Gilles Billen

List of Publications by Year in descending order

128 papers	11,096 citations	25034 57 h-index	31849 101 g-index
131 all docs	131 docs citations	131 times ranked	9742 citing authors

#	Article	IF	Citations
1	Continental Atlantic Rivers: The Meuse, Loire and Adour-Garonne Basins. , 2022, , 225-228.		1
2	Nutrient transport and transformation in macrotidal estuaries of the French Atlantic coast: a modeling approach using the Carbon-Generic Estuarine Model. Biogeosciences, 2022, 19, 931-955.	3.3	10
3	The relative productivity of organic agriculture must be considered in the full food-system context. A comment on Connor (2022). Agricultural Systems, 2022, 199, 103413.	6.1	1
4	Hydromorphology of coastal zone and structure of watershed agro-food system are main determinants of coastal eutrophication. Environmental Research Letters, 2021, 16, 023005.	5.2	20
5	Reshaping the European agro-food system and closing its nitrogen cycle: The potential of combining dietary change, agroecology, and circularity. One Earth, 2021, 4, 839-850.	6.8	85
6	Nitrogen dynamics in cropping systems under Mediterranean climate: a systemic analysis. Environmental Research Letters, 2021, 16, 073002.	5.2	25
7	Nitrogen biogeochemistry of water-agro-food systems: the example of the Seine land-to-sea continuum. Biogeochemistry, 2021, 154, 307-321.	3.5	6
8	Crop production and nitrogen use in European cropland and grassland 1961â€“2019. Scientific Data, 2021, 8, 288.	5.3	26
9	Agricultural performance over the border line. Nature Food, 2020, 1, 667-668.	14.0	1
10	Modeling indirect N2O emissions along the N cascade from cropland soils to rivers. Biogeochemistry, 2020, 148, 207-221.	3.5	14
11	The Seine Watershed Water-Agro-Food System: Long-Term Trajectories of C, N and P Metabolism. Handbook of Environmental Chemistry, 2020, , 91-115.	0.4	8
12	The phosphorus legacy offers opportunities for agro-ecological transition (France 1850â€“2075). Environmental Research Letters, 2020, 15, 064022.	5.2	20
13	Global Nitrogen and Phosphorus Pollution. , 2020, , 421-431.		4
14	Long Term Trends in Agronomical and Environmental Performances of World Cropping Systems: The Relationship Between Yield and Nitrogen Input to Cropland at the Country and Regional Scales. , 2020, , 29-45.		2
15	Carbon Dioxide Emission and Soil Sequestration for the French Agro-Food System: Present and Prospective Scenarios. Frontiers in Sustainable Food Systems, 2019, 3, .	3.9	7
16	Long-term changes in greenhouse gas emissions from French agriculture and livestock (1852â€“2014): From traditional agriculture to conventional intensive systems. Science of the Total Environment, 2019, 660, 1486-1501.	8.0	72
17	Managing the Agri-Food System of Watersheds to Combat Coastal Eutrophication: A Land-to-Sea Modelling Approach to the French Coastal English Channel. Geosciences (Switzerland), 2019, 9, 441.	2.2	19
18	Drivers of long-term carbon dynamics in cropland: A bio-political history (France, 1852â€“2014). Environmental Science and Policy, 2019, 93, 53-65.	4.9	23

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19	Modeling the biogeochemical functioning of the Seine estuary and its coastal zone: Export, retention, and transformations. Limnology and Oceanography, 2019, 64, 895-912.	3.1	15
20	Opening to Distant Markets or Local Reconnection of Agro-Food Systems? Environmental Consequences at Regional and Global Scales. , 2019, , 391-413.		5
21	The biogeochemical imprint of human metabolism in Paris Megacity: A regionalized analysis of a water-agro-food system. Journal of Hydrology, 2019, 573, 1028-1045.	5.4	37
22	How can water quality be improved when the urban waste water directive has been fulfilled? A case study of the Lot river (France). Environmental Science and Pollution Research, 2018, 25, 11924-11939.	5.3	18
23	Organic carbon transfers in the subtropical Red River system (Viet Nam): insights on CO2 sources and sinks. Biogeochemistry, 2018, 138, 277-295.	3.5	6
24	Long trend reduction of phosphorus wastewater loading in the Seine: determination of phosphorus speciation and sorption for modeling algal growth. Environmental Science and Pollution Research, 2018, 25, 23515-23528.	5.3	21
25	Phosphorus management in cropping systems of the Paris Basin: From farm to regional scale. Journal of Environmental Management, 2018, 205, 18-28.	7.8	26
26	Nitrate retention at the riverâ€“watershed interface: a new conceptual modeling approach. Biogeochemistry, 2018, 139, 31-51.	3.5	28
27	Two contrasted future scenarios for the French agro-food system. Science of the Total Environment, 2018, 637-638, 695-705.	8.0	59
28	A N, P, C, and water flows metabolism study in a peri-urban territory in France: The case-study of the Saclay plateau. Resources, Conservation and Recycling, 2018, 137, 200-213.	10.8	22
29	Nutrient inputs and hydrology together determine biogeochemical status of the Loire River (France): Current situation and possible future scenarios. Science of the Total Environment, 2018, 637-638, 609-624.	8.0	35
30	Total organic carbon fluxes of the Red River system (Vietnam). Earth Surface Processes and Landforms, 2017, 42, 1329-1341.	2.5	23
31	Declining spatial efficiency of global cropland nitrogen allocation. Global Biogeochemical Cycles, 2017, 31, 245-257.	4.9	55
32	How the structure of agro-food systems shapes nitrogen, phosphorus, and carbon fluxes: The generalized representation of agro-food system applied at the regional scale in France. Science of the Total Environment, 2017, 586, 42-55.	8.0	97
33	Potential for recoupling production and consumption in peri-urban territories: The case-study of the Saclay plateau near Paris, France. Food Policy, 2017, 69, 35-45.	6.0	33
34	Direct nitrous oxide emissions in Mediterranean climate cropping systems: Emission factors based on a meta-analysis of available measurement data. Agriculture, Ecosystems and Environment, 2017, 238, 25-35.	5.3	178
35	Riverine carbon flux from the Red River system (Viet Nam and China): a modelling approach. APN Science Bulletin, 2017, 7, .	0.7	2
36	Water management practices exacerbate nitrogen retention in Mediterranean catchments. Science of the Total Environment, 2016, 573, 420-432.	8.0	43

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37	Reconnecting crop and cattle farming to reduce nitrogen losses to river water of an intensive agricultural catchment (Seine basin, France): past, present and future. Environmental Science and Policy, 2016, 63, 76-90.	4.9	72
38	A participative network of organic and conventional crop farms in the Seine Basin (France) for evaluating nitrate leaching and yield performance. Agricultural Systems, 2016, 148, 105-113.	6.1	20
39	Nitrogen use in the global food system: past trends and future trajectories of agronomic performance, pollution, trade, and dietary demand. Environmental Research Letters, 2016, 11, 095007.	5.2	227
40	Long-term water quality in the lower Seine: Lessons learned over 4 decades of monitoring. Environmental Science and Policy, 2016, 58, 141-154.	4.9	92
41	La place du transport de denrÃ©es agricoles dans le cycle biogÃ©ochimique de lâ€™azote en FranceÂ: un aspect de la spÃ©cialisation des territoires. Cahiers Agricultures, 2016, 25, 15004.	0.9	25
42	Phosphorus budget in the waterâ€agroâ€food system at nested scales in two contrasted regions of the world (ASEANâ€8 and EUâ€27). Global Biogeochemical Cycles, 2015, 29, 1348-1368.	4.9	54
43	Relationships for estimating N₂ fixation in legumes: incidence for N balance of legumeâ€based cropping systems in Europe. Ecosphere, 2015, 6, 1-24.	2.2	155
44	The response of river nitrification to changes in wastewater treatment (The case of the lower Seine) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	0.6	26
45	Impacts of European livestock production: nitrogen, sulphur, phosphorus and greenhouse gas emissions, land-use, water eutrophication and biodiversity. Environmental Research Letters, 2015, 10, 115004.	5.2	332
46	A simplified algorithm for calculating benthic nutrient fluxes in river systems. Annales De Limnologie, 2015, 51, 37-47.	0.6	15
47	Field and modelling studies of Escherichia coli loads in tropical streams of montane agro-ecosystems. Journal of Hydro-Environment Research, 2015, 9, 496-507.	2.2	36
48	Conversion of a Conventional to an Organic Mixed Dairy Farming System: Consequences in Terms of N Fluxes. Agroecology and Sustainable Food Systems, 2015, 39, 978-1002.	1.9	4
49	A vast range of opportunities for feeding the world in 2050: trade-off between diet, N contamination and international trade. Environmental Research Letters, 2015, 10, 025001.	5.2	79
50	The role of water nitrogen retention in integrated nutrient management: assessment in a large basin using different modelling approaches. Environmental Research Letters, 2015, 10, 065008.	5.2	58
51	Nitrous oxide emissions and nitrate leaching in an organic and a conventional cropping system (Seine) Tj ETQq1 1 0.784314 rgBT /Ov	5.3	41
52	Temperature dependence of nitrous oxide production of a luvisolic soil in batch experiments. Process Biochemistry, 2015, 50, 79-85.	3.7	40
53	Long-term biogeochemical functioning of the Red River (Vietnam): past and present situations. Regional Environmental Change, 2015, 15, 329-339.	2.9	40
54	Nitrate leaching from organic and conventional arable crop farms in the Seine Basin (France). Nutrient Cycling in Agroecosystems, 2014, 100, 285-299.	2.2	49

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55	50 year trends in nitrogen use efficiency of world cropping systems: the relationship between yield and nitrogen input to cropland. Environmental Research Letters, 2014, 9, 105011.	5.2	764
56	Leakage of nitrous oxide emissions within the Spanish agro-food system in 1961â€“2009. Mitigation and Adaptation Strategies for Global Change, 2014, 21, 975.	2.1	6
57	Food and feed trade as a driver in the global nitrogen cycle: 50-year trends. Biogeochemistry, 2014, 118, 225-241.	3.5	240
58	A biogeochemical view of the global agro-food system: Nitrogen flows associated with protein production, consumption and trade. Global Food Security, 2014, 3, 209-219.	8.1	97
59	How changes in diet and trade patterns have shaped the N cycle at the national scale: Spain (1961â€“2009). Regional Environmental Change, 2014, 14, 785-797.	2.9	78
60	The contribution of food waste to global and European nitrogen pollution. Environmental Science and Policy, 2013, 33, 186-195.	4.9	120
61	Large-scale patterns of river inputs in southwestern Europe: seasonal and interannual variations and potential eutrophication effects at the coastal zone. Biogeochemistry, 2013, 113, 481-505.	3.5	126
62	The nitrogen cascade from agricultural soils to the sea: modelling nitrogen transfers at regional watershed and global scales. Philosophical Transactions of the Royal Society B: Biological Sciences, 2013, 368, 20130123.	4.0	184
63	Nitrogen fluxes from the landscape are controlled by net anthropogenic nitrogen inputs and by climate. Frontiers in Ecology and the Environment, 2012, 10, 37-43.	4.0	281
64	Grain, meat and vegetables to feed Paris: where did and do they come from? Localising Paris food supply areas from the eighteenth to the twenty-first century. Regional Environmental Change, 2012, 12, 325-335.	2.9	67
65	History of the urban environmental imprint: introduction to a multidisciplinary approach to the long-term relationships between Western cities and their hinterland. Regional Environmental Change, 2012, 12, 249-253.	2.9	50
66	Restoration of ponds in rural landscapes: Modelling the effect on nitrate contamination of surface water (the Seine River Basin, France). Science of the Total Environment, 2012, 430, 280-290.	8.0	44
67	N, P, Si budgets for the Red River Delta (northern Vietnam): how the delta affects river nutrient delivery to the sea. Biogeochemistry, 2012, 107, 241-259.	3.5	42
68	Coupled biogeochemical cycles: eutrophication and hypoxia in temperate estuaries and coastal marine ecosystems. Frontiers in Ecology and the Environment, 2011, 9, 18-26.	4.0	656
69	Nitrogen as a threat to European water quality. , 2011, , 379-404.		80
70	Nitrogen flows and fate in urban landscapes. , 2011, , 249-270.		13
71	Nitrogen processes in aquatic ecosystems. , 2011, , 126-146.		46
72	Nitrogen in current European policies. , 2011, , 62-81.		27

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73	Cost assessment and ecological effectiveness of nutrient reduction options for mitigating Phaeocystis colony blooms in the Southern North Sea: An integrated modeling approach. Science of the Total Environment, 2011, 409, 2179-2191.	8.0	54
74	Nitrogen cycling in a hypothetical scenario of generalised organic agriculture in the Seine, Somme and Scheldt watersheds. Regional Environmental Change, 2011, 11, 359-370.	2.9	39
75	Assessing the effect of nutrient mitigation measures in the watersheds of the Southern Bight of the North Sea. Science of the Total Environment, 2010, 408, 1245-1255.	8.0	37
76	Anthropogenic nitrogen autotrophy and heterotrophy of the world's watersheds: Past, present, and future trends. Global Biogeochemical Cycles, 2010, 24, .	4.9	51
77	Hydrological regime and water budget of the Red River Delta (Northern Vietnam). Journal of Asian Earth Sciences, 2010, 37, 219-228.	2.3	79
78	N:P:Si nutrient export ratios and ecological consequences in coastal seas evaluated by the ICEP approach. Global Biogeochemical Cycles, 2010, 24, .	4.9	138
79	The food-print of Paris: long-term reconstruction of the nitrogen flows imported into the city from its rural hinterland. Regional Environmental Change, 2009, 9, 13-24.	2.9	94
80	Modelling the N cascade in regional watersheds: The case study of the Seine, Somme and Scheldt rivers. Agriculture, Ecosystems and Environment, 2009, 133, 234-246.	5.3	68
81	Nitrous oxide (N2O) in the Seine river and basin: Observations and budgets. Agriculture, Ecosystems and Environment, 2009, 133, 223-233.	5.3	83
82	Nutrient transfer in three contrasting NW European watersheds: The Seine, Somme, and Scheldt Rivers. A comparative application of the Seneque/Riverstrahler model. Water Research, 2009, 43, 1740-1754.	11.3	77
83	Nitrous oxide emissions from denitrifying activated sludge of urban wastewater treatment plants, under anoxia and low oxygenation. Bioresource Technology, 2008, 99, 2200-2209.	9.6	168
84	Organic matter dynamics and budgets in the turbidity maximum zone of the Seine Estuary (France). Estuarine, Coastal and Shelf Science, 2008, 77, 150-162.	2.1	25
85	Modelling nutrient fluxes from sub-arctic basins: Comparison of pristine vs. dammed rivers. Journal of Marine Systems, 2008, 73, 236-249.	2.1	45
86	Modelling nutrient exchange at the sedimentâ€“water interface of river systems. Journal of Hydrology, 2007, 341, 55-78.	5.4	43
87	River basin nutrient delivery to the coastal sea: Assessing its potential to sustain new production of non-siliceous algae. Marine Chemistry, 2007, 106, 148-160.	2.3	203
88	The Seine system: Introduction to a multidisciplinary approach of the functioning of a regional river system. Science of the Total Environment, 2007, 375, 1-12.	8.0	64
89	Production vs. Respiration in river systems: An indicator of an â€œecological statusâ€• Science of the Total Environment, 2007, 375, 110-124.	8.0	43
90	Fecal bacteria in the rivers of the Seine drainage network (France): Sources, fate and modelling. Science of the Total Environment, 2007, 375, 152-167.	8.0	142

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91	SENEQUE: A multi-scaling GIS interface to the Riverstrahler model of the biogeochemical functioning of river systems. Science of the Total Environment, 2007, 375, 257-273.	8.0	67
92	New tools for modelling water quality of hydrosystems: An application in the Seine River basin in the frame of the Water Framework Directive. Science of the Total Environment, 2007, 375, 274-291.	8.0	48
93	Testing an integrated riverâ€“ocean mathematical tool for linking marine eutrophication to land use: The Phaeocystis-dominated Belgian coastal zone (Southern North Sea) over the past 50Âyears. Journal of Marine Systems, 2007, 64, 216-228.	2.1	107
94	Modelling nitrogen transformations in the lower Seine river and estuary (France): impact of wastewater release on oxygenation and N2O emission. Hydrobiologia, 2007, 588, 291-302.	2.0	46
95	Diffuse and Point Sources of Silica in the Seine River Watershed. Environmental Science & Technology, 2006, 40, 6630-6635.	10.0	84
96	Nitrous oxide emissions from secondary activated sludge in nitrifying conditions of urban wastewater treatment plants: Effect of oxygenation level. Water Research, 2006, 40, 2972-2980.	11.3	290
97	Nitrogen Behaviour and Nitrous Oxide Emission in the Tidal Seine River Estuary (France) as Influenced by Human Activities in the Upstream Watershed. Biogeochemistry, 2006, 77, 305-326.	3.5	98
98	Assessing Nitrification and Denitrification in the Seine River and Estuary Using Chemical and Isotopic Techniques. Ecosystems, 2006, 9, 564-577.	3.4	145
99	Nutrient fluxes and water quality in the drainage network of the Scheldt basin over the last 50Âyears. Hydrobiologia, 2005, 540, 47-67.	2.0	99
100	Nutrient dynamics and control of eutrophication in the Marne River system: modelling the role of exchangeable phosphorus. Journal of Hydrology, 2005, 304, 397-412.	5.4	107
101	Nutrient (N, P) budgets for the Red River basin (Vietnam and China). Global Biogeochemical Cycles, 2005, 19, n/a-n/a.	4.9	62
102	Title is missing!. Biogeochemistry, 2003, 63, 35-51.	3.5	189
103	Mortality rates of autochthonous and fecal bacteria in natural aquatic ecosystems. Water Research, 2003, 37, 4151-4158.	11.3	102
104	Title is missing!. Biogeochemistry, 2002, 57, 171-197.	3.5	396
105	Lower Seine River and Estuary (France) Carbon and Oxygen Budgets during Low Flow. Estuaries and Coasts, 2001, 24, 964.	1.7	87
106	Modeling the Response of Water Quality in the Seine River Estuary to Human Activity in Its Watershed over the Last 50 Years. Estuaries and Coasts, 2001, 24, 977.	1.7	162
107	Ecological functioning of the Marne reservoir (upper Seine basin, France). River Research and Applications, 2000, 16, 51-71.	0.8	45
108	Distribution of Nitrifying Activity in the Seine River (France) from Paris to the Estuary. Estuaries and Coasts, 2000, 23, 669.	1.7	76

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109	Wastewater as a source of nitrifying bacteria in river systems: the case of the River Seine downstream from Paris. Water Research, 2000, 34, 3213-3221.	11.3	56
110	Title is missing!. Hydrobiologia, 1999, 410, 151-166.	2.0	72
111	Supply of organic matter and bacteria to aquatic ecosystems through waste water effluents. Water Research, 1999, 33, 3521-3531.	11.3	82
112	Seasonal succession of diatoms and Chlorophyceae in the drainage network of the Seine River: Observation and modeling. Limnology and Oceanography, 1995, 40, 750-765.	3.1	285
113	Modelling phytoplankton development in whole drainage networks: the RIVERSTRAHLER Model applied to the Seine river system. Hydrobiologia, 1994, 289, 119-137.	2.0	206
114	Ecological interactions in a shallow sand-pit lake (Lake CrÃ©teil, Parisian Basin, France): a modelling approach. Hydrobiologia, 1994, 275-276, 97-114.	2.0	15
115	Modelling phytoplankton development in whole drainage networks: the RIVERSTRAHLER Model applied to the Seine river system. , 1994, , 119-137.		24
116	Modelling carbon cycling through phytoplankton and microbes in the Scotiaâ€"Weddell Sea area during sea ice retreat. Marine Chemistry, 1991, 35, 305-324.	2.3	69
117	Role of bacteria in the North Sea ecosystem. Journal of Sea Research, 1990, 26, 265-293.	1.0	59
118	Rate of Bacterial Mortality in Aquatic Environments. Applied and Environmental Microbiology, 1985, 49, 1448-1454.	3.1	126
119	Activity of heterotrophic bacteria and its coupling to primary production during the spring phytoplankton bloom in the southern bight of the North Sea. Limnology and Oceanography, 1984, 29, 721-730.	3.1	132
120	Natural isotopic composition of nitrogen as a tracer of origin for suspended organic matter in the Scheldt estuary. Geochimica Et Cosmochimica Acta, 1984, 48, 549-555.	3.9	215
121	A method for determining exoproteolytic activity in natural waters. Limnology and Oceanography, 1983, 28, 190-193.	3.1	151
122	Concentration and microbiological utilization of small organic molecules in the Scheldt estuary, the Belgian coastal zone of the North Sea and the English Channel. Estuarine and Coastal Marine Science, 1980, 11, 279-294.	0.9	98
123	A budget of nitrogen recycling in North Sea sediments off the Belgian coast. Estuarine and Coastal Marine Science, 1978, 7, 127-146.	0.9	195
124	Nitrification in the Scheldt estuary (Belgium and the Netherlands). Estuarine and Coastal Marine Science, 1975, 3, 79-89.	0.9	95
125	Vertical distribution of nitrate concentration in interstitial water of marine sediments with nitrification and denitrification. Limnology and Oceanography, 1975, 20, 953-961.	3.1	133
126	Nitrogen flows in farming systems across Europe. , 0, , 211-228.		20

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127	Nitrogen flows from European regional watersheds to coastal marine waters. , 0, , 271-297.		54
128	Nitrogen flows and fate in rural landscapes. , 0, , 229-248.		10