H E Markus Meier

List of Publications by Year
in descending order

118 papers	6,479 citations	76196 40 h-index	76769 74 g-index
132 all docs	132 docs citations	132 times ranked	4623 citing authors

#	Article	IF	Citations
1	European climate in the late twenty-first century: regional simulations with two driving global models and two forcing scenarios. Climate Dynamics, 2004, 22, 13-31.	1.7	474
2	Hypoxia-Related Processes in the Baltic Sea. Environmental Science & Technology, 2009, 43, 3412-3420.	4.6	470
3	Reconstructing the Development of Baltic Sea Eutrophication 1850â€“2006. Ambio, 2012, 41, 534-548.	2.8	313
4	Baltic Sea climate in the late twenty-first century: a dynamical downscaling approach using two global models and two emission scenarios. Climate Dynamics, 2006, 27, 39-68.	1.7	219
5	Modeling the pathways and ages of inflowing salt- and freshwater in the Baltic Sea. Estuarine, Coastal and Shelf Science, 2007, 74, 610-627.	0.9	177
6	On the dynamics of oxygen, phosphorus and cyanobacteria in the Baltic Sea; A model study. Journal of Marine Systems, 2009, 75, 163-184.	0.9	175
7	Modeling the combined impact of changing climate and changing nutrient loads on the Baltic Sea environment in an ensemble of transient simulations for 1961â€“2099. Climate Dynamics, 2012, 39, 2421-2441.	1.7	175
8	Projected future climate change and Baltic Sea ecosystem management. Ambio, 2015, 44, 345-356.	2.8	163
9	A multiprocessor coupled ice-ocean model for the Baltic Sea: Application to salt inflow. Journal of Geophysical Research, 2003, 108, .	3.3	158
10	Hypoxia in future climates: A model ensemble study for the Baltic Sea. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	150
11	Scenario simulations of future salinity and ecological consequences in the Baltic Sea and adjacent North Sea areasâ€“implications for environmental monitoring. Ecological Indicators, 2015, 50, 196-205.	2.6	137
12	Modeling decadal variability of the Baltic Sea: 2. Role of freshwater inflow and large-scale atmospheric circulation for salinity. Journal of Geophysical Research, 2003, 108, .	3.3	130
13	Evaluation of biogeochemical cycles in an ensemble of three state-of-the-art numerical models of the Baltic Sea. Journal of Marine Systems, 2011, 88, 267-284.	0.9	121
14	Impact of Climate Change on Ecological Quality Indicators and Biogeochemical Fluxes in the Baltic Sea: A Multi-Model Ensemble Study. Ambio, 2012, 41, 558-573.	2.8	120
15	Estimating uncertainties of projected Baltic Sea salinity in the late 21st century. Geophysical Research Letters, 2006, 33, .	1.5	119
16	Comparing reconstructed past variations and future projections of the Baltic Sea ecosystemâ€”first results from multi-model ensemble simulations. Environmental Research Letters, 2012, 7, 034005.	2.2	116
17	Observational and numerical modeling methods for quantifying coastal ocean turbulence and mixing. Progress in Oceanography, 2008, 76, 399-442.	1.5	113
18	Combined effects of global climate change and regional ecosystem drivers on an exploited marine food web. Global Change Biology, 2013, 19, 3327-3342.	4.2	99

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19	Extremes of Temperature, Oxygen and Blooms in the Baltic Sea in a Changing Climate. Ambio, 2012, 41, 574-585.	2.8	90
20	Simulated sea level in past and future climates of the Baltic Sea. Climate Research, 2004, 27, 59-75.	0.4	88
21	The Baltic Haline Conveyor Belt or The Overturning Circulation and Mixing in the Baltic. Ambio, 2004, 33, 261-266.	2.8	83
22	Disentangling the impact of nutrient load and climate changes on Baltic Sea hypoxia and eutrophication since 1850. Climate Dynamics, 2019, 53, 1145-1166.	1.7	80
23	On the parameterization of mixing in three-dimensional Baltic Sea models. Journal of Geophysical Research, 2001, 106, 30997-31016.	3.3	79
24	Climate change in the Baltic Sea region: a summary. Earth System Dynamics, 2022, 13, 457-593.	2.7	75
25	Simulated Distributions of Baltic Sea-ice in Warming Climate and Consequences for the Winter Habitat of the Baltic Ringed Seal. Ambio, 2004, 33, 249-256.	2.8	66
26	Simulated halocline variability in the Baltic Sea and its impact on hypoxia during 1961â€“2007. Journal of Geophysical Research: Oceans, 2013, 118, 6982-7000.	1.0	66
27	Quantifying Arctic contributions to climate predictability in a regional coupled ocean-ice-atmosphere model. Climate Dynamics, 2010, 34, 1157-1176.	1.7	64
28	Transport of fresh and resuspended particulate organic material in the Baltic Sea â€” a model study. Journal of Marine Systems, 2011, 87, 1-12.	0.9	63
29	Modeling decadal variability of the Baltic Sea: 1. Reconstructing atmospheric surface data for the period 1902â€“1998. Journal of Geophysical Research, 2003, 108, .	3.3	53
30	Modeling the age of Baltic Seawater masses: Quantification and steady state sensitivity experiments. Journal of Geophysical Research, 2005, 110, .	3.3	53
31	Uncertainties in Projections of the Baltic Sea Ecosystem Driven by an Ensemble of Global Climate Models. Frontiers in Earth Science, 2019, 6, .	0.8	52
32	Baltic Sea ecosystem response to various nutrient load scenarios in present and future climates. Climate Dynamics, 2019, 52, 3369-3387.	1.7	50
33	The climate in the Baltic Sea region during the last millennium simulated with a regional climate model. Climate of the Past, 2012, 8, 1419-1433.	1.3	48
34	Impact of Climate Change on Fish Population Dynamics in the Baltic Sea: A Dynamical Downscaling Investigation. Ambio, 2012, 41, 626-636.	2.8	48
35	Eutrophication status of the North Sea, Skagerrak, Kattegat and the Baltic Sea in present and future climates: A model study. Journal of Marine Systems, 2014, 132, 174-184.	0.9	45
36	Development and evaluation of a new regional coupled atmosphereâ€“ocean model in the North Sea and Baltic Sea. Tellus, Series A: Dynamic Meteorology and Oceanography, 2022, 67, 24284.	0.8	45

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37	Temperature Variability of the Baltic Sea Since 1850 and Attribution to Atmospheric Forcing Variables. Journal of Geophysical Research: Oceans, 2019, 124, 4168-4187.	1.0	45
38	Impacts of changing climate on the non-indigenous invertebrates in the northern Baltic Sea by end of the twenty-first century. Biological Invasions, 2016, 18, 3015-3032.	1.2	44
39	Recently Accelerated Oxygen Consumption Rates Amplify Deoxygenation in the Baltic Sea. Journal of Geophysical Research: Oceans, 2018, 123, 3227-3240.	1.0	44
40	Assessment of Eutrophication Abatement Scenarios for the Baltic Sea by Multi-Model Ensemble Simulations. Frontiers in Marine Science, 2018, 5, .	1.2	44
41	Projected climate change impact on Baltic Sea cyanobacteria. Climatic Change, 2013, 119, 391-406.	1.7	42
42	Ensemble Modeling of the Baltic Sea Ecosystem to Provide Scenarios for Management. Ambio, 2014, 43, 37-48.	2.8	42
43	Summer hydrographic changes in the Baltic Sea, Kattegat and Skagerrak projected in an ensemble of climate scenarios downscaled with a coupled regional oceanâ€“sea iceâ€“atmosphere model. Climate Dynamics, 2019, 53, 5945-5966.	1.7	42
44	Shared socio-economic pathways extended for the Baltic Sea: exploring long-term environmental problems. Regional Environmental Change, 2019, 19, 1073-1086.	1.4	42
45	Changing Salinity Gradients in the Baltic Sea As a Consequence of Altered Freshwater Budgets. Geophysical Research Letters, 2019, 46, 9739-9747.	1.5	41
46	Effect of climate change on the thermal stratification of the baltic sea: a sensitivity experiment. Climate Dynamics, 2012, 38, 1703-1713.	1.7	40
47	Modeling the impact of reduced sea ice cover in future climate on the Baltic Sea biogeochemistry. Geophysical Research Letters, 2013, 40, 149-154.	1.5	38
48	Impact of accelerated future global mean sea level rise on hypoxia in the Baltic Sea. Climate Dynamics, 2017, 49, 163-172.	1.7	38
49	The influence of increasing water turbidity on the sea surface temperature in the Baltic Sea: A model sensitivity study. Journal of Marine Systems, 2011, 88, 323-331.	0.9	36
50	Reducing eutrophication increases spatial extent of communities supporting commercial fisheries: a model case study. ICES Journal of Marine Science, 2018, 75, 1306-1317.	1.2	36
51	Future projections of record-breaking sea surface temperature and cyanobacteria bloom events in the Baltic Sea. Ambio, 2019, 48, 1362-1376.	2.8	36
52	Atmospheric response to different sea surface temperatures in the Baltic Sea: coupled versus uncoupled regional climate model experiments. Hydrology Research, 2005, 36, 397-409.	1.1	35
53	Oceanographic regional climate projections for the Baltic Sea untilÂ2100. Earth System Dynamics, 2022, 13, 159-199.	2.7	34
54	Salinity dynamics of the Baltic Sea. Earth System Dynamics, 2022, 13, 373-392.	2.7	34

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55	The Potential of Current- and Wind-Driven Transport for Environmental Management of the Baltic Sea. Ambio, 2014, 43, 94-104.	2.8	33
56	A new approach to model oxygen dependent benthic phosphate fluxes in the Baltic Sea. Journal of Marine Systems, 2015, 144, 127-141.	0.9	33
57	Projected Changeâ€"North Sea. Regional Climate Studies, 2016, , 175-217.	1.2	33
58	Freshwater fluxes in the Baltic Sea: A model study. Journal of Geophysical Research, 2010, 115, .	3.3	32
59	Long-Term Mean Circulation of the Baltic Sea as Represented by Various Ocean Circulation Models. Frontiers in Marine Science, 2018, 5, .	1.2	31
60	Assessment of Uncertainties in Scenario Simulations of Biogeochemical Cycles in the Baltic Sea. Frontiers in Marine Science, 2019, 6, .	1.2	31
61	Simulated Sea Surface Temperature and Heat Fluxes in Different Climates of the Baltic Sea. Ambio, 2004, 33, 242-248.	2.8	30
62	Impacts of changing society and climate on nutrient loading to the Baltic Sea. Science of the Total Environment, 2020, 731, 138935.	3.9	29
63	Ridged sea ice characteristics in the Arctic from a coupled multicategory sea ice model. Journal of Geophysical Research, 2012, 117, .	3.3	28
64	Impact of the Atlantic Multidecadal Oscillation on Baltic Sea Variability. Geophysical Research Letters, 2018, 45, 9880-9888.	1.5	28
65	Surface Heat Budget over the North Sea in Climate Change Simulations. Atmosphere, 2019, 10, 272.	1.0	28
66	Natural variability is a large source of uncertainty in future projections of hypoxia in the Baltic Sea. Communications Earth & Environment, 2021, 2, .	2.6	27
67	Modelling nutrient retention in the coastal zone of an eutrophic sea. Biogeosciences, 2016, 13, 5753-5769.	1.3	26
68	The Atlantic Multidecadal Oscillation controls the impact of the North Atlantic Oscillation on North European climate. Environmental Research Letters, 2020, 15, 104025.	2.2	26
69	Echoes from the Past: A Healthy Baltic Sea Requires More Effort. Ambio, 2014, 43, 60-68.	2.8	25
70	Decadal-to-Centennial Variability of Salinity in the Baltic Sea. Journal of Climate, 2016, 29, 7173-7188.	1.2	25
71	Human impacts and their interactions in the Baltic Sea region. Earth System Dynamics, 2022, 13, 1-80.	2.7	25
72	Modeling Nutrient Transports and Exchanges of Nutrients Between Shallow Regions and the Open Baltic Sea in Present and Future Climate. Ambio, 2012, 41, 586-599.	2.8	23

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73	Spatio-temporal dynamics of a fish predator: Density-dependent and hydrographic effects on Baltic Sea cod population. PLoS ONE, 2017, 12, e0172004.	1.1	22
74	Biogeochemical functioning of the Baltic Sea. Earth System Dynamics, 2022, 13, 633-685.	2.7	22
75	Past and Current Climate Change. , 2008, , 35-131.		21
76	Food web and fisheries in the future Baltic Sea. Ambio, 2019, 48, 1337-1349.	2.8	20
77	Understanding past and future sea surface temperature trends in the Baltic Sea. Climate Dynamics, 2022, 58, 3021-3039.	1.7	20
78	Numerical Investigations of Future Ice Conditions in the Baltic Sea. Ambio, 2001, 30, 237-244.	2.8	19
79	Reanalyzing temperature and salinity on decadal time scales using the ensemble optimal interpolation data assimilation method and a 3D ocean circulation model of the Baltic Sea. Journal of Geophysical Research: Oceans, 2013, 118, 5536-5554.	1.0	19
80	Impact of saltwater inflows on phosphorus cycling and eutrophication in the Baltic Sea: a 3D model study. Tellus, Series A: Dynamic Meteorology and Oceanography, 2022, 66, 23985.	0.8	19
81	Arctic Ocean Water Mass Transformation in Sâ€“T Coordinates. Journal of Physical Oceanography, 2015, 45, 1025-1050.	0.7	19
82	Nutrient transports in the Baltic Sea â€“ results from a 30-year physicalâ€“biogeochemical reanalysis. Biogeosciences, 2017, 14, 2113-2131.	1.3	19
83	Nutrient Retention in the Swedish Coastal Zone. Frontiers in Marine Science, 2018, 5, .	1.2	19
84	Environmentally safe areas and routes in the Baltic proper using Eulerian tracers. Marine Pollution Bulletin, 2012, 64, 1375-1385.	2.3	18
85	Effects of air-sea coupling over the North Sea and the Baltic Sea on simulated summer precipitation over Central Europe. Climate Dynamics, 2017, 49, 3851-3876.	1.7	18
86	BALTEXâ€”an interdisciplinary research network for the Baltic Sea region. Environmental Research Letters, 2011, 6, 045205.	2.2	17
87	Tracing terrestrial DOC in the Baltic Seaâ€”A 3â€Ð model study. Global Biogeochemical Cycles, 2016, 30, 134-148.	1.9	17
88	Is â€˜deep-water formationâ€™ in the Baltic Sea a key to understanding seabed dynamics and ventilation changes over the past 7,000 years?. Quaternary International, 2020, 550, 55-65.	0.7	17
89	Simulated distributions of Baltic Sea-ice in warming climate and consequences for the winter habitat of the Baltic ringed seal. Ambio, 2004, 33, 249-56.	2.8	17
90	An Earth System Science Program for the Baltic Sea Region. Eos, 2014, 95, 109-110.	0.1	16

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91	The Baltic haline conveyor belt or the overturning circulation and mixing in the Baltic. Ambio, 2004, 33, 261-6.	2.8	14
92	Working toward improved small-scale sea ice-ocean modeling in the Arctic seas. Eos, 2003, 84, 325.	0.1	13
93	Is interactive air sea coupling relevant for simulating the future climate of Europe?. Climate Dynamics, 2021, 56, 491-514.	1.7	13
94	Coupled regional Earth system modeling in the Baltic Sea region. Earth System Dynamics, 2021, 12, 939-973.	2.7	13
95	Projected Changeâ€"Marine Physics. Regional Climate Studies, 2015, , 243-252.	1.2	13
96	Investigating interdecadal salinity changes in the Baltic Sea in a 1850â€"2008 hindcast simulation. Climate of the Past, 2020, 16, 1617-1642.	1.3	13
97	Arctic Ocean freshwater composition, pathways and transformations from a passive tracer simulation. Tellus, Series A: Dynamic Meteorology and Oceanography, 2014, 66, 23988.	0.8	12
98	ECOSUPPORT: A Pilot Study on Decision Support for Baltic Sea Environmental Management. Ambio, 2012, 41, 529-533.	2.8	11
99	A method for assessing the coastline recession due to the sea level rise by assuming stationary wind-wave climate. Oceanological and Hydrobiological Studies, 2015, 44, 362-380.	0.3	11
100	Provision of aquatic ecosystem services as a consequence of societal changes: The case of the Baltic Sea. Population Ecology, 2021, 63, 61-74.	0.7	11
101	Investigating Hypoxic and Euxinic Area Changes Based on Various Datasets From the Baltic Sea. Frontiers in Marine Science, 2022, 9, .	1.2	11
102	Causes of simulated long-term changes in phytoplankton biomass in the Baltic proper: a wavelet analysis. Biogeosciences, 2018, 15, 5113-5129.	1.3	10
103	Performance Analysis of a Multiprocessor Coupled Iceâ€"Ocean Model for the Baltic Sea. Journal of Atmospheric and Oceanic Technology, 2002, 19, 114-124.	0.5	9
104	Projections of Future Anthropogenic Climate Change. , 2008, , 133-219.		8
105	Sensitivity of the Baltic Sea Overturning Circulation to Longâ€Term Atmospheric and Hydrological Changes. Journal of Geophysical Research: Oceans, 2021, 126, e2020JC016079.	1.0	8
106	Improving the multiannual, high-resolution modelling of biogeochemical cycles in the Baltic Sea by using data assimilation. Tellus, Series A: Dynamic Meteorology and Oceanography, 2022, 66, 24908.	0.8	7
107	A model sensitivity study for the seaâ€"air exchange of methane in the Laptev Sea, Arctic Ocean. Tellus, Series B: Chemical and Physical Meteorology, 2022, 66, 24174.	0.8	7
108	Baltic Sea Operational Oceanographyâ€"A Stimulant for Regional Earth System Research. Frontiers in Earth Science, 2020, 8, .	0.8	7

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109	Modeling cyanobacteria life cycle dynamics and historical nitrogen fixation in the Baltic Proper. Biogeosciences, 2021, 18, 6213-6227.	1.3	7
110	Impact of increasing inflow of warm Atlantic water on the seaâ€air exchange of carbon dioxide and methane in the Laptev Sea. Journal of Geophysical Research G: Biogeosciences, 2016, 121, 1867-1883.	1.3	4
111	Revisiting the Role of Convective Deep Water Formation in Northern Baltic Sea Bottom Water Renewal. Journal of Geophysical Research: Oceans, 2020, 125, e2020JC016114.	1.0	4
112	Studying the Baltic Sea Circulation with Eulerian Tracers. , 2013, , 101-129.		4
113	Atmospheric rivers in CMIP5 climate ensembles downscaled with a high-resolution regional climate model. Earth System Dynamics, 2022, 13, 613-631.	2.7	3
114	Atlantic multidecadal variability and the implications for North European precipitation. Environmental Research Letters, 2022, 17, 044040.	2.2	3
115	Commentary: Lake or Sea? The Unknown Future of Central Baltic Sea Herring. Frontiers in Ecology and Evolution, 2020, 8, .	1.1	1
116	Ensemble Modeling of the Baltic Sea Ecosystem to Provide Scenarios for Management. , 2014, 43, 37.		1
117	Editorial: The Baltic Sea Region in Transition. Frontiers in Earth Science, 2020, 8, .	0.8	1
118	Validator â€“ a Web-Based Interactive Tool for Validation of Ocean Models at Oceanographic Stations. Journal of Open Research Software, 2019, 7, 18.	2.7	1