

Curriculum Vitae

Prof. Dr.-Ing. habil. Jörn Birkmann

* 20 October 1972

University of Stuttgart
Institute of Spatial and Regional Planning
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70569 Stuttgart
Germany

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Professional Experience

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| Since Oct 2014 University of Stuttgart | Head of the Institute of Spatial and Regional Planning, full professor and chair of Spatial Development and Environmental Research (W3 with leadership function) |
| Oct 2012 – Apr 2013 Ludwig Maximilian University of Munich | Temporary professorship at the Ludwig Maximilian University, Department of Geography, professor for Human Geography with a special focus on sustainable development |
| Jan 2007 – Sept 2014 United Nations University | Head of the Vulnerability Assessment, Risk Management and Adaptive Planning Section , Institute for Environment and Human Security (UNU-EHS) |
| Sept 2004 – Jan 2007 United Nations University | Scientific Advisor , Institute for Environment and Human Security (UNU-EHS) |
| Jan 1999 – Aug 2004 TU Dortmund | Researcher and Senior Lecturer at the Faculty of Spatial Planning |

Study Record

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| 2010 University of Bonn | Associate Professor , Department of Geography, Mathematical-Natural Science Faculty |
| 2009 University of Bonn | Habilitation (postdoctoral lecture qualification), Mathematical-Natural Science Faculty, for the field of Geography |
| July 2003 TU Dortmund | PhD Dr.-Ing. engineering research doctorate earned with the appraisal 'Outstanding', Faculty of Spatial Planning |
| 1993 – 1998 TU Dortmund | Studies of Spatial Planning; Master's Degree (Diploma): grade 1.2 |

Honors/Awards

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| 2022 Call to University of Vienna | Call to the chair "Spatial Research and Spatial Planning" at the University of Vienna - rejected |
| Since 2022 Member | Scientific Advisory Board on Spatial Development of the Federal Ministry for Housing, Urban Development and Building |
| 2019 – 2022 Coordinating Lead Author | Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report (AR6) |
| 2019 – 2022 Member | German Committee Future Earth |
| 2013 - 2020 Member | Committee of the IRDR Integrated Research on Disaster Risk |
| 2011 - 2014 Member | IOC/UNESCO Expert Group "Coastal Hazards" |
| 2009 - 2014 Lead Author | Intergovernmental Panel on Climate Change, (IPCC) , Working Group II, Fifth Assessment Report (AR5) |
| Since 2009 Full Member | Academy for Territorial Development in the Leibniz Association |
| 2008 – 2009 Member | Expert Group of the World Meteorological Organization "Flood Risk Mapping" |
| 2004 Award | ' Doctoral Dissertation Award 2004 ' conferred by the University of Dortmund |

Selected Research Projects

In the last three years, the average amount of third-party funding raised per year was around 2 million euros.

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| 2022 – 2026 Ministry of Regional Development and Housing Baden-Wuerttemberg Lead | Spatial Analysis: Development of a Spatial Monitoring in the Context of the New Drafting of the State Development Plan for Baden-Wuerttemberg [Lead: Prof. Birkmann, Budget: 1.3 Mio. €, Budget Birkmann 699.595€] |
| 2022 –2026 German Agency for International Cooperation/GIZ | Urban-Act: Strategies and models for integrated urban climate action for low-carbon and resilient cities (USTUTT-Urban Act) [Budget 806.000€; Budget Birkmann 408.485€] |
| 2021 –2024 BMBF Lead | KAHR: Scientific monitoring of the reconstruction processes after the flood disaster in Rhineland-Palatinate and North Rhine-Westphalia: Impulses for resilience and climate adaptation [Lead Prof. Birkmann; Budget 5.2 Mio. €; Budget Birkmann 728.000€] https://www.hochwasser-kahr.de |
| 2021 –2023 BMBF Lead | RESI-extrem II: Resilience building after extreme events: lessons learned and new approaches in dealing with spatially ubiquitous extreme events – case studies Schwaebisch Gmuend and Olfen [Lead: Prof. Birkmann; Budget 790.212€; Budget Birkmann 254.381€] |

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| <p>2021 –2025 BMBF</p> | <p>LIRLAP II: Research and development phase. Linking disaster risk governance and land-use planning: the case of informal settlements in hazard prone areas in The Philippines; [Lead Prof. Greiving; Budget 2.1 Mio. €; Budget Birkmann 485.000€]</p> |
| <p>2020 –2026 ERC Co-Lead</p> | <p>ERC-Synergy Grant: “urbisphere”. [4 PIs - Prof. Birkmann, Prof. S. Grimmond/University of Reading, England, Prof. N. Chrysoulakis/FORTH - Greece, Remote Sensing Lab and Prof. A. Christen/University of Freiburg; Budget 12.7 Mio. €; Budget Birkmann 2.5 Mio €;] https://cordis.europa.eu/project/id/855005/de</p> |
| <p>2020 –2023 BMBF Lead</p> | <p>ISAP: Integrative city-regional adaptation strategies in a growing polycentric region: case study – region of Stuttgart [Lead Prof. Birkmann; Budget 2 Mio. €; Budget Birkmann 647.000€]</p> |
| <p>2020 –2022 BMBF Lead</p> | <p>ZURES II: Application and implementation of future oriented climate- and vulnerability-scenarios in selected tools and planning processes – case study City of Ludwigsburg [Lead Prof. Birkmann; Budget 743.500€; Budget Birkmann 235.457€]</p> |
| <p>2019 –2020 Ministry of Rural Affairs and Consumer Protection Baden-Wuerttemberg (MLR) Lead</p> | <p>IREUS II Study: Development of rural areas in Baden-Wuerttemberg [Lead Prof. Birkmann/Prof. Siedentop (ILS); Budget 147.000€; Budget Birkmann 70.000€]</p> |
| <p>2018 –2020 BMBF</p> | <p>LIRLAP: Linking disaster risk governance and land-use planning: the case of informal settlements in hazard prone areas in The Philippines (LIRLAP) [Lead Prof. Greiving, Budget 670.000€; Budget Birkmann 150.826€]</p> |
| <p>2017 –2020 BMBF Lead</p> | <p>RESI-extrem: Resilience building after extreme events: lessons learned and new approaches in dealing with spatially ubiquitous extreme events – case studies Schwaebisch Gmuend and Olfen [Lead: Prof. Birkmann; Budget 1 Mio.€; Budget Birkmann 333.000€]</p> |
| <p>2016 –2019 BMBF Lead</p> | <p>ZURES: Future oriented climate- and vulnerability-scenarios as tools to promote resilience of cities – case study Bonn and Ludwigsburg [Lead: Prof. Birkmann, Budget 1.1 Mio.€; Budget Birkmann 263.728€]</p> |
| <p>2016 –2019 EC</p> | <p>STORM: Safeguarding Cultural Heritage through Technical and Organisational Resources Management) [Lead: Prof. Boj; Budget 7. Mio. €; Budget Birkmann 447.500€]</p> |
| <p>2014 –2017 EC</p> | <p>INTACT: Impact of Extreme Weather Events on Critical Infrastructures [Lead: Willems/TNO (The Netherlands Organisation for Applied Scientific Research); Budget 3.4 Mio. €, Budget Birkmann 242.000€* (*always EC Contribution only)]</p> |
| <p>2014 –2018 EC</p> | <p>PEARL: Preparing for Extreme And Rare events in coastal regions [Lead: Dr. Z. Vojinovic/UNESCO-IHE (IHE-Delft); Budget 6.5 Mio. €; Budget Birkmann 222.024€].</p> |

A complete list of the projects can be found on the website of the Institute of Spatial and Regional Planning: <https://www.ireus.uni-stuttgart.de/en/Research/Projects/>

Service/Membership/Esteem

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| Co-Editor of scientific journals | Journal of Extreme Events https://www.worldscientific.com/page/joee/editorial-board |
| Editorial board member | International Journal of Disaster Risk Reduction https://www.journals.elsevier.com/international-journal-of-disaster-risk-reduction/editorial-board/jorn-birkmann |
| Since 2021 Member | Climate Innovation Council of the City of Stuttgart |
| Since 2020 Chairman | Scientific Advisory Board of the Leibniz Institute of Ecological Urban and Regional Development (IÖR) in Dresden |
| 2012 – 2015 Member | National Platform “Zukunftsstadt” , Working Group “„klimaangepasste, resiliente und wandlungsfähige Stadt” |
| Since 2019 Member | Sustainability advisory board of the State Government of Baden-Wuerttemberg |
| 2005 – 2011 Head | Expert Group of the Academy of Spatial Research and Planning (ARL) on “Climate Change and Spatial Development” |
| 2006 – 2010 Member | Expert-Group of the Academy of Spatial Research and Planning (ARL) “Risk Management as a Key Area for Spatial Planning” |

Impact

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| ERC-Synergy Grant | The ERC-Synergy grant “urbisphere” shows the excellence of research and takes into account an additional aspect – the outstanding intrinsic synergetic effect of scientific cooperation between very different disciplines. |
| Vulnerability Concepts | Vulnerability assessment concepts and frameworks are integrated into international guidelines, for example for coastal zone management. |
| Science Communication | Important findings of Prof. Birkmann’s research have been taken up in the national and international media, for example in the New York Times, The Guardian or the Tagesspiegel (print media) and in television and radio, for example the second German Channel (ZDF) or science TV- like Odysso (e.g. minute 28); available: https://www.ardmediathek.de/video/odysso-wissen-im-swr/ein-jahr-danach-welche-lehren-ziehen-wir-aus-der-ahrtaflut/swr/Y3JpZDovL3N3ci5kZS9hZXgvbzE2ODg3Njk or e.g. SWR radio, available: https://www.swr.de/swr2/leben-und-gesellschaft/frust-nach-der-flut-was-wird-nun-aus-dem-ahrta-100.html |

Research Fields / Research Foci

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| Spatial planning, climate change, vulnerability and risk | Analysis of present and future impacts of climate change on spatial development, spatial functions and human vulnerability. Examination of coupling processes between climate change, climate change adaptation and human security – particularly in urban regions. Evaluation of opportunities and constraints of present planning systems and tools in dealing with climatic changes and dynamics of human vulnerability and risk. New paradigms and planning tools, such as ‘adaptive spatial and urban governance’ or ‘transformative planning’. |
| Sustainable Spatial Development, Resilience and Adaptive Planning | Theories and concepts of sustainable spatial development, adaptation and resilience. Analysis of different theories and concepts and their applicability in spatial development research and formal spatial planning. Development of new tools and approaches for formal and informal planning processes to strengthen resilience building and adaptive planning (e.g. online information systems, scenario approaches). Evaluation of the benefits and constraints of city-regional cooperation in terms of adaptation to climate change and sustainable settlement and transport planning. |
| Indicators, Assessments and Evaluation Tools | Development of tools to assess and evaluate socio-economic trends and environmental change. Concepts and approaches for spatial monitoring systems – including evaluation tools. Quantitative and qualitative methods to assess adaptive capacities of people, economic sectors and institutions to deal with complex environmental, socio-economic and political changes. Enhancement of planning methods for integrated infrastructure and settlement development. Evaluation of urban upgrading and resettlement projects. |
| Coupled Social-Ecological Systems | Research regarding coupled social-ecological systems under pressure. Analysis of the impacts of extreme events and human interventions on coupled social-ecological systems, particularly in urban and peri-urban environments. Evaluation of respective feedback- und regulation-processes. Identification of emerging risks due to environmental and societal changes. |

**List of Scientific Publications BIRKMANN, Joern (Jörn);
ORCID: 0000-0001-8733-3964; Scopus author ID: 21733408600
(Selection)**

**over 100 scientific publications;
in Scopus listed at present 88 documents; H-Index 31**

Key Publications

Birkmann, J. Jamshed, A., McMillan, J.M., Feldmeyer, D., Totin, E., Solecki, W., Ibrahim, Z.Z., Roberts, D. Kerr, E.B., Poertner, H.O., Pelling, M., Djalante, R., Garschagen, M., Filho, W.L., Sapir, D.G., Alegria, A. (2022): Understanding human vulnerability to climate change: A global perspective on index validation for adaptation planning. *Science of the Total Environment*, Vol 803, 150065, DOI: <https://doi.org/10.1016/j.scitotenv.2021.150065>

Birkmann, J., Feldmeyer, D., McMillan, J.M., Solecki, W., Totin, E., Roberts, D., Trisos, C., Jamshed, A., Boyd, E., Wrathall, D. (2021): Regional clusters of vulnerability show the need for transboundary cooperation. *Environmental Research Letters*, Vol 16, 094052. DOI: <https://doi.org/10.1088/1748-9326/ac1f43>

O'Neill, B., Oppenheimer, M., Warren, R., Hallegatte, S., Kopp, R., Pörtner, H.O., Scholes, R., **Birkmann, J.**, Foden, W., Licker, R., Mach, K., Marbaix, P., Mastrandrea, M., Price, J., Takahashi, K., Van Ypersele, J.P., Yohe, G. (2017): IPCC reasons for concern regarding climate change risks, *Nature Climate Change* 7, 28-37. (97 times cited/ web of science)
<https://doi.org/10.1038/nclimate3179>
(available online: www.nature.com/articles/nclimate3179)

O'Neill, B., Kriegler, E., Ebi, K.L., Kemp-Benedict, E., Riahi, K., Rothman, D., van Ruijven, B., van Vuuren, D., **Birkmann, J.**, Kok, K., Levy, M., Solecki, W. (2017): The roads ahead: Narratives for shared socioeconomic pathways describing world futures in the 21st century, *Global Environmental Change* 42, 169-180. (958 times cited/ web of science)
<https://doi.org/10.1016/j.gloenvcha.2015.01.004>

Birkmann, J., Welle, T., Solecki, W., Lwasa, S., Garschagen, M. (2016): Boost resilience of small and mid-sized cities – Smaller settlements are growing faster than megacities – and they need more protection from extreme events, *Nature*, 537, 605-608. (79 times cited/ web of science)
<https://www.nature.com/news/boost-resilience-of-small-and-mid-sized-cities-1.20667>

Scientific articles in journals – peer-reviewed (selection):

2023

Truedinger A., Jamshed A., Sauter, H., Birkmann, J. (2023): Adaptation after Extreme Flooding Events: Moving or Staying? The Case of the Ahr Valley in Germany, *Sustainability* 15(2):1407. DOI: [10.3390/su15021407](https://doi.org/10.3390/su15021407)

2022

Birkmann, J. Jamshed, A., McMillan, J.M., Feldmeyer, D., Totin, E., Solecki, W., Ibrahim, Z.Z., Roberts, D. Kerr, E.B., Poertner, H.O., Pelling, M., Djalante, R., Garschagen, M., Filho, W.L., Sapir, D.G., Alegria, A. (2022): Understanding human vulnerability to climate change: A global perspective on index validation for adaptation planning. *Science of the Total Environment*, Vol 803, 150065. DOI: <https://doi.org/10.1016/j.scitotenv.2021.150065>

Iqbal, N., Ravan, M., Jamshed, A., Birkmann, J., Somarakis, G., Mitrika, Z., Chrysoulakis, N. (2022): Linkages between Typologies of Existing Urban Development Patterns and Human Vulnerability to Heat Stress in Lahore. *Sustainability*, 14(17), 10561. DOI: <https://doi.org/10.3390/su141710561>

McMillan, J.M., Birkmann, J., Tangwanichagapong, S., Jamshed, A. (2022): Spatial Planning and Systems Thinking Tools for Climate Risk Reduction: A Case Study of the Andaman Coast, Thailand. *Sustainability* 14:8022. DOI: <https://doi.org/10.3390/su14138022>

Puntub, W, Schnittfinke, T; Fleischhauer, M., Birkmann, J., Garschagen, M., Sandholz, S., Wannewitz, M. (2022): Linking science and practice in participatory future-oriented assessment and planning of human heat stress vulnerability in Bonn, Germany. *Journal of Environmental Planning and Management*. DOI: [10.1080/09640568.2022.2043260](https://doi.org/10.1080/09640568.2022.2043260)

2021

Birkmann, J., Feldmeyer, D., McMillan, J.M., Solecki, W., Totin, E., Roberts, D., Trisos, C., Jamshed, A., Boyd, E., Wrathall, D. (2021): Regional clusters of vulnerability show the need for transboundary cooperation. *Environmental Research Letters*, Vol 16, 094052. DOI: <https://doi.org/10.1088/1748-9326/ac1f43>

Birkmann, J., Sauter, H., Garschagen, M., Fleischhauer, M., Puntub, W., Klose, C., Burkhardt, A., Götsche, F., Laranjeira, K., Müller, J., Büter, B. (2021): New methods for local vulnerability scenarios to heat stress to inform urban planning – Case Study City of Ludwigsburg/Germany. *Climatic Change* 165 (1): DOI: [10.1007/s10584-021-03005-3](https://doi.org/10.1007/s10584-021-03005-3)

Jamshed, A., Birkmann, J., McMillan J., RANA, I.A., Feldmeyer, D., Sauter, H (2021) How do rural-urban linkages change after an extreme flood event? Empirical evidence from rural communities in Pakistan. *Science of the Total Environment*, Vol 750C, 141462. DOI: <https://doi.org/10.1016/j.scitotenv.2020.141462>

Wendnagel-Beck, A., Ravan, M., Iqbal, N., Birkmann, J., Somarakis, G., Hertwig, D., Grimmond, S. (2021): Characterizing Physical and Social Compositions of Cities to Inform Climate Adaptation: Case Studies in Germany. *Urban Planning* 6(4), 321-337. DOI: <https://doi.org/10.17645/up.v6i4.4515>

Maru, M., Worku, H., Birkmann, J (2021): Factors affecting the spatial resilience of Ethiopia's secondary cities to urban uncertainties: A study of household perceptions of Kombolcha city. *HELIYON*. DOI: <http://dx.doi.org/10.1016/j.heliyon.2021.e08472>

Feldmeyer, D., Nowak, W., Jamshed, A., Birkmann, J. (2021): An open resilience index: crowdsourced indicators empirically developed from natural hazard and climatic event data. *Science of the Total Environment*, Vol 774, 145734. DOI: <https://doi.org/10.1016/j.scitotenv.2021.145734>

Leal, W; Stringer, LC; Totin, E; Djalante, R., Pinho, P., Mach, KJ; Carril, LRF; Birkmann, J; Pandey, R; Wolf, F (2021): Whose voices, whose choices? Pursuing climate resilient trajectories for the poor. *Environmental Science and Policy* 121. DOI: [10.1016/J.ENVSOCI.2021.02.018](https://doi.org/10.1016/J.ENVSOCI.2021.02.018)

Feldmeyer, D; Birkmann, J; McMillan, JM; Stringer, L; Filho, WL; Djalante, R; Pinho, PF; Liwenga, E. (2021): Global vulnerability hotspots: differences and agreement between international indicator-based assessments. *Climatic Change* 169 (1-2). DOI: [10.1007/s10584-021-03203-z](https://doi.org/10.1007/s10584-021-03203-z)

Jamshed, A., Birkmann, J., McMillan, J. M., Rana, I. A., Feldmeyer, D., Sauter, H. (2021): How do rural-urban linkages change after an extreme flood event? Empirical evidence from rural communities in Pakistan. *Science of the Total Environment* 750, 141462. DOI: [10.1016/j.scitotenv.2020.141462](https://doi.org/10.1016/j.scitotenv.2020.141462)

Lauer, H., Delos Reyes, M., Birkmann, J. (2021): Managed Retreat as Adaptation Option: Investigating Different Resettlement Approaches and Their Impacts – Lessons from Metro Manila. *Sustainability* 13, no. 2: 829. DOI: <https://doi.org/10.3390/su13020829>

2020

Birkmann, J., Sauter, H., Jamshed, A., Sorg, L., Fleischhauer, M., Sandholz, S., Wannewitz, M., Greiving, S., Bueter, B., Schneider, M., Garschagen, M. (2020): Strengthening risk-informed decision-making: scenarios for human vulnerability and exposure to extreme events, *Disaster Prevention and Management* 29(5), 663-679.

Jamshed, A., Birkmann, J., Rana, I.A., Feldmeyer, D. (2020): The effect of spatial proximity to cities on rural vulnerability against flooding. *Ecological Indicators*, Vol 118, 106704. DOI: <https://doi.org/10.1016/j.ecolind.2020.106704>.

Jamshed, A., Birkmann, J., Rana, I.A., McMillan; J.M. (2020): Relevance of city size to the vulnerability of surrounding rural areas: an empirical study of flooding in Pakistan. *International Journal of Disaster Risk Reduction*, Vol 48, 101601. DOI: <https://doi.org/10.1016/j.ijdrr.2020.101601>

Feldmeyer, D., Wilden, D., Jamshed, A., Birkmann, J., (2020): Validation of indicators and aggregation method of regional climate resilience indicators. *Ecological Indicators*, Vol 119, 106861. DOI: <https://doi.org/10.1016/j.ecolind.2020.106861>.

Jamshed, A., Birkmann, J., Feldmeyer, D., Rana, I.A. (2020): A conceptual framework understand the dynamics of rural-urban linkages for rural flood vulnerability. *Sustainability*, Vol 12, No 7, 2894. DOI: <https://doi.org/10.3390/su1207289>

Feldmeyer, D., Wilden, D., Jamshed, A., Birkmann, J. (2020): Regional climate resilience index: A novel multimethod comparative approach for indicator development, empirical validation and implementation. *Ecological indicators* 119, 106861. DOI: [10.1016/j.ecolind.2020.106861](https://doi.org/10.1016/j.ecolind.2020.106861)

Weisser, B., Jamshed, A., Birkmann, J., McMillan, J. (2020): Building Resilience After Climate-Related Extreme Events: Lessons Learned from Extreme Precipitation in Schwäbisch Gmünd. *Journal of Extreme Events* 7/1. doi.org/10.1142/S2345737620500104

Almeida, L., de Araujo, A., Welle, T., Birkmann, J. (2020): DRIB Index 2020: Validating and enhancing disaster risk indicators in Brazil. *International Journal of Disaster Risk Reduction* 42, 101346. DOI: <https://doi.org/10.1016/j.ijdrr.2019.101346>

Lecina-Diaz, J., Martinez-Vilalta, J., Alvarez, A., Banque, M., Birkmann, J., Feldmeyer, D., Vayreda, J., Retana, J. (2020): Characterizing forest vulnerability and risk to climate-change hazards. *Frontiers in Ecology and the Environment*. DOI: [DI 10.1002/fee.2278](https://doi.org/10.1002/fee.2278)

Jamshed, A., Birkmann, J., Rana, I. A., McMillan, J. M. (2020): The relevance of city size to the vulnerability of surrounding rural areas: An empirical study of flooding in Pakistan. *International Journal of Disaster Risk Reduction*, 2212-4209.

Feldmeyer, D., Meisch, C., Sauter, H., Birkmann, J. (2020): Using OpenStreetMap Data and Machine Learning to Generate Socio-economic Indicators, *International Journal of Geo-Information* 9(9), 498. DOI: <https://doi.org/10.3390/ijgi9090498>

2019

Jamshed, A., Ahmad Rana, I., Maqsood Mirza, U., Birkmann, J. (2019): Assessing the relationship between vulnerability and capacity: An empirical study on rural flooding in Pakistan. *International Journal of Disaster Risk Reduction* 36. DOI: doi.org/10.1016/j.ijdrr.2019.101109

Jamshed; I.A. Rana, J. McMillan; J. Birkmann (2019): Building Community Resilience in Post-Disaster Resettlement in Pakistan. *International Journal of Disaster Resilience in the Built Environment* 10(4). DOI: <https://doi.org/10.1108/IJDRBE-06-2019-0039>

Ravankhah, M., de Wit, R., Argyriou, A., Chliaoutakis, A., Revez, M., Birkmann, J., Žuvela-Aloise, M., Sarris, A., Tzigounaki, A., Giapitsoglou, K (2019): Integrated Assessment of Natural Hazards, Including Climate Change's Influences, for Cultural Heritage Sites: The Case of the Historic Centre of Rethymno in Greece. *International Journal of Disaster Risk Science* 09/01, 343-361.

2018

Feldmeyer, D., Birkmann, J., Welle, T. (2018): Development of Human Vulnerability 2012 – 2017, *Journal of Extreme Events*, Vol. 04/04. DOI: [10.1142/S2345737618500057](https://doi.org/10.1142/S2345737618500057)

Jamshed, A., Rana, I.A., Birkmann, J., Nadeem, O.(2018): Changes in Vulnerability and Response Capacities of Rural Communities After Extreme Events: Case of Major Floods of 2010 and 2014 in Pakistan, *Journal of Extreme Events*, Vol. 04/03. DOI: [10.1142/S2345737617500130](https://doi.org/10.1142/S2345737617500130)

Sorg, L., Medina, N., Feldmeyer, D., Sanchez, A., Vojinovic, Z., Birkmann, J., Marchese, A. (2018): Capturing the multifaceted phenomena of socioeconomic vulnerability. *Natural Hazards*, Vol.9/01; 257-282. DOI: [10.1007/s11069-018-3207-1](https://doi.org/10.1007/s11069-018-3207-1)

2017

O'Neill, B. C., Kriegler, E. Ebi, K. L., Kemp-Benedict, E., Riahi, K., Rothman, D. S., van Ruijven, B. J., van Vuuren, D. P., Birkmann, J., Kok, K., Levy, M., Solecki, W. (2017): The roads ahead: Narratives for shared

socioeconomic pathways describing world futures in the 21st century. *Global Environmental Change*, Vol. 42, 169-180. DOI: [10.1016/j.gloenvcha.2015.01.004](https://doi.org/10.1016/j.gloenvcha.2015.01.004)

O'Neill, B. C., Oppenheimer, M., Warren, R. Hallegatte, S., Kopp, R. E., Pörtner, H. O., Scholes, R., Birkmann, J., Foden, W., Licker, R., Mach, K. J., Marbaix, P., Mastrandrea, M. D., Price, J., Takahashi, K., van Ypersele, J.-P., Yohe, G. (2017): IPCC reasons for concern regarding climate change risks. *Nature Climate Change* 7(1), 28-37. DOI: [org/10.1038/nclimate3179](https://doi.org/10.1038/nclimate3179)

Asadzadeh, A., Koetter, T., Salehi, P., Birkmann, J. (2017): Operationalizing a concept: The systematic review of composite indicator building for measuring community disaster resilience. *International Journal of Disaster Risk Reduction* 25, 147-162. DOI: [10.1016/j.ijdrr.2017.09.015](https://doi.org/10.1016/j.ijdrr.2017.09.015)

Welle, T., Birkmann, T. (2017): Measuring the Unmeasurable: Comparative Assessment of Urban Vulnerability for Coastal Megacities - New York, London, Tokyo, Kolkata and Lagos. *Journal of Extreme Events*, Vol. 03/ 03 (14 pages). DOI: [10.1142/S2345737616500184](https://doi.org/10.1142/S2345737616500184)

Birkmann, J., Wenzel, F., Greiving, S., Garschagen, M., Valée, D., Nowak, W., Welle, T., Fina, S., Goris, A., Rilling, A., Friedrich, F., Fekete, F., Cutter, S. L., Düzgün, S., Ley, A., Friedrich, M., Kuhlmann, U., Novák, B., Wieprecht, S., Riegel, C., Thieken, A., Rhiyner, J., Ulbrich, U. and Mitchell, J. K. (2017): Extreme Events, Critical Infrastructures, Human Vulnerability and Strategic Planning: Emerging Research Issues, *Journal of Extreme Events*, Vol. 03/04 (25 pages). DOI: [10.1142/S2345737616500172](https://doi.org/10.1142/S2345737616500172)

Birkmann, J., Agboola, J. I., Welle, T., Aho, M., Odunuga, M., von Streit, J., Pelling, M. (2017): Vulnerability, Resilience and Transformation of Urban Areas in the Coastal Megacity Lagos: Findings of Local Assessments and a Household Survey in Highly Exposed Areas. *Journal of Extreme Events*, Vol. 03/03 (24 pages). DOI: [10.1142/S2345737616500196](https://doi.org/10.1142/S2345737616500196)

2016

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