# Johan RockstrÃ¶m

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/1910930/publications.pdf

Version: 2024-02-01

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|---|---|---|---|
| 144 papers | 63,009 citations | 10956 71 h-index | 13338 130 g-index |
| 153 all docs | 153 docs citations | 153 times ranked | 53251 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | A safe operating space for humanity. Nature, 2009, 461, 472-475. | 13.7 | 8,638 |
| 2 | Planetary boundaries: Guiding human development on a changing planet. Science, 2015, 347, 1259855. | 6.0 | 7,124 |
| 3 | Solutions for a cultivated planet. Nature, 2011, 478, 337-342. | 13.7 | 5,821 |
| 4 | Food in the Anthropocene: the EATâ€“Lancet Commission on healthy diets from sustainable food systems. Lancet, The, 2019, 393, 447-492. | 6.3 | 5,421 |
| 5 | Planetary Boundaries: Exploring the Safe Operating Space for Humanity. Ecology and Society, 2009, 14, . | 1.0 | 3,867 |
| 6 | The Lancet Commission on pollution and health. Lancet, The, 2018, 391, 462-512. | 6.3 | 2,747 |
| 7 | Resilience Thinking: Integrating Resilience, Adaptability and Transformability. Ecology and Society, 2010, 15, . | 1.0 | 2,469 |
| 8 | Sustainable development goals for people and planet. Nature, 2013, 495, 305-307. | 13.7 | 2,055 |
| 9 | Social-Ecological Resilience to Coastal Disasters. Science, 2005, 309, 1036-1039. | 6.0 | 2,002 |
| 10 | Trajectories of the Earth System in the Anthropocene. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 8252-8259. | 3.3 | 1,832 |
| 11 | Options for keeping the food system within environmental limits. Nature, 2018, 562, 519-525. | 13.7 | 1,709 |
| 12 | The Anthropocene: From Global Change to Planetary Stewardship. Ambio, 2011, 40, 739-761. | 2.8 | 1,175 |
| 13 | Climate tipping points â€" too risky to bet against. Nature, 2019, 575, 592-595. | 13.7 | 1,162 |
| 14 | Six Transformations to achieve the Sustainable Development Goals. Nature Sustainability, 2019, 2, 805-814. | 11.5 | 999 |
| 15 | A roadmap for rapid decarbonization. Science, 2017, 355, 1269-1271. | 6.0 | 815 |
| 16 | Natural capital and ecosystem services informing decisions: From promise to practice. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 7348-7355. | 3.3 | 717 |
| 17 | Sustainable intensification of agriculture for human prosperity and global sustainability. Ambio, 2017, 46, 4-17. | 2.8 | 653 |
| 18 | Social-ecological resilience and biosphere-based sustainability science. Ecology and Society, 2016, 21, . | 1.0 | 616 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Future water availability for global food production: The potential of green water for increasing resilience to global change. Water Resources Research, 2009, 45, . | 1.7 | 521 |
| 20 | Managing water in rainfed agricultureâ€"The need for a paradigm shift. Agricultural Water Management, 2010, 97, 543-550. | 2.4 | 475 |
| 21 | Reducing hazard vulnerability: towards a common approach between disaster risk reduction and climate adaptation. Disasters, 2006, 30, 39-48. | 1.1 | 458 |
| 22 | Assessing â€œDangerous Climate Changeâ€• Required Reduction of Carbon Emissions to Protect Young People, Future Generations and Nature. PLoS ONE, 2013, 8, e81648. | 1.1 | 448 |
| 23 | Reconnecting to the Biosphere. Ambio, 2011, 40, 719-38. | 2.8 | 420 |
| 24 | Global assessment of agricultural system redesign for sustainable intensification. Nature Sustainability, 2018, 1, 441-446. | 11.5 | 416 |
| 25 | Social tipping dynamics for stabilizing Earthâ€™s climate by 2050. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 2354-2365. | 3.3 | 394 |
| 26 | Assessing the water challenge of a new green revolution in developing countries. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 6253-6260. | 3.3 | 336 |
| 27 | Beyond Cockpit-ism: Four Insights to Enhance the Transformative Potential of the Sustainable Development Goals. Sustainability, 2015, 7, 1651-1660. | 1.6 | 327 |
| 28 | Feeding ten billion people is possible within four terrestrial planetary boundaries. Nature Sustainability, 2020, 3, 200-208. | 11.5 | 306 |
| 29 | Three years to safeguard our climate. Nature, 2017, 546, 593-595. | 13.7 | 305 |
| 30 | Transforming Innovation for Sustainability. Ecology and Society, 2012, 17, . | 1.0 | 300 |
| 31 | Innovation can accelerate the transition towards a sustainable food system. Nature Food, 2020, 1, 266-272. | 6.2 | 285 |
| 32 | Dry spell analysis and maize yields for two semi-arid locations in east Africa. Agricultural and Forest Meteorology, 2003, 117, 23-37. | 1.9 | 277 |
| 33 | Our future in the Anthropocene biosphere. Ambio, 2021, 50, 834-869. | 2.8 | 275 |
| 34 | Multiscale regime shifts and planetary boundaries. Trends in Ecology and Evolution, 2013, 28, 389-395. | 4.2 | 243 |
| 35 | Towards a revised planetary boundary for consumptive freshwater use: role of environmental flow requirements. Current Opinion in Environmental Sustainability, 2013, 5, 551-558. | 3.1 | 229 |
| 36 | Human impacts on planetary boundaries amplified by Earth system interactions. Nature Sustainability, 2020, 3, 119-128. | 11.5 | 217 |

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|---|---|---|---|
| 37 | The emergence and evolution of Earth System Science. Nature Reviews Earth & Environment, 2020, 1, 54-63. | 12.2 | 213 |
| 38 | An integrated framework for sustainable development goals. Ecology and Society, 2014, 19, . | 1.0 | 209 |
| 39 | Planet-proofing the global food system. Nature Food, 2020, 1, 3-5. | 6.2 | 205 |
| 40 | Rainwater management for increased productivity among small-holder farmers in drought prone environments. Physics and Chemistry of the Earth, 2002, 27, 949-959. | 1.2 | 192 |
| 41 | Water for food and nature in droughtâ€“prone tropics: vapour shift in rainâ€“fed agriculture. Philosophical Transactions of the Royal Society B: Biological Sciences, 2003, 358, 1997-2009. | 1.8 | 191 |
| 42 | Semiarid Crop Production from a Hydrological Perspective: Gap between Potential and Actual Yields. Critical Reviews in Plant Sciences, 2000, 19, 319-346. | 2.7 | 190 |
| 43 | Transnational Corporations as â€˜Keystone Actorsâ€™ in Marine Ecosystems. PLoS ONE, 2015, 10, e0127533. | 1.1 | 187 |
| 44 | Policy design for the Anthropocene. Nature Sustainability, 2019, 2, 14-21. | 11.5 | 176 |
| 45 | Drivers, "Slow" Variables, "Fast" Variables, Shocks, and Resilience. Ecology and Society, 2012, 17, . | 1.0 | 164 |
| 46 | Agriculture: Increase water harvesting in Africa. Nature, 2015, 519, 283-285. | 13.7 | 160 |
| 47 | Protecting irrecoverable carbon in Earthâ€™s ecosystems. Nature Climate Change, 2020, 10, 287-295. | 8.1 | 159 |
| 48 | Food systems for sustainable development: proposals for a profound four-part transformation. Agronomy for Sustainable Development, 2018, 38, 41. | 2.2 | 157 |
| 49 | Synchronous failure: the emerging causal architecture of global crisis. Ecology and Society, 2015, 20, . | 1.0 | 144 |
| 50 | Articulating the effect of food systems innovation on the Sustainable Development Goals. Lancet Planetary Health, The, 2021, 5, e50-e62. | 5.1 | 135 |
| 51 | Water productivity in rainfed systems: overview of challenges and analysis of opportunities in water scarcity prone savannahs. Irrigation Science, 2007, 25, 299-311. | 1.3 | 134 |
| 52 | Global potential to increase crop production through water management in rainfed agriculture. Environmental Research Letters, 2009, 4, 044002. | 2.2 | 134 |
| 53 | Resilience building and water demand management for drought mitigation. Physics and Chemistry of the Earth, 2003, 28, 869-877. | 1.2 | 131 |
| 54 | Conservation tillage for sustainable agriculture. Soil and Tillage Research, 2001, 61, 93-108. | 2.6 | 127 |

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|---|---|---|---|
| 55 | Linkages Among Water Vapor Flows, Food Production, and Terrestrial Ecosystem Services. Ecology and Society, 1999, 3, . | 0.9 | 124 |
| 56 | A horizon scan of global conservation issues for 2014. Trends in Ecology and Evolution, 2014, 29, 15-22. | 4.2 | 120 |
| 57 | Rewiring food systems to enhance human health and biosphere stewardship. Environmental Research Letters, 2017, 12, 100201. | 2.2 | 112 |
| 58 | The role of water harvesting to achieve sustainable agricultural intensification and resilience against water related shocks in sub-Saharan Africa. Agriculture, Ecosystems and Environment, 2013, 181, 69-79. | 2.5 | 107 |
| 59 | Assessing impacts of agricultural water interventions in the Kothapally watershed, Southern India. Hydrological Processes, 2012, 26, 387-404. | 1.1 | 98 |
| 60 | The Water Planetary Boundary: Interrogation and Revision. One Earth, 2020, 2, 223-234. | 3.6 | 98 |
| 61 | A planetary boundary for green water. Nature Reviews Earth & Environment, 2022, 3, 380-392. | 12.2 | 95 |
| 62 | Understanding of water resilience in the Anthropocene. Journal of Hydrology X, 2019, 2, 100009. | 0.8 | 89 |
| 63 | Hysteresis of tropical forests in the 21st century. Nature Communications, 2020, 11, 4978. | 5.8 | 87 |
| 64 | Emergence of a global scienceâ€“business initiative for ocean stewardship. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 9038-9043. | 3.3 | 86 |
| 65 | Illuminating water cycle modifications and Earth system resilience in the Anthropocene. Water Resources Research, 2020, 56, e2019WR024957. | 1.7 | 86 |
| 66 | Identifying a Safe and Just Corridor for People and the Planet. Earth's Future, 2021, 9, e2020EF001866. | 2.4 | 84 |
| 67 | Mapping the irrecoverable carbon in Earthâ€™s ecosystems. Nature Sustainability, 2022, 5, 37-46. | 11.5 | 84 |
| 68 | A Global and Spatially Explicit Assessment of Climate Change Impacts on Crop Production and Consumptive Water Use. PLoS ONE, 2013, 8, e57750. | 1.1 | 83 |
| 69 | Redefining green growth within planetary boundaries. Energy Research and Social Science, 2018, 44, 41-49. | 3.0 | 79 |
| 70 | Achieving the 17 Sustainable Development Goals within 9 planetary boundaries. Global Sustainability, 2019, 2, . | 1.6 | 79 |
| 71 | Low-cost drip irrigationâ€”A suitable technology for southern Africa?. Agricultural Water Management, 2007, 89, 59-70. | 2.4 | 78 |
| 72 | Building resilience to drought in desertificationâ€prone savannas in Subâ€Saharan Africa: The water perspective. Natural Resources Forum, 2008, 32, 93-102. | 1.8 | 78 |

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| 73 | The Challenges of Applying Planetary Boundaries as a Basis for Strategic Decision-Making in Companies with Global Supply Chains. Sustainability, 2017, 9, 279. | 1.6 | 78 |
| 74 | The Quadruple Squeeze: Defining the safe operating space for freshwater use to achieve a triply green revolution in the Anthropocene. Ambio, 2010, 39, 257-265. | 2.8 | 71 |
| 75 | Assessing the implications of water harvesting intensification on upstreamâ€“downstream ecosystem services: A case study in the Lake Tana basin. Science of the Total Environment, 2016, 542, 22-35. | 3.9 | 71 |
| 76 | The world's biggest gamble. Earth's Future, 2016, 4, 465-470. | 2.4 | 70 |
| 77 | Response to Comment on â€œPlanetary boundaries: Guiding human development on a changing planetâ€. Science, 2015, 348, 1217-1217. | 6.0 | 69 |
| 78 | Agro-hydrological evaluation of on-farm rainwater storage systems for supplemental irrigation in Laikipia district, Kenya. Agricultural Water Management, 2005, 73, 21-41. | 2.4 | 65 |
| 79 | Rainwater harvesting to enhance water productivity of rainfed agriculture in the semi-arid Zimbabwe. Physics and Chemistry of the Earth, 2007, 32, 1068-1073. | 1.2 | 65 |
| 80 | Hydro-economic evaluation of rainwater harvesting and management technologies: Farmersâ€™ investment options and risks in semi-arid Laikipia district of Kenya. Physics and Chemistry of the Earth, 2005, 30, 772-782. | 1.2 | 63 |
| 81 | Towards a sustainable water future: shaping the next decade of global water research. Current Opinion in Environmental Sustainability, 2013, 5, 708-714. | 3.1 | 63 |
| 82 | All options, not silver bullets, needed to limit global warming to 1.5 Â°C: a scenario appraisal. Environmental Research Letters, 2021, 16, 064037. | 2.2 | 58 |
| 83 | Green water security for the food makers of tomorrow: windows of opportunity in drought-prone savannahs. Water Science and Technology, 2001, 43, 71-78. | 1.2 | 55 |
| 84 | Onâ€Farm Spatial and Temporal Variability of Soil and Water in Pearl Millet Cultivation. Soil Science Society of America Journal, 1999, 63, 1308-1319. | 1.2 | 54 |
| 85 | Defining a sustainable development target space for 2030 and 2050. One Earth, 2022, 5, 142-156. | 3.6 | 54 |
| 86 | A horizon scan of global conservation issues for 2015. Trends in Ecology and Evolution, 2015, 30, 17-24. | 4.2 | 53 |
| 87 | A Horizon Scan of Global Conservation Issues for 2016. Trends in Ecology and Evolution, 2016, 31, 44-53. | 4.2 | 53 |
| 88 | Processes for the sustainable stewardship of marine environments. Ecological Economics, 2016, 128, 55-67. | 2.9 | 52 |
| 89 | Linking Freshwater Flows and Ecosystem Services Appropriated by People: The Case of the Baltic Sea Drainage Basin. Ecosystems, 1999, 2, 351-366. | 1.6 | 51 |
| 90 | Closing the loop: Reconnecting human dynamics to Earth System science. Infrastructure Asset Management, 2017, 4, 151-157. | 1.2 | 48 |

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|---|---|---|---|
| 91 | An assessment of the effect of human faeces and urine on maize production and water productivity. Physics and Chemistry of the Earth, 2005, 30, 840-845. | 1.2 | 47 |
| 92 | Water is a master variable: Solving for resilience in the modern era. Water Security, 2019, 8, 100048. | 1.2 | 46 |
| 93 | The topology of non-linear global carbon dynamics: from tipping points to planetary boundaries. Environmental Research Letters, 2013, 8, 044048. | 2.2 | 45 |
| 94 | Contours of a Resilient Global Future. Sustainability, 2014, 6, 123-135. | 1.6 | 44 |
| 95 | Healthy diets and sustainable food systems â€“ Authors' reply. Lancet, The, 2019, 394, 215-216. | 6.3 | 42 |
| 96 | We need biosphere stewardship that protects carbon sinks and builds resilience. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, . | 3.3 | 41 |
| 97 | Yield and soil system changes from conservation tillage in dryland farming: A case study from North Eastern Tanzania. Agricultural Water Management, 2011, 98, 1687-1695. | 2.4 | 39 |
| 98 | Assessment of the growth in social groups for sustainable agriculture and land management. Global Sustainability, 2020, 3, . | 1.6 | 36 |
| 99 | Acting in the Anthropocene: the EATâ€“Lancet Commission. Lancet, The, 2016, 387, 2364-2365. | 6.3 | 35 |
| 100 | Potential impacts of water harvesting and ecological sanitation on crop yield, evaporation and river flow regimes in the Thukela River basin, South Africa. Agricultural Water Management, 2011, 98, 1113-1124. | 2.4 | 33 |
| 101 | Upâ€scaling potential impacts on water flows from agricultural water interventions: opportunities and tradeâ€offs in the Osman Sagar catchment, Musi subâ€basin, India. Hydrological Processes, 2013, 27, 3905-3921. | 1.1 | 33 |
| 102 | Rootzone storage capacity reveals drought coping strategies along rainforest-savanna transitions. Environmental Research Letters, 2020, 15, 124021. | 2.2 | 28 |
| 103 | Assessment of rainwater retention in agricultural land and crop yield increase due to conservation tillage in Ewaso Ngâ€™iro river basin, Kenya. Physics and Chemistry of the Earth, 2006, 31, 910-918. | 1.2 | 27 |
| 104 | Semiarid Crop Production from a Hydrological Perspective: Gap between Potential and Actual Yields. , 0, . | | 27 |
| 105 | Future Earth. Science, 2016, 351, 319-319. | 6.0 | 26 |
| 106 | Defining â€˜science-based targetsâ€™. National Science Review, 2021, 8, nwaa186. | 4.6 | 26 |
| 107 | Investment in resilient food systems in the most vulnerable and fragile regions is critical. Nature Food, 2021, 2, 546-551. | 6.2 | 26 |
| 108 | Ten new insights in climate science 2021: a horizon scan. Global Sustainability, 2021, 4, . | 1.6 | 26 |

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| 109 | Human and planetary health: towards a common language. Lancet, The, 2015, 386, e36-e37. | 6.3 | 23 |
| 110 | Planetary Boundaries: Separating Fact from Fiction. A Response to Montoya et al.. Trends in Ecology and Evolution, 2018, 33, 233-234. | 4.2 | 21 |
| 111 | Future Hydroclimatic Impacts on Africa: Beyond the Paris Agreement. Earth's Future, 2019, 7, 748-761. | 2.4 | 21 |
| 112 | Corona and the climate: a comparison of two emergencies. Global Sustainability, 2020, 3, . | 1.6 | 19 |
| 113 | Climate change: The necessary, the possible and the desirable Earth League climate statement on the implications for climate policy from the 5th <scp>IPCC</scp> Assessment. Earth's Future, 2014, 2, 606-611. | 2.4 | 18 |
| 114 | Ten new insights in climate science 2020 â€“ a horizon scan. Global Sustainability, 2021, 4, . | 1.6 | 17 |
| 115 | Low head drip irrigation kits and treadle pumps for smallholder farmers in Zimbabwe: a technical evaluation based on laboratory tests. Physics and Chemistry of the Earth, 2004, 29, 1049-1059. | 1.2 | 16 |
| 116 | Global sustainability: the challenge ahead. Global Sustainability, 2018, 1, . | 1.6 | 16 |
| 117 | Investigation of the Curve Number Method For Surface Runoff Estimation In Tropical Regions. Journal of the American Water Resources Association, 2016, 52, 1155-1169. | 1.0 | 14 |
| 118 | Business leaders. Nature Climate Change, 2011, 1, 426-427. | 8.1 | 13 |
| 119 | Balancing Water for Humans and Nature. , 0, , . | | 13 |
| 120 | Scientific mobilization of keystone actors for biosphere stewardship. Scientific Reports, 2022, 12, 3802. | 1.6 | 13 |
| 121 | Suitability of Water Harvesting in the Upper Blue Nile Basin, Ethiopia: A First Step towards a Mesoscale Hydrological Modeling Framework. Advances in Meteorology, 2016, 2016, 1-12. | 0.6 | 12 |
| 122 | Is wetter better? Exploring agriculturally-relevant rainfall characteristics over four decades in the Sahel. Environmental Research Letters, 2021, 16, 035002. | 2.2 | 12 |
| 123 | Potential feedbacks between loss of biosphere integrity and climate change. Global Sustainability, 2019, 2, . | 1.6 | 11 |
| 124 | Global food production in a water-constrained world: exploring â€˜greenâ€™ and â€˜blueâ€™ challenges and solutions. , 2011, , 131-152. | | 10 |
| 125 | Analytically tractable climateâ€“carbon cycle feedbacks under 21st century anthropogenic forcing. Earth System Dynamics, 2018, 9, 507-523. | 2.7 | 9 |
| 126 | Resolving ecological feedbacks on the ocean carbon sink in Earth system models. Earth System Dynamics, 2021, 12, 797-818. | 2.7 | 8 |

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| 127 | Stockholm to Stockholm: Achieving a safe Earth requires goals that incorporate a just approach. One Earth, 2021, 4, 1209-1211. | 3.6 | 7 |
| 128 | A â€˜perfectâ€™ agreement in Paris is not essential. Nature, 2015, 527, 411-411. | 13.7 | 5 |
| 129 | The EATâ€“Lancet Commission: a flawed approach? â€“ Authors' reply. Lancet, The, 2019, 394, 1141-1142. | 6.3 | 5 |
| 130 | Watershed development as a growth engine for sustainable development of rainfed areas. , 2011, , 35-52. | | 4 |
| 131 | Human well-being in the Anthropocene: limits to growth. Global Sustainability, 2021, 4, . | 1.6 | 4 |
| 132 | Energy and Environment. , 0, , 191-254. | | 2 |
| 133 | Managing the global commons. Our Planet: the Magazine of the United Nations Environment Programme, 0, 2017, 26-27. | 0.0 | 1 |
| 134 | Conference Covered Climate from All Angles. Science, 2009, 324, 881-882. | 6.0 | 0 |
| 135 | The role played by water in the biosphere. , 0, , 2-44. | | 0 |
| 136 | Human modification of the Earth System. , 0, , 46-67. | | 0 |
| 137 | Crucial functioning of and human dependence on the global water system. , 0, , 94-140. | | 0 |
| 138 | Food production: a mega water challenge. , 0, , 142-171. | | 0 |
| 139 | Closing the yield gap in the savannah zone. , 0, , 172-193. | | 0 |
| 140 | Pathways to the future. , 0, , 250-276. | | 0 |
| 141 | Reply to comment on â€˜Up-scaling potential impacts on water flows from agricultural water interventions: opportunities and trade-offs in the Osman Sagar catchment, Musi sub-basin, Indiaâ€™.Hydrological Processes27: 3905-3921 by Boumaet al.,. Hydrological Processes, 2014, 28, 3352-3355. | 1.1 | 0 |
| 142 | Governance for navigating the novel freshwater dynamics of the Anthropocene. , 0, , 226-249. | | 0 |
| 143 | Delineating the Plate Boundaries: A Review of Integrated Metrics for Healthy and Environmentally Sustainable Diets. , 2020, , 339-350. | | 0 |
| 144 | Obituary for Paul J. Crutzen. Global Sustainability, 2021, 4, . | 1.6 | 0 |