

# Monica Caparas

Research Associate at Woodwell Climate Research Center  
monica.caparas18@gmail.com

## EDUCATION

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**Brown University, Sc.B.** Providence, RI | 2017  
Concentration in Mathematical Geophysics with a focus on climate and modeling

**Danish Institute for Study Abroad** Copenhagen, Denmark | 2015  
Focus on Environmental Sustainability in Northern European Cities

## PROFESSIONAL EXPERIENCE

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**Climate Risk Research Associate** Remote in Las Vegas, NV | 2019-Present  
*Woodwell Climate Research Center (formerly Woods Hole Research Center)*

- Collaborate with national and local governments (Democratic Republic of Congo, Summit County, Utah), research institutions (GeoHazards International, The Center For Climate & Security), private industries (Wellington Management, McKinsey & Company), and community-based and Indigenous organizations (Nevada Homeless Alliance, Te Kereru Associates) to identify, quantify, and visualize physical climate risks pertinent to cross-disciplinary interests, such as resiliency and adaptation, climate data accessibility, financial investment, and national security

**Biosphere & Climate Research Assistant** Providence, RI | 2015-2017  
*Brown University*

- Retrieved, analyzed, and visualized data from remote sensing satellites and climate models to understand the global water cycle, plant seasonality, and ocean-atmosphere interactions under a changing climate

**Water Quality Assistant** Las Vegas, NV | 2013  
*Clark County Water Reclamation District*

- Tested water samples throughout treatment process from wastewater to reclaimed public water to ensure quality compliance

## PEER-REVIEWED PUBLICATIONS

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**Caparas, M., Zobel, Z., Castanho, A. D. D. A., & Schwalm, C. R. (2021)** *Increasing risks of crop failure and water scarcity in global breadbaskets by 2030*. Environmental Research Letters

## POLICY BRIEFS

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1. Naegele, A., Gassert, K., Byrne, D., **Caparas, M.**, Dobler-Morales, C., Dusseau, D., Schwalm, C.R., McGlinchey, D., Zambo, J., Condia, A., Fennelly, A., Bush, G., Walker W.S., Wabakangha, J. N., Kavul, O.M., Kasanda, & T., Kalombo, A.M. (2023) *From Risk to Resilience: An Assessment of the DRC*. Woodwell Climate Research Center
2. Barron, E., Ellison, T., Naegele, A., **Caparas, M.**, & Schwalm, C.R. (2023) *Looming Climate Security Crises in Iran*. The Converging Risks Lab, an institute of the Council on Strategic Risks

3. Gassert, K. N., **Caparas, M.**, & Dobler-Morales, C. (2022) *Climate Risk Assessment: Canastra Region, Brazil*. Woodwell Climate Research Center
4. Gassert, K. N., **Caparas, M.**, & Glenn, D. (2022) *Climate Risk Assessment: Summit County*. Woodwell Climate Research Center
5. Dill, C., Naegele, A., Baillargeon, N., **Caparas, M.**, Dusseau, D., Holland, M., & Schwalm, C.R. (2021) *Converging Crises in North Korea: Security, Stability & Climate Change*. The Converging Risks Lab, an institute of the Council on Strategic Risks

## CONTRIBUTED REPORTS

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1. **Woodwell Climate Research Center** as primary climatological analysts. (2020) *Climate Risk and Response in Asia*. McKinsey Global Institute
2. **Woods Hole Research Center** as primary climatological analysts. (2020) *Climate risk and response: Physical Hazards and Socioeconomic Impact*. McKinsey Global Institute

## PRESENTATIONS

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1. **Caparas, M.**, Grigsby-Thedford, C., Dusseau, D., Gassert, K., & Schwalm, C. R. (2024) *Integrating Local Knowledge of Homelessness With Climate Risk Metrics to Inform Intervention and Adaptation Planning*. American Geophysical Union Fall Meeting (oral)
2. Naegele, A., Ellison, T., Baron, E., **Caparas, M.**, Hugh, B., Gassert, K., Shintani, C., & Schwalm, C.R. (2024) *A Confluence of Climate and Security Risks*. American Geophysical Union Fall Meeting (oral)
3. **Caparas, M.**, Zobel, Z., & Schwalm, C. R. (2021) *Shifts in Agricultural Breadbaskets in North America*. American Geophysical Union Fall Meeting (poster)
4. Peter, D., **Caparas, M.**, MacDonald, E., Duran, G., Churchill, C., & Scott, L. (2021) *When URGE meets DIRE: Combining URGE Lessons and Deliverables with an Institutional Diversity Committee to Effect Change at the Woodwell Climate Research Center*. American Geophysical Union Fall Meeting (poster)
5. **Caparas, M.**, Castanho, A. D. D. A., Zobel, Z., & Schwalm, C. R. (2020) *An assessment of major global agricultural breadbaskets reveals significant exposure to future climatic crop yield failures within water scarce regions*. American Geophysical Union Fall Meeting (poster)
6. **Caparas, M.** & Lee, J.E. (2017) *Tropical Extreme Precipitation and Walker Circulation Strength in a Warming World*. Ivy League Undergraduate Research Symposium (poster)

## INVITED TALKS

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**Nevada Statewide Conference on Addressing Homelessness** 2024  
*Weathering the Storm: The Impact of Weather on People Experiencing Homelessness*

## GRANTS

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**Fund for Climate Solutions (Award total: \$89,900)** 2023-Present  
 Project Title: *How climate change will exacerbate the vulnerability of people experiencing homelessness in Las Vegas*. Funding Institution: Woodwell Climate Research Center.

## LEADERSHIP & SERVICE

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### Woodwell Climate Research Center

Co-chair of Diversity, Inclusion, Retention, and Equity Committee	2022-2024
Member of Diversity, Inclusion, Retention, and Equity Committee	2019-2024
Member of Climate Justice Subcommittee	2022-2024
Member of Woods Hole Diversity Unlearning Racism in Geosciences Education	2021
Co-lead of Cultural Assessment Survey & Training Subcommittee	2020-2021
Member of Visiting Speaker Series Subcommittee	2020-2021

### Brown University

Diversity and Inclusion Liaison for the Department of Earth, Environmental, and Planetary Sciences	2016-2017
Lead Coordinator of STEM Inclusion @ Brown	2016-2017
Peer Advisor for New Scientist Collective	2016-2017
Social Justice Educator for Brown Center for Students of Color	2016
Member of First-Generation @ Brown	2016
Women's Peer Counselor for the Office of Residential Life	2014-2015

### Nevada Homeless Alliance

Event Volunteer	2023-Present
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## MOVEMENT ARTS

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### Stage performances

Shine Showcase (pole dance soloist)	
2023	
Pole Sports Organization Mountain Competition (pole dance soloist)	
2018	
Fusion Annual Spring Show (dance ensemble)	2015-2017
<i>Chicago</i> (pole dance ensemble)	
2016	
<i>A Chorus Line</i> (dance ensemble)	
2016	
<i>Not Long Now</i> (dance ensemble)	
2015	
<i>D.U.S.T.</i> (dance soloist)	
2014	

### Agencies and Companies

Dragon Talent Agency (gig dancer)	2018-2019
GoGo Mogul (gig dancer and aerialist)	2018-2019
Fusion Dance Company (stage dancer, choreographer, and technical manager)	2014-2017
Poler Bears Company (stage dancer and choreographer)	2013-2016

## TEACHING EXPERIENCE

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<b>Pole Dance Instructor</b> , <i>In Your Skin</i>	Pawtucket, RI   2020-2021
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<b>Pole Dance Instructor</b> , <i>Bella Vita Pole Fitness</i>	Falmouth, MA   2019
<b>K-12 Math Instructor</b> , <i>Mathnasium of Green Valley</i>	Henderson, NV   2018
<b>Yoga and Meditation Instructor</b> , <i>McAuley House</i>	Providence, RI   2015

## FIELD EXPERIENCE

<b>Hydrological sampling and mapping</b> , <i>University of Minnesota</i>	Akeley, MN   2016
<b>Soil sampling and tree logging</b> , <i>Brown University</i>	Manaus, Brazil   2015

## CERTIFICATES & TRAINING

<b>International Institute for Applied Systems Analysis</b>	2024
Community Water Model (CWatM) Level A1 Certificate	
<b>Interaction Institute for Social Change</b>	2023
Fundamentals of Facilitation for Racial Justice Work	

## SKILLS

### Technical

- Programming (Python, Bash, Linux)
- Data visualization (QGIS)
- Google Cloud Computing
- Climate and hydrological modeling
- Google Earth Engine

### Organizational

- Event planning
- Facilitation
- Project management
- Workshop creation