



## Summary

> 80 peer-reviewed publications

> €3.2 million own funding

> 50 invited talks, 6 keynotes

Academic age: 7 years

## Contact

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## Personal data

Birth date: 21.09.1990

Nationalities: Portuguese  
and Brazilian

Children: one child (2024)

## Research focus

Climate change impacts

NLP, machine learning & AI

Inter-and-transdisciplinary  
research

Human-water relationships

Climate justice

Leader of the Group 'Computational Social Sciences for Extreme Events'

# Prof. Dr. Mariana Madruga de Brito

## ACADEMIC POSITIONS

<b>W2 Professor</b> <i>Geography of the Society and the Environment</i> , Leipzig University	2026-now
<b>Group Leader</b> , Helmholtz Centre for Environmental Research, Germany	2023-now
<b>Postdoctoral Researcher</b> , Department of Urban and Environmental Sociology, Helmholtz Centre for Environmental Research, Germany	2019-2023
<b>Postdoctoral Researcher</b> , Geography Institute, University of Bonn, Germany	2018-2019
<b>Ph.D. Candidate</b> , Geography Institute, University of Bonn, Germany	2015-2018
<b>Teaching Assistant</b> , Danish Technical University (DTU), Denmark	2014-2014
<b>Research Assistant</b> , Centre for Disaster Studies (CEPED), Brazil	2010-2014

## EDUCATION

<b>Ph.D. in Geography</b> - University of Bonn, Germany. Thesis: A participatory multicriteria approach for flood vulnerability assessment <b>Magna cum Laude</b>	01.15-07.18
<b>M.Sc. Exchange</b> - University of Freiburg, Germany (DAAD scholarship)	01.14-03.14
<b>M.Sc. in Engineering</b> - Federal University of Rio Grande do Sul, Brazil <b>GPA 10/10</b>	03.12-07.14
<b>B.Sc. in Environmental Engineering</b> , Lutheran University of Brazil <b>GPA 9.08/10</b>	03.07-12.11

## RESEARCH STAYS

<b>Vrije Universiteit Amsterdam, Netherlands</b> - Inst. for Environmental Studies	08.22-08.22
<b>German Research Center for Geosciences, Germany</b> - Hydrology Section	11.21-12.21
<b>University of Vigo, Spain</b> – Depart. of Statistics and Operational Research	02.19-03.19
<b>Alpen-Adria-Universität Klagenfurt, Austria</b> - Institute of Geography	11.17-12.17
<b>Federal University of Rio Grande do Sul, Brazil</b> - Depart. of Civil Engineering	05.16-08.16
<b>Danish Technical University, Denmark</b> - National Space Institute	08.14-12.14

## RESEARCH FUNDING AND GRANTS

### As principal investigator (PI) or coordinator (total: €3.2 million own funding)

<b>CLIMES</b> : Understanding and predicting impacts of climate extremes under global change (Marie Curie Doctoral Network, €290.000 own share) - <b>PI</b>	2026-2030
<b>CASCADE</b> : Cascading impacts of climate extremes: new perspectives for interlinking ESS in Leipzig (Volkswagen Stiftung, €1.670.000) - <b>Coordinator</b>	2026-2031
<b>In4Nile</b> : Advancing Water Quality Information in the Nile River Basin (Helmholtz Association, €700.000, €180.000 own share) - <b>PI</b>	2026-2029
<b>IDEAS</b> : Helmholtz School for Integrated Data Science in Environmental and Life Sciences (Helmholtz Association, €3.000.000, €200.000 own share) - <b>PI</b>	2026-2030
<b>Climate discourse</b> : Linking public discourse on climate extremes to political action (Leipzig University, €215.000) - <b>Coordinator</b>	2025-2027
<b>SEESAW</b> : Societal and Environmental impacts of complex extremes in a changing World (Helmholtz Association, €200.000 own share) - <b>PI</b>	2025-2028

<b>EXTREME-ADAPT:</b> Quantifying the effect of adaptation measures on spatio-temporal changes in flood and drought risk (Helmholtz Association, €500.000, €125.000 own share) - <i>Coordinator</i>	2025-2027
<b>Graduate School Governance monitor</b> (Helmholtz Association, €200.000 own share) - <i>PI</i>	2023-2026
<b>Graduate School Thirsty Cities:</b> Pathways for water-resilient urban transformation and agricultural adaptation - (Helmholtz Association, €180.000 own share) - <i>Coordinator</i>	2021-2024

### As co-PI or contributor

<b>Optimization of the EGU scheduling</b> (EGU Special Activity Funding, €28.000) - <i>co-PI</i>	2025-2026
<b>Urban transformation pathways, sustainable governance, and urban resilience building</b> (Merian Institute for Advanced Studies in Africa - MIASA and BMBF, €50.000) - <i>contributor</i>	2023-2024
<b>A state-of-the-art impacts database of European climate extremes from the mining of online texts</b> (Swedish Research Council, €150.000) - <i>co-PI</i>	2023-2026
<b>PARADeS</b> - Participatory assessment of flood-related disaster prevention and development of an adapted coping system in Ghana (BMBF, €1.800.000) - <i>contributor, proposal writer</i> <a href="#">[Link]</a>	2018-2019

### SCHOLARSHIPS

<b>Early Career Short-Term Scientific Mission Grant</b> at VU Amsterdam. Prof. Philip Ward (COST DAMOCLES, €1.800)	2022-2022
<b>HIDA Trainee Network on Machine Learning</b> at GFZ. P.D. Heidi Kreibich (Helmholtz Association, €2.800)	2021-2021
<b>Early Career Short-Term Scientific Mission Grant</b> at Vigo University. Prof. Juan Puga (COST Land4Floods, €2.500)	2019-2019
<b>Ph.D. Scholarship</b> - DAAD (€78.000)	2015-2018
<b>University Winter Course Scholarship</b> - DAAD (€3.000)	2014-2014
<b>Multiple M.Sc. scholarships</b> - CNPq, FAPERGS, and Brazilian National Civil Defense (~€10.000)	2013-2014

### AWARDS

<b>Arne Richter Award for Outstanding Early Career Scientists</b> - European Geosciences Union <a href="#">[Link]</a>	2025
<b>Best research presented at the “IV Encontro Nacional de Desastres”</b> - ABRH	2024
<b>First prize for Jan Sodoge’s project at the HIDA Annual Conference</b> (Main supervisor)	2021
<b>Best oral presentation at the “Dangerous Landscapes” conference.</b> Hannover, Germany. Volkswagen Stiftung	2017

### TEACHING

- Regular teaching at Leipzig University e.g. for M.Sc. “Urban Geography”. Total portfolio of 3 classes.
- Taught several Training Schools including the “Latin America Hydrology Summer School” in Brazil, the “3<sup>rd</sup> Como Training School on compound events” in Italy, the “Attributing impacts of climate change (i2c): challenges, methods, and perspectives” in France, the “Centre of Natural Hazards and Disaster Science (CNDS) Summer school” in Sweden.

### SUPERVISION

- **2 Postdoc projects supervised and 2 ongoing** at the Helmholtz Centre for Environmental Research (3 female, 1 male)
- **4 PhD projects supervised and 8 ongoing supervisions** as adviser or co-adviser with defenses at Potsdam University (*Summa cum Laude*), Leipzig University, University of Valencia and Federal University of Rio Grande do Sul (7 female, 4 male, 1 diverse)
- **7 MSc and 1 BSc theses** as adviser or co-adviser at Leipzig University, Freie Universität Berlin, Potsdam University, Weimar University, Graz University, Federal University of Rio Grande do Sul (4 female, 1 male, 2 diverse)

### MENTORING

Mentor for the <b>Mentoring<sup>3</sup> program</b> , Universität Duisburg-Essen	2023
Mentor for the <b>EGU General Assembly mentoring program</b>	2023
Mentor for the <b>Journal Disaster Prevention and Management</b> in the special issue for inclusive disaster studies	2021

## KEYNOTES

Seminar Integrating Social-Ecological Justice and Digital Tools in Urban Greening, Barcelona, Spain	2026
16 <sup>th</sup> Sino German symposium on Science and Technology, Shanghai, China (Alexander von Humboldt Foundation)	2026
EU Science for Preparedness Conference, Turin, Italy	2025
German Conference on Natural Language Processing - KONVENS 2025, Hildesheim, Germany	2025
2 <sup>nd</sup> International School on Artificial Intelligence and Data Science Applications, Valencia, Spain	2025
2 <sup>nd</sup> International Sociohydrology Conference, Tokyo, Japan	2025
Workshop Multi-risk of extreme weather events: focus on economic, social and health dimensions, Berlin, Germany	2025
3 <sup>rd</sup> International Conference on Natural Hazards and Risks in a Changing World: Addressing Compound and Multi-Hazard Risk, Amsterdam, Netherlands	2024

## SOLICITED TALKS

More than 50 invited talks in 14 countries, including at Wien University, Tsinghua University, VU Amsterdam, Reading University, Uppsala University, World Meteorological Organization, l'Ecole Polytechnique, EURAC, Basque Centre for Climate Change.

## PANEL DISCUSSION MEMBER

EGU Great Debate - The Role of Large Language Models in Transforming Geosciences: Friend, Foe, or Fad?	2025
Social Science Communication - 1st Regional Scientific Workshop, World Meteorological Organization, Romania	2023
Remaining gaps and future research in hydrology - Panta Rhei Symposium, Germany	2023
Hydrological Phenomena & Human Behavior - Frontiers in Hydrology Conference, Puerto Rico	2022
Science for Society - HGF-IASS Integration Committee, Germany	2022

## FUNCTIONS IN SCIENTIFIC SOCIETIES

Co-lead of the RISK-KAN Working Group "Multi-hazard vulnerability dynamics" <a href="#">[Link]</a>	2025-now
Scientific Committee (invited) - EM-DAT The International Disaster Database, CRED	2025-now
Member of the EGU Plinius Medal Committee - EGU	2025-now
Scientific and Technical Council (elected member) - Helmholtz Centre for Environmental Research	2022-now
Co-speaker of the UFZ Working Group "Social Science and Water Research" <a href="#">[Link]</a>	2021-now
Scientific Advisory Board (invited) - Einstein Research Unit Climate and Water under Change (CliWaC)	2022-2026

## KEY PUBLICATIONS

Number of citations in [Google Scholar](#): 2966; h-index: 26; h-10-index: 43. Number of peer-reviewed publications: 80

1. Carvalho, T.M.N., Niekler, A., Kuhlicke, C., Zscheischler, J., **de Brito, M.M.** (2026) Climate hazard impact research underrepresents vulnerable countries and cascading socioeconomic impacts. *Communications Earth and Environment*.
2. **de Brito, M.M.**, Sodoge, J., Kreibich, H., Kuhlicke, C. (2025) Comprehensive assessment of flood socioeconomic impacts using text as data. *Water Resource Research*. doi:10.1029/2024WR037813
3. **de Brito, M.M.**, Sodoge, J., Fekete, A., Hagenlocher, M., Koks, E., Kuhlicke, C., Messori, G., de Ruyter, M., Schweizer, P., Ward, P.J. (2024) Uncovering the dynamics of multi-sector impacts of hydrological extremes: a methods overview. *Earth's Future*. doi: 10.1029/2023EF003906
4. Alencar, P., Sodoge, J., Paton, E. N., **de Brito, M.M.** (2024) Flash droughts and their impacts-using newspaper articles to assess the perceived consequences of rapidly emerging droughts. *Environmental Research Letters*. doi: 10.1088/1748-9326/ad58fa
5. Carvalho, T.M.N., de Souza Filho, F.D.A., **de Brito, M.M.** (2024) Unveiling Water allocation dynamics: a text analysis of 25 years of stakeholder meetings. *Environmental Research Letters*. doi: 10.1088/1748-9326/ad37cd