523-38	10.2	255
123	Modelling and managing critical source areas of diffuse pollution from agricultural land using flow connectivity simulation. <i>Journal of Hydrology</i> , 2005 , 304, 446-461	6	206
122	The phosphorus transfer continuum: linking source to impact with an interdisciplinary and multi-scaled approach. <i>Science of the Total Environment</i> , 2005 , 344, 5-14	10.2	201
121	A Conceptual Approach for Integrating Phosphorus and Nitrogen Management at Watershed Scales. <i>Journal of Environmental Quality</i> , 2000 , 29, 158-166	3.4	185
120	Hydrological processes in abandoned and restored peatlands: An overview of management approaches. <i>Wetlands Ecology and Management</i> , 2003 , 11, 65-83	2.1	168
119	MODELLING THE IMPACT OF LAND USE CHANGE ON WATER QUALITY IN AGRICULTURAL CATCHMENTS. <i>Hydrological Processes</i> , 1997 , 11, 269-286	3.3	157
118	Anisotropy and depth-related heterogeneity of hydraulic conductivity in a bog peat. I: laboratory measurements. <i>Hydrological Processes</i> , 2003 , 17, 89-101	3.3	134
117	Rapid incidental phosphorus transfers from grassland. <i>Journal of Environmental Quality</i> , 2001 , 30, 2105-124	3.4	132
116	A restatement of the natural science evidence concerning catchment-based 'natural' flood management in the UK. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2017 , 473, 20160706	2.4	129
115	CONTRIBUTION OF NITROGEN SPECIES AND PHOSPHORUS FRACTIONS TO STREAM WATER QUALITY IN AGRICULTURAL CATCHMENTS. <i>Hydrological Processes</i> , 1996 , 10, 971-983	3.3	122
114	Representation of landscape hydrological connectivity using a topographically driven surface flow index. <i>Water Resources Research</i> , 2009 , 45,	5.4	119
113	Phosphorus loss from an agricultural watershed as a function of storm size. <i>Journal of Environmental Quality</i> , 2008 , 37, 362-8	3.4	118
112	Multiple stressors on water availability at global to catchment scales: understanding human impact on nutrient cycles to protect water quality and water availability in the long term. <i>Freshwater Biology</i> , 2010 , 55, 241-257	3.1	117
111	Trends in nutrients. <i>Hydrological Processes</i> , 1996 , 10, 263-293	3.3	113
110	Future novel threats and opportunities facing UK biodiversity identified by horizon scanning. <i>Journal of Applied Ecology</i> , 2007 , 45, 821-833	5.8	106
109	A procedure for the simultaneous determination of total nitrogen and total phosphorus in freshwater samples using persulphate microwave digestion. <i>Water Research</i> , 1992 , 26, 1281-1287	12.5	103

108	Nitrate concentration changes at the groundwater-surface water interface of a small Cumbrian river. <i>Hydrological Processes</i> , 2009 , 23, 2195-2211	3.3	92
107	Spatio-temporal variations of hyporheic flow in a riffle-step-pool sequence. <i>Hydrological Processes</i> , 2009 , 23, 2138-2149	3.3	89
106	Suppression of dissolved organic carbon by sulfate induced acidification during simulated droughts. <i>Environmental Science & Technology</i> , 2006 , 40, 1776-83	10.3	82
105	Seasonal variation in phosphorus concentration–discharge hysteresis inferred from high-frequency in situ monitoring. <i>Journal of Hydrology</i> , 2015 , 524, 333-347	6	81
104	Why is achieving good ecological outcomes in rivers so difficult?. <i>Freshwater Biology</i> , 2012 , 57, 91-107	3.1	78
103	Evaluating colloidal phosphorus delivery to surface waters from diffuse agricultural sources. <i>Journal of Environmental Quality</i> , 2005 , 34, 287-98	3.4	77
102	Phosphorus dynamics observed through increasing scales in a nested headwater-to-river channel study. <i>Science of the Total Environment</i> , 2005 , 344, 83-106	10.2	76
101	Inadmissible evidence: knowledge and prediction in land and riverscapes. <i>Journal of Hydrology</i> , 2005 , 304, 3-19	6	72
100	Evaluating the quality of hydraulic conductivity estimates from piezometer slug tests in peat. <i>Hydrological Processes</i> , 2005 , 19, 1227-1244	3.3	70
99	Preferential Attachment of Escherichia coli to Different Particle Size Fractions of an Agricultural Grassland Soil. <i>Water, Air, and Soil Pollution</i> , 2007 , 185, 369-375	2.6	68
98	On the concept of delivery of sediment and nutrients to stream channels. <i>Hydrological Processes</i> , 2005 , 19, 551-556	3.3	67
97	The release of phosphorus to porewater and surface water from river riparian sediments. <i>Journal of Environmental Quality</i> , 2007 , 36, 1534-44	3.4	66
96	The concentration-discharge slope as a tool for water quality management. <i>Science of the Total Environment</i> , 2018 , 630, 738-749	10.2	65
95	Pathways of runoff and sediment transfer in small agricultural catchments. <i>Hydrological Processes</i> , 2009 , 23, 1349-1358	3.3	64
94	Increased temperature sensitivity of net DOC production from ombrotrophic peat due to water table draw-down. <i>Global Change Biology</i> , 2009 , 15, 794-807	11.4	63
93	Valuing local knowledge as a source of expert data: Farmer engagement and the design of decision support systems. <i>Environmental Modelling and Software</i> , 2012 , 36, 76-85	5.2	62
92	Hydrological Factors for Phosphorus Transfer from Agricultural Soils. <i>Advances in Agronomy</i> , 1999 , 153-178	7.8	58
91	A tiered risk-based approach for predicting diffuse and point source phosphorus losses in agricultural areas. <i>Science of the Total Environment</i> , 2005 , 344, 225-39	10.2	57

90	Evaluating diffuse and point phosphorus contributions to river transfers at different scales in the Taw catchment, Devon, UK. <i>Journal of Hydrology</i> , 2005 , 304, 118-138	6	56
89	Revealing the spatial variability of water fluxes at the groundwater-surface water interface. <i>Water Resources Research</i> , 2013 , 49, 3978-3992	5.4	55
88	Transfer of <i>Escherichia coli</i> to water from drained and undrained grassland after grazing. <i>Journal of Environmental Quality</i> , 2005 , 34, 918-25	3.4	55
87	Assessing the Potential for Pathogen Transfer from Grassland Soils to Surface Waters. <i>Advances in Agronomy</i> , 2005 , 85, 125-180	7.7	51
86	Risk-based modelling of diffuse land use impacts from rural landscapes upon salmonid fry abundance. <i>Ecological Modelling</i> , 2011 , 222, 1016-1029	3	50
85	Differential <i>E. coli</i> die-off patterns associated with agricultural matrices. <i>Environmental Science & Technology</i> , 2006 , 40, 5710-6	10.3	50
84	Making process-based knowledge useable at the operational level: a framework for modelling diffuse pollution from agricultural land. <i>Environmental Modelling and Software</i> , 2003 , 18, 753-760	5.2	50
83	Nutrient mobility within river basins: a European perspective. <i>Journal of Hydrology</i> , 2005 , 304, 477-490	6	49
82	The conceptual basis for a decision support framework to assess the risk of phosphorus loss at the field scale across Europe. <i>Journal of Plant Nutrition and Soil Science</i> , 2003 , 166, 447-458	2.3	47
81	Soil water movement and nutrient cycling in semi-arid rangeland: vegetation change and system resilience. <i>Hydrological Processes</i> , 1998 , 12, 443-459	3.3	45
80	Surveillant Science: Challenges for the Management of Rural Environments Emerging from the New Generation Diffuse Pollution Models. <i>Journal of Agricultural Economics</i> , 2006 , 57, 239-257	3.7	44
79	Characterization of the key pathways of dissimilatory nitrate reduction and their response to complex organic substrates in hyporheic sediments. <i>Limnology and Oceanography</i> , 2012 , 57, 387-400	4.8	43
78	Understanding nutrient biogeochemistry in agricultural catchments: the challenge of appropriate monitoring frequencies. <i>Environmental Sciences: Processes and Impacts</i> , 2014 , 16, 1676-91	4.3	39
77	Engaging with the water sector for public health benefits: waterborne pathogens and diseases in developed countries. <i>Bulletin of the World Health Organization</i> , 2010 , 88, 873-5	8.2	39
76	The controversial role of tile drainage in phosphorus export from agricultural land. <i>Water Science and Technology</i> , 1999 , 39, 55	2.2	38
75	Re-shaping models of <i>E. coli</i> population dynamics in livestock faeces: increased bacterial risk to humans?. <i>Environment International</i> , 2010 , 36, 1-7	12.9	36
74	Scale appropriate modelling of diffuse microbial pollution from agriculture. <i>Progress in Physical Geography</i> , 2009 , 33, 358-377	3.5	36
73	Eliciting fuzzy distributions from experts for ranking conceptual risk model components. <i>Environmental Modelling and Software</i> , 2012 , 36, 19-34	5.2	35

72	The interplay between transport and reaction rates as controls on nitrate attenuation in permeable, streambed sediments. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2015 , 120, 1093-1109	3.7	35
71	A multi-scale framework for strategic management of diffuse pollution. <i>Environmental Modelling and Software</i> , 2009 , 24, 74-85	5.2	34
70	Anisotropy and depth-related heterogeneity of hydraulic conductivity in a bog peat. II: modelling the effects on groundwater flow. <i>Hydrological Processes</i> , 2003 , 17, 103-113	3.3	34
69	Establishing relative release kinetics of faecal indicator organisms from different faecal matrices. <i>Letters in Applied Microbiology</i> , 2009 , 49, 124-30	2.9	33
68	Management of livestock and their manure to reduce the risk of microbial transfers to water – the case for an interdisciplinary approach. <i>Trends in Food Science and Technology</i> , 2008 , 19, 240-247	15.3	33
67	The controversial role of tile drainage in phosphorus export from agricultural land. <i>Water Science and Technology</i> , 1999 , 39, 55-61	2.2	32
66	The effect of drainage on nutrient release from fen peat and its implications for water quality – a laboratory simulation. <i>Water, Air, and Soil Pollution</i> , 1990 , 49, 159-173	2.6	32
65	Using genetic algorithms to calibrate a water quality model. <i>Science of the Total Environment</i> , 2007 , 374, 260-72	10.2	30
64	Scaling issues relating to phosphorus transfer from land to water in agricultural catchments. <i>Journal of Hydrology</i> , 2005 , 304, 330-342	6	30
63	Integrating contributing areas and indexing phosphorus loss from agricultural watersheds. <i>Journal of Environmental Quality</i> , 2008 , 37, 1488-96	3.4	29
62	Noninvasive quantitative measurement of colloid transport in mesoscale porous media using time lapse fluorescence imaging. <i>Environmental Science & Technology</i> , 2006 , 40, 5930-6	10.3	29
61	Disappearing Peat-Regenerating Peat? The Impact of Climate Change on British Peatlands. <i>Geographical Journal</i> , 1993 , 159, 203	2.2	29
60	Unravelling organic matter and nutrient biogeochemistry in groundwater-fed rivers under baseflow conditions: Uncertainty in in situ high-frequency analysis. <i>Science of the Total Environment</i> , 2016 , 572, 1520-1533	10.2	28
59	"Wrong, but useful": negotiating uncertainty in infectious disease modelling. <i>PLoS ONE</i> , 2013 , 8, e76277	3.7	28
58	Mitigation and Current Management Attempts to Limit Pathogen Survival and Movement Within Farmed Grassland. <i>Advances in Agronomy</i> , 2007 , 95-152	7.7	28
57	Towards a nutrient export risk matrix approach to managing agricultural pollution at source. <i>Hydrology and Earth System Sciences</i> , 2004 , 8, 834-845	5.5	28
56	Phosphorus mobilisation and transport within a long-restored floodplain wetland. <i>Ecological Engineering</i> , 2012 , 44, 348-359	3.9	27
55	A cross-disciplinary toolkit to assess the risk of faecal indicator loss from grassland farm systems to surface waters. <i>Agriculture, Ecosystems and Environment</i> , 2009 , 129, 401-412	5.7	27

54	Field drains as a route of rapid nutrient export from agricultural land receiving biosolids. <i>Science of the Total Environment</i> , 2006 , 365, 33-46	10.2	27
53	Managing the impacts of nutrient enrichment on river systems: dealing with complex uncertainties in risk analyses. <i>Freshwater Biology</i> , 2012 , 57, 108-123	3.1	26
52	Groundwater-Dependent Wetlands in the UK and Ireland: Controls, Functioning and Assessing the Likelihood of Damage from Human Activities. <i>Water Resources Management</i> , 2007 , 21, 2015-2025	3.7	26
51	Chemical fractionation of lake sediments to determine the effects of land-use change on nutrient loading. <i>Journal of Hydrology</i> , 1994 , 159, 395-421	6	25
50	Opportunities and limitations of molecular methods for quantifying microbial compliance parameters in EU bathing waters. <i>Environment International</i> , 2014 , 64, 124-8	12.9	23
49	Development and testing of a risk indexing framework to determine field-scale critical source areas of faecal bacteria on grassland. <i>Environmental Modelling and Software</i> , 2010 , 25, 503-512	5.2	23
48	Uncertainties in the governance of animal disease: an interdisciplinary framework for analysis. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2011 , 366, 2023-34	5.8	22
47	Unruly pathogens: eliciting values for environmental risk in the context of heterogeneous expert knowledge. <i>Environmental Science and Policy</i> , 2009 , 12, 281-296	6.2	22
46	Catchments, sub-catchments and private spaces: Scale and process in managing microbial pollution from source to sea. <i>Environmental Science and Policy</i> , 2011 , 14, 315-326	6.2	22
45	Control of river stage on the reactive chemistry of the hyporheic zone. <i>Hydrological Processes</i> , 2014 , 28, 4766-4779	3.3	21
44	ON THE IMPORTANCE OF CONSIDERING CHANNEL MICROFORMS IN GROUNDWATER MODELS OF HYPORHEIC EXCHANGE. <i>River Research and Applications</i> , 2013 , 29, 528-535	2.3	21
43	Can Policy Be Risk-Based? The Cultural Theory of Risk and the Case of Livestock Disease Containment. <i>Sociologia Ruralis</i> , 2015 , 55, 379-399	2.8	20
42	A Monte Carlo approach to the inverse problem of diffuse pollution risk in agricultural catchments. <i>Science of the Total Environment</i> , 2012 , 433, 434-49	10.2	20
41	Evaluating measures to control the impact of agricultural phosphorus on water quality. <i>Water Science and Technology</i> , 1999 , 39, 149	2.2	20
40	Interpreting spatial patterns in redox and coupled water-nitrogen fluxes in the streambed of a gaining river reach. <i>Biogeochemistry</i> , 2014 , 117, 491-509	3.8	19
39	Fine-scale in situ measurement of riverbed nitrate production and consumption in an armored permeable riverbed. <i>Environmental Science & Technology</i> , 2014 , 48, 4425-34	10.3	19
38	Design of a decision support tool for visualising E. coli risk on agricultural land using a stakeholder-driven approach. <i>Land Use Policy</i> , 2017 , 66, 227-234	5.6	18
37	Influence of emergent vegetation on nitrate cycling in sediments of a groundwater-fed river. <i>Biogeochemistry</i> , 2014 , 118, 121-134	3.8	17

36	Development of an iron oxide-impregnated paper strip technique for the determination of bioavailable phosphorus in runoff. <i>Water Research</i> , 1998 , 32, 1429-1436	12.5	17
35	Agricultural phosphorus and water quality: sources, transport and management. <i>Agricultural and Food Science</i> , 1998 , 7, 297-314	2	17
34	Advancing understanding of runoff and sediment transfers in agricultural catchments through simultaneous observations across scales. <i>Earth Surface Processes and Landforms</i> , 2011 , 36, 1749-1760	3.7	16
33	Soil nitrate sources and nitrate leaching losses, Slapton, South Devon. <i>Soil Use and Management</i> , 1991 , 7, 200-206	3.1	16
32	Determining E. coli burden on pasture in a headwater catchment: combined field and modelling approach. <i>Environment International</i> , 2012 , 43, 6-12	12.9	14
31	In situ measurement of redox sensitive solutes at high spatial resolution in a riverbed using Diffusive Equilibrium in Thin Films (DET). <i>Ecological Engineering</i> , 2012 , 49, 18-26	3.9	14
30	Hydrological management of a cutover peatland. <i>Hydrological Processes</i> , 1994 , 8, 245-262	3.3	12
29	Policy, practice and decision making for zoonotic disease management: water and Cryptosporidium. <i>Environment International</i> , 2012 , 40, 70-78	12.9	11
28	Estimating phosphorus delivery with its mitigation measures from soil to stream using fuzzy rules. <i>Soil Use and Management</i> , 2013 , 29, 187-198	3.1	11
27	Measurement of colloid mobilization and redeposition during drainage in quartz sand. <i>Environmental Science & Technology</i> , 2009 , 43, 5769-75	10.3	11
26	Evaluating the risk of non-point source pollution from biosolids: integrated modelling of nutrient losses at field and catchment scales. <i>Hydrology and Earth System Sciences</i> , 2007 , 11, 601-613	5.5	11
25	High-resolution measurement of pore saturation and colloid removal efficiency in quartz sand using fluorescence imaging. <i>Environmental Science & Technology</i> , 2007 , 41, 8288-94	10.3	11
24	An investigation into the inputs controlling predictions from a diffuse phosphorus loss model for the UK; the Phosphorus Indicators Tool (PIT). <i>Science of the Total Environment</i> , 2005 , 344, 211-23	10.2	11
23	Molecular tools for bathing water assessment in Europe: Balancing social science research with a rapidly developing environmental science evidence-base. <i>Ambio</i> , 2016 , 45, 52-62	6.5	10
22	Prospective modelling of 3D hyporheic exchange based on high-resolution topography and stream elevation. <i>Hydrological Processes</i> , 2014 , 28, 2579-2594	3.3	10
21	Employing the citizens' jury technique to elicit reasoned public judgments about environmental risk: insights from an inquiry into the governance of microbial water pollution. <i>Journal of Environmental Planning and Management</i> , 2014 , 57, 233-253	2.8	10
20	A field methodology for quantifying phosphorus transfer and delivery to streams in first order agricultural catchments. <i>Journal of Hydrology</i> , 2008 , 350, 329-338	6	10
19	Solute transfer from drained fen peat. <i>Water, Air, and Soil Pollution</i> , 1991 , 55, 379	2.6	10

18	A culture change in catchment microbiology?. <i>Hydrological Processes</i> , 2010 , 24, 2973-2976	3.3	9
17	The Impact of Agriculture On Dissolved Nitrogen and Phosphorus Cycling in Temperate Ecosystems. <i>Chemistry and Ecology</i> , 1993 , 8, 217-231	2.3	9
16	Paleolimnology of Slapton Ley, Devon, UK. <i>Hydrobiologia</i> , 1991 , 214, 115-124	2.4	8
15	Sequential inorganic chemical analysis of a core from Slapton Ley, Devon, UK. <i>Hydrobiologia</i> , 1991 , 214, 125-135	2.4	8
14	Fingerprinting hydrological and biogeochemical drivers of freshwater quality. <i>Hydrological Processes</i> , 2021 , 35, e13973	3.3	7
13	Fully integrated approach: an alternative solution of coupling a GIS and diffuse pollution models. <i>Frontiers of Environmental Science and Engineering</i> , 2014 , 8, 616-623	5.8	6
12	Diffusive equilibrium in thin films provides evidence of suppression of hyporheic exchange and large-scale nitrate transformation in a groundwater-fed river. <i>Hydrological Processes</i> , 2015 , 29, 1385-1396	3.3	6
11	Estimating phosphorus delivery from land to water in headwater catchments using a fuzzy decision tree approach. <i>Soil Use and Management</i> , 2013 , 29, 175-186	3.1	6
10	Off-Site Impacts of Erosion: Eutrophication as an Example 2006 , 775-789		6
9	Nutrient mobility within river basins: a European perspective. <i>Journal of Hydrology</i> , 2005 , 304, 1-2	6	6
8	Paleolimnology of Slapton Ley, Devon, UK 1991 , 115-124		6
7	Sequential inorganic chemical analysis of a core from Slapton Ley, Devon, UK 1991 , 125-135		6
6	The Phosphorus Indicators Tool: a simple model of diffuse P loss from agricultural land to water. <i>Soil Use and Management</i> , 2003 , 19, 1-11	3.1	5
5	Transport of nitrogen in soil water following the application of animal manures to sloping grassland. <i>Hydrological Sciences Journal</i> , 2000 , 45, 61-73	3.5	3
4	Evaluation of Qualitative and Quantitative Classifications for Fen Peat in the Somerset Levels, England. <i>Journal of Biogeography</i> , 1987 , 14, 129	4.1	3
3	CONTRIBUTION OF NITROGEN SPECIES AND PHOSPHORUS FRACTIONS TO STREAM WATER QUALITY IN AGRICULTURAL CATCHMENTS		2
2	Spatial and temporal dynamics of nitrogen exchange in an upwelling reach of a groundwater-fed river and potential response to perturbations changing rainfall patterns under UK climate change scenarios. <i>Hydrological Processes</i> , 2021 , 35, e14135	3.3	1
1	Managing Agricultural Catchments to Sustain Production and Water Quality107-134		

