Jan H Kwakkel

List of Publications by Year
in descending order

100 papers	5,130 citations	147566 31 h-index	95083 68 g-index
110 all docs	110 docs citations	110 times ranked	4044 citing authors

#	Article	IF	Citations
1	Dynamic adaptive policy pathways: A method for crafting robust decisions for a deeply uncertain world. Global Environmental Change, 2013, 23, 485-498.	3.6	1,111
2	Adapt or Perish: A Review of Planning Approaches for Adaptation under Deep Uncertainty. Sustainability, 2013, 5, 955-979.	1.6	399
3	An uncertain future, deep uncertainty, scenarios, robustness and adaptation: How do they fit together?. Environmental Modelling and Software, 2016, 81, 154-164.	1.9	299
4	Developing dynamic adaptive policy pathways: a computer-assisted approach for developing adaptive strategies for a deeply uncertain world. Climatic Change, 2015, 132, 373-386.	1.7	211
5	Prospects of modelling societal transitions: Position paper of an emerging community. Environmental Innovation and Societal Transitions, 2015, 17, 41-58.	2.5	155
6	Comparing Robust Decision-Making and Dynamic Adaptive Policy Pathways for model-based decision support under deep uncertainty. Environmental Modelling and Software, 2016, 86, 168-183.	1.9	154
7	Exploratory Modeling and Analysis, an approach for model-based foresight under deep uncertainty. Technological Forecasting and Social Change, 2013, 80, 419-431.	6.2	150
8	Robustness Metrics: How Are They Calculated, When Should They Be Used and Why Do They Give Different Results?. Earth's Future, 2018, 6, 169-191.	2.4	142
9	Classifying and communicating uncertainties in model-based policy analysis. International Journal of Technology, Policy and Management, 2010, 10, 299.	0.1	134
10	Coping with the Wickedness of Public Policy Problems: Approaches for Decision Making under Deep Uncertainty. Journal of Water Resources Planning and Management - ASCE, 2016, 142, .	1.3	127
11	The Exploratory Modeling Workbench: An open source toolkit for exploratory modeling, scenario discovery, and (multi-objective) robust decision making. Environmental Modelling and Software, 2017, 96, 239-250.	1.9	121
12	Deep Uncertainty. , 2013, , 395-402.		113
13	An exploratory approach for adaptive policymaking by using multi-objective robust optimization. Simulation Modelling Practice and Theory, 2014, 46, 25-39.	2.2	90
14	Fit for purpose? Building and evaluating a fast, integrated model for exploring water policy pathways. Environmental Modelling and Software, 2014, 60, 99-120.	1.9	87
15	Adaptive Robust Design under deep uncertainty. Technological Forecasting and Social Change, 2013, 80, 408-418.	6.2	86
16	Dynamic scenario discovery under deep uncertainty: The future of copper. Technological Forecasting and Social Change, 2013, 80, 789-800.	6.2	86
17	Thresholds, tipping and turning points for sustainability under climate change. Current Opinion in Environmental Sustainability, 2013, 5, 334-340.	3.1	85
18	Exploratory modeling for analyzing coupled human-natural systems under uncertainty. Global Environmental Change, 2020, 65, 102186.	3.6	65

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19	Using System Dynamics for Grand Challenges: The ESDMA Approach. Systems Research and Behavioral Science, 2015, 32, 358-375.	0.9	62
20	Improving scenario discovery for handling heterogeneous uncertainties and multinomial classified outcomes. Environmental Modelling and Software, 2016, 79, 311-321.	1.9	61
21	Designing monitoring arrangements for collaborative learning about adaptation pathways. Environmental Science and Policy, 2017, 69, 29-38.	2.4	55
22	Modeling with Stakeholders for Transformative Change. Sustainability, 2019, 11, 825.	1.6	52
23	Tree-based ensemble methods for sensitivity analysis of environmental models: A performance comparison with Sobol and Morris techniques. Environmental Modelling and Software, 2018, 107, 245-266.	1.9	48
24	Coping with uncertainty in climate policy making: (Mis)understanding scenario studies. Futures, 2013, 53, 1-12.	1.4	42
25	Narrative-informed exploratory analysis of energy transition pathways: A case study of India's electricity sector. Energy Policy, 2017, 110, 271-287.	4.2	42
26	Transport network criticality metrics: a comparative analysis and a guideline for selection. Transport Reviews, 2020, 40, 241-264.	4.7	40
27	A scenario discovery study of the impact of uncertainties in the global container transport system on European ports. Futures, 2016, 81, 148-160.	1.4	37
28	Radicalization under deep uncertainty: a multi-model exploration of activism, extremism, and terrorism. System Dynamics Review, 2014, 30, 1-28.	1.1	36
29	The geopolitical impact of the shale revolution: Exploring consequences on energy prices and rentier states. Energy Policy, 2016, 98, 390-399.	4.2	36
30	Innovation forecasting: A case study of the management of engineering and technology literature. Technological Forecasting and Social Change, 2011, 78, 346-357.	6.2	35
31	Assessing the Efficacy of Dynamic Adaptive Planning of Infrastructure: Results from Computational Experiments. Environment and Planning B: Planning and Design, 2012, 39, 533-550.	1.7	34
32	Including robustness considerations in the search phase of Many-Objective Robust Decision Making. Environmental Modelling and Software, 2018, 105, 201-216.	1.9	32
33	Dealing with Uncertainties in Fresh Water Supply: Experiences in the Netherlands. Water Resources Management, 2017, 31, 703-725.	1.9	30
34	Aquifer Thermal Energy Storage (ATES) smart grids: Large-scale seasonal energy storage as a distributed energy management solution. Applied Energy, 2019, 242, 624-639.	5.1	30
35	A strategic model of port-hinterland freight distribution networks. Transportation Research, Part E: Logistics and Transportation Review, 2016, 95, 368-384.	3.7	29
36	Supporting DMDU: A Taxonomy of Approaches and Tools. , 2019, , 355-374.		29

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37	PyNetLogo: Linking NetLogo with Python. Jasss, 2018, 21, .	1.0	29
38	Ebola in West Africa: Model-Based Exploration of Social Psychological Effects and Interventions. Systems Research and Behavioral Science, 2015, 32, 2-14.	0.9	28
39	A coupled simulation architecture for agent-based/geohydrological modelling with NetLogo and MODFLOW. Environmental Modelling and Software, 2019, 115, 19-37.	1.9	28
40	Efficient or Fair? Operationalizing Ethical Principles in Flood Risk Management: A Case Study on the Dutchâ€German Rhine. Risk Analysis, 2020, 40, 1844-1862.	1.5	28
41	Governing climate risks in the face of normative uncertainties. Wiley Interdisciplinary Reviews: Climate Change, 2020, 11, e666.	3.6	28
42	On considering robustness in the search phase of Robust Decision Making: A comparison of Many-Objective Robust Decision Making, multi-scenario Many-Objective Robust Decision Making, and Many Objective Robust Optimization. Environmental Modelling and Software, 2020, 127, 104699.	1.9	26
43	Enabling assessment of distributive justice through models for climate change planning: A review of recent advances and a research agenda. Wiley Interdisciplinary Reviews: Climate Change, 2021, 12, e721.	3.6	26
44	Impact of Scenario Selection on Robustness. Water Resources Research, 2020, 56, e2019WR026515.	1.7	25
45	Framing flexibility: Theorising and data mining to develop a useful definition of flexibility and related concepts. Futures, 2011, 43, 923-933.	1.4	24
46	Visualizing geo-spatial data in science, technology and innovation. Technological Forecasting and Social Change, 2014, 81, 67-81.	6.2	24
47	Lessons for model use in transition research: A survey and comparison with other research areas. Environmental Innovation and Societal Transitions, 2015, 15, 194-210.	2.5	24
48	Societal Ageing in the Netherlands: A Robust System Dynamics Approach. Systems Research and Behavioral Science, 2015, 32, 485-501.	0.9	22
49	Dynamic Adaptive Policy Pathways (DAPP). , 2019, , 71-92.		22
50	Behavior-based scenario discovery using time series clustering. Technological Forecasting and Social Change, 2020, 156, 120052.	6.2	22
51	Uncertainty in the Framework of Policy Analysis. Profiles in Operations Research, 2013, , 215-261.	0.3	21
52	How Robust is a Robust Policy? Comparing Alternative Robustness Metrics for Robust Decision-Making. Profiles in Operations Research, 2016, , 221-237.	0.3	21
53	How to evaluate a monitoring system for adaptive policies: criteria for signposts selection and their model-based evaluation. Climatic Change, 2019, 153, 267-283.	1.7	21
54	Evaluation of flood risk reduction strategies through combinations of interventions. Journal of Flood Risk Management, 2019, 12, e12506.	1.6	19

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55	The Emergence of Climate Change Mitigation Action by Society: An Agent-Based Scenario Discovery Study. Jasss, 2016, 19, .	1.0	18
56	Participatory multi-modelling as the creation of a boundary object ecology: the case of future energy infrastructures in the Rotterdam Port Industrial Cluster. Sustainability Science, 2021, 16, 901-918.	2.5	17
57	Exploratory Modeling and Analysis. , 2013, , 532-537.		17
58	Accounting for the uncertain effects of hydraulic interactions in optimising embankments heights: Proof of principle for the IJssel River. Journal of Flood Risk Management, 2019, 12, e12532.	1.6	16
59	Rapid flood risk screening model for compound flood events in Beira, Mozambique. Natural Hazards and Earth System Sciences, 2020, 20, 2633-2646.	1.5	16
60	Decision Support for Airport Strategic Planning. Transportation Planning and Technology, 2008, 31, 11-34.	0.9	15
61	Evaluation of infrastructure planning approaches: An analogy with medicine. Futures, 2011, 43, 934-946.	1.4	15
62	Improving scenario discovery by bagging random boxes. Technological Forecasting and Social Change, 2016, 111, 124-134.	6.2	15
63	A generalized manyâ€objective optimization approach for scenario discovery. Futures & Foresight Science, 2019, 1, e8.	0.7	15
64	Systemic Flood Risk Management: The Challenge of Accounting for Hydraulic Interactions. Water (Switzerland), 2019, 11, 2530.	1.2	15
65	Dynamic Adaptive Policies: A Way to Improve the Costâ€"Benefit Performance of Megaprojects?. Environment and Planning B: Planning and Design, 2014, 41, 594-612.	1.7	14
66	An Exploratory Analysis of the Dutch Electricity System in Transition. Journal of the Knowledge Economy, 2014, 5, 670-685.	2.7	12
67	Tipping points in science: A catastrophe model of scientific change. Journal of Engineering and Technology Management - JET-M, 2014, 32, 185-205.	1.4	11
68	Accounting for Multisectoral Dynamics in Supporting Equitable Adaptation Planning: A Case Study on the Rice Agriculture in the Vietnam Mekong Delta. Earth's Future, 2021, 9, e2020EF001939.	2.4	11
69	Evaluating Adaptive Policymaking using expert opinions. Technological Forecasting and Social Change, 2012, 79, 311-325.	6.2	10
70	Is real options analysis fit for purpose in supporting climate adaptation planning and decisionâ€making?. Wiley Interdisciplinary Reviews: Climate Change, 2020, 11, e638.	3.6	10
71	Guidance framework and software for understanding and achieving system robustness. Environmental Modelling and Software, 2021, 142, 105059.	1.9	10
72	Dynamic Adaptive Planning (DAP). , 2019, , 53-69.		9

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73	A novel concurrent approach for multiclass scenario discovery using Multivariate Regression Trees: Exploring spatial inequality patterns in the Vietnam Mekong Delta under uncertainty. Environmental Modelling and Software, 2021, 145, 105177.	1.9	9
74	Operationalizing adaptive policymaking. Futures, 2013, 52, 12-26.	1.4	8
75	Simulating endogenous dynamics of intervention-capacity deployment: Ebola outbreak in Liberia. International Journal of Systems Science: Operations and Logistics, 2017, 4, 53-67.	2.0	8
76	Comment on â€œFrom Data to Decisions: Processing Information, Biases, and Beliefs for Improved Management of Natural Resources and Environmentsâ€•by Glynn et al.. Earth's Future, 2018, 6, 757-761.	2.4	8
77	Multi-scenario multi-objective robust optimization under deep uncertainty: A posteriori approach. Environmental Modelling and Software, 2021, 144, 105134.	1.9	8
78	Evidence of regional sea-level rise acceleration for the North Sea. Environmental Research Letters, 2022, 17, 074002.	2.2	8
79	Dealing with Multiple Models in System Dynamics. International Journal of System Dynamics Applications, 2014, 3, 17-35.	0.3	7
80	Exploring Deep Uncertainty Approaches for Application in Life Cycle Engineering. Procedia CIRP, 2018, 69, 457-462.	1.0	6
81	Assessing the Capacity of Adaptive Policy Pathways to Adapt on Time by Mapping Trigger Values to Their Outcomes. Sustainability, 2019, 11, 1716.	1.6	6
82	What are the merits of endogenising land-use change dynamics into model-based climate adaptation planning?. Socio-Environmental Systems Modeling, 0, 1, 16126.	0.0	6
83	The semantics of the uncertainty literature. , 2008, , .		4
84	Adaptive policymaking for Airport Strategic Planning. , 2008, , .		3
85	Shale Gas and Import Dependency. International Journal of System Dynamics Applications, 2015, 4, 31-56.	0.3	3
86	Grappling with uncertainty in the long-term development of infrastructure systems. , 2010, , .		2
87	The adoption and diffusion of common-pool resource-dependent technologies: The case of aquifer Thermal Energy Storage systems. , 2015, , .		2
88	Technological Frontiers and Embeddings: A Visualization Approach. International Journal of Innovation and Technology Management, 2017, 14, 1740009.	0.8	2
89	Techniques and methods for uncertainty management. , 2008, , .		1
90	Mixed representations of science and technology data for use in the management of technology. , 2008, , .		1

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91	Evaluation of infrastructure planning approaches: an analogy with medicine. , 2009, , .		1
92	Managing polysemy and synonymy in science mapping using the mixtures of factor analyzers model. Journal of the Association for Information Science and Technology, 2009, 60, 2064-2078.	2.6	1
93	Polder pumping-station for the future: designing and retrofitting infrastructure systems under structural uncertainty. Sustainable and Resilient Infrastructure, 2022, 7, 222-238.	1.7	1
94	Next stop, implementation: collaborative monitoring to inform adaptive policy-making and implementation. Proceedings of the International Association of Hydrological Sciences, 0, 364, 374-379.	1.0	1
95	Remining PICMET: 1987–2008. , 2009, , .		0
96	Innovation forecasting: A case study of the management of engineering and technology literature. , 2009, , .		0
97	A theory of infrastructure provision. , 2009, , .		0
98	A complex network perspective on the world science system. , 2011, , .		0
99	Integrated building energy management using aquifer thermal energy storage (ATES) in smart thermal grids. , 2017, , .		0
100	Reaction: A commentary on Lustick and Tetlock (2021). Futures & Foresight Science, 2021, 3, e84.	0.7	0