

# Diana A. Moanga, PhD

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## Appointments

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04/2023 – present     Lecturer – **Stanford University**  
01/2023 – present     Manager of the Spatial Analysis Center – **Stanford University**  
09/2022 – 01/2023     Postdoctoral Researcher – **Stanford University**  
Department of Earth System Science, Doerr School of Sustainability  
02/2021 – 08/2022     Postdoctoral Researcher – **Florida International University**  
Department of Earth and Environment, Sea Level Solutions Center

## Education

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08/2015 – 12/2020     PhD – **University of California Berkeley**  
Environmental Science Policy and Management  
  
01/2014 – 08/2015     MS – **University of Miami**  
Marine Affairs and Policy  
  
08/2012 – 12/2013     BA – **University of Miami**  
Marine Affairs, Ecosystem Science and Policy (Minor)  
  
08/2008 – 04/2012     **Florida International University**  
Hospitality and Tourism Management (transferred to University of Miami)

## Publications

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2023     Clare, J.D., de Valpine, P., B, **Moanga, D.**, & Beissinger, S.R.  
A Cloudy Forecast for Predicting Species Distributions: Predictive  
Uncertainties Abound For California Birds After A Century Of Climate And  
Land-Use Change. *Global Change Biology*.  
<https://onlinelibrary.wiley.com/doi/full/10.1111/gcb.17019>  
  
Hemond, O., Butsic V., **Moanga, D.**, & Wartenberg, A. Farm consolidation and  
turnover dynamics linked to increased crop diversity and higher agricultural  
input use. *Agricultural Systems*. <https://doi.org/10.1016/j.agry.2023.103708>  
2022     Clement. A., Troxler, T., Keefe, O., Arcodia, M., Cruz, M., Hernandez. A.,  
**Moanga, D.**, Adefris. Z. & Jacobson, S. Hyperlocal Observations Reveal  
Persistent Extreme Urban Heat in Southeast Florida. *Journal of Applied  
Meteorology and Climatology*. <https://doi.org/10.1175/JAMC-D-22-0165.1>  
  
Dillis, C., Butsic, V., **Moanga, D.**, Parker-Shames, P., Wartenberg, A., & Grantham,  
T. The threat of wildfire is unique to cannabis among agricultural sectors in  
California. *Ecosphere*. <https://doi.org/10.1002/ecs2.4205>  
2021     Troxler, T., Clement, A. C, Arditi-Rocha, Y., Beesing, G., Bhat, M., Bolson, J.,  
Caban-Aleman. C., Castillo. K., Collins, O., Cruz, M., Dodd, A., Evans, S.D.,  
Fleming, A.L., Sequera, C.G., Gilbert, J., Hernandez, A., Folder, C., Ilcheva, M.,  
Kelly, E., Leon, A., Lombard, J., Mach, K., **Moanga, D.**, Murley, J.F., Knowles,  
A., Obeysekera, J., Parra, L., Posner, J., Sarwat, A., Silverstein, R., Stuart, J.A.,  
Sukop, M, Wdowinski, S., & Wheaton, E. (2021). A System for Resilience  
Learning: Developing a community-driven, multi-sector research approach for

- greater preparedness and resilience to long-term climate stresses and extreme events in the Miami metropolitan region. *Journal of Extreme Events*. <https://doi.org/10.1142/S2345737621500196>.
- Wartenberg C.A., **Moanga D.**, & Butsic V. (2021). Identifying drivers of change and predicting future land-use impacts in established farmlands. *Journal of Land Use Science*. <https://doi.org/10.1080/1747423X.2021.2018061>
- Wartenberg, A., **Moanga, D.**, Potts, M.D., & Butsic V. (2021). Limited economic-ecological trade-offs in a shifting agricultural landscape: a case study from Kern County, California. *Frontiers in Sustainable Food Systems, section Agroecology and Ecosystem Services*, 5:650727, <https://doi.org/10.3389/fsufs.2021.650727>.
- 2020 **Moanga, D.**, Biging, G.S., Butsic, V., & Radke, J. (2020). The space time cube as an approach to quantifying future wildfires in California. *International Journal of Wildland Fire*, 30(2). <https://doi.org/10.1071/WF19062>.
- Laćan, I., **Moanga, D.**, Butsic, V., & McBride, J.R. (2020). Sealed in San José: paving of front yards and its effect diminishes on urban forest resource and benefits in low- density residential neighborhoods. *Journal of Urban Forestry & Urban Greening* 54. <https://doi.org/10.1016/j.ufug.2020.126755>.
- 2018 **Moanga, D.**, Schroeter, I., Ackerly, D., & Butsic, V. (2018). Avoided land use conversions and carbon loss from conservation purchases in California. *Journal of Land Use Science* 13(4): 391-413. <https://doi.org/10.1080/1747423X.2018.1533043>
- 2017 Butsic, V., Shapero, M., **Moanga, D.**, & Larson S. (2017). Using InVEST to assess ecosystem services on conserved properties in Sonoma County, CA. *California Agriculture* 71(2):81-89. <https://doi.org/10.3733/ca.2017a0008>.
- Glynn, P.W., Alvarado, J.J., Banks, S., Cortés, J., Feingold, J.S., Jiménez, C., Maragos, J.E., Martínez, P., Maté, J.L., **Moanga, D.A.**, Navarrete, S. Reyes-Bonilla, H., Riegl, B., Rivera, F., Vargas-Angel, R., Wieters, E.A., & Zapata, F.A. (2017). Eastern Pacific coral reef provinces, coral community structure and composition: an overview. In *Coral Reefs of the Eastern Tropical Pacific* (pp. 107-176). Springer, Dordrecht. [https://link.springer.com/chapter/10.1007/978-94-017-7499-4\\_5](https://link.springer.com/chapter/10.1007/978-94-017-7499-4_5).
- 2015 **Moanga, D.** (2015). *Karenia brevis* hot spots in the west Florida shelf and their associated socio-economic implications. University of Miami Scholarly Repository.
- In Prep* Fu, S., **Moanga, D.**, Osman, K., Unveiling US's Water Reuse Media Trends: A Journey Across Temporal and Spatial Boundaries. *Water Research*.
- Myers-Pigg, A.N., Bailey, V., Bond-Lamberty, B., Holmquist, J., Kirwan, M., Megonigal, P., **Moanga, D.**, Ward, N.D., & White Jr. E., Toward implementing the network-of-networks framework to advance understanding of coastal disturbance impacts. *Nature Communications Earth and Environment*.
- Troxler, T., **Moanga, D.**, Hewavithana, D., Moore, C., Jacobson, S., Goshgarian, M., Hernandez, A., Kamrath, C., Hagemann, K., Clement, A., Sukop, M., Obeysekera, J., Localized flood thresholds for land area and structures – a south Florida application for current and projected future conditions. *Urban Climate*.
- Moanga, D.**, T. Troxler, K. Ishtiaq, S. Jacobson, M. Cruz, A. Clement, A.

Hernandez, & Z. Adefris. Understanding Miami's urban heat with the help of citizen science. *Journal of Urban Climate*.

Clare, J.D., **Moanga, D.**, Butsic, V., DeValpine, P., Tingley, M., Epanchin, P., Iknayan, K., MacLean, S., & Beissinger, S. Some rise, some fall, and some contort: growth, collapse, and turnover in bird communities across California in response to a century of climate and land use change. *PANS*.

## Technical reports

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- 2022 Ghebremichael, K., Troxler, T., Hernandez, A., Fourqurean, R., Jerome, L., Carroll, K., **Moanga, D.**, Lazzaroni, H., Roy, S., Jenkins, J., McFarlane-Weinstein, J., Kaur, A., Knowles, H., Alvarez, S., Sukop, & M., Obeysekera, J. (2022). Laying the groundwork for 'Getting to Neutral' in the State of Florida. Technical Report. Florida Climate Institute. <https://floridacclimateinstitute.org/2012-03-02-19-57-58/getting-to-neutral-report>.
- 2018 Ackerly, D., Battles, J., Butsic, V., Gonzalez, P., Kelly, M., Silver, W., Saah, D., Di Tommaso, S., Mayer, A., **Moanga, D.**, Schroeter, I., & Riordan, B. (2018). Land Acquisition and Ecosystem Carbon in Coastal California. California's Fourth Climate Change Assessment. Publication number: CCCA4-EXT-2018-003.
- Radke, J.D., Biging, G.S., Rovers, K., Schmidt-Poolman, M., Foster, H., Roe, E., Ju, Y., Lindbergh, S., Beach, T., Maier, L., He, Y., Ashenfarb, M., Norton, P. Wray, M., Alruheil, A., Yi, S., Rau, R. Collins, J., Radke, D., Coufal, M., Marx, S., **Moanga, D.**, Ulyashin, V., & Dalal, A. (2018). Assessing Extreme Weather-Related Vulnerability and Identifying Resilience Options for California's Interdependent Transportation Fuel Sector. California's Fourth Climate Change Assessment, California Energy Commission. Publication Number: CCCA4-CEC-2018-012.

## Teaching Experience

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Stanford University (Lecturer)	Spring 2024	Remote Sensing of Land (Undergraduate - Ug & / Graduate – G)
Stanford University (Lecturer)	Fall 2023	Fundamentals of Geographic Information Science (Ug & G)
Stanford University (Co-Instructor)	Spring 2023	Remote Sensing of Land (Ug & G)
Stanford University (teaching assistant -TA)	Winter 2023	From Freshwater to Oceans to Land Systems: An Earth System Perspective to Global Challenges (G)
UC Berkeley (TA)	Fall 2018, 2020	International Environmental Politics (Ug)
	Spring 2016	Environmental Issues (Ug)
University of Miami (TA)	Fall 2013, 2014; Spring 2015	Spatial Applications in Marine Science (Ug)
	Spring 2015	Spatial Analysis: Intermediate Course in Marine GIS (G)
	Spring, Fall 2014	Introduction to Marine GIS Laboratory (Ug)

## Service and Professional Development

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Peer Reviewer for: AGU Advances; MDPI Remote Sensing; MDPI Land; MDPI Sustainability; MDPI Agriculture; MDPI Fire; MDPI Atmosphere; MDPI Applied Sciences; International Journal of Wildland Fire; Journal of Land Use Science; *PLOS Sustainability and Transformation*; Journal of Environmental Planning and Management; Landscape and Urban Planning; International Journal of Environmental Research and Public Health; International Journal of Disaster Risk Reduction; Carbon Balance and Management.

- 2023      Stanford Woods Institute for the Environment - Mentoring Undergraduates in Interdisciplinary Research (MUIR). MUIR mentor.
- Guest lecture at Santa Clara University (May 2023). Talk titled “Climate Change as a Driver of Ghost Forest Formation and Threaten Equity in Coastal Community Resilience.”
- Guest panel speaker for the Stanford Geballe Laboratory for Advanced Materials (GLAM) Postdoc Community Special Event.
- 2021      Collaborative Online International Learning (COIL) Program:  
            Design for Adaptability: Coastal Design Explorations for Changing Climatic Conditions and Social/Cultural Environments.

## Talks and Academic Presentations

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- 2024      GIS Workshop for the Just Transitions Policy Lab at Stanford University. Talk titled: “*Geospatial applications for environmental justice*”.
- 2023      *Quantifying Coastal Hazard Exposure of Critical Water Infrastructure for Disadvantaged Communities on the Northern Gulf of Mexico*. Moanga., D. White., E. American Geophysical Union (AGU). (Poster presentation).
- Unveiling US’s Water Reuse Media Trends: A Journey Across Temporal and Spatial Boundaries*. Fu., S; Osman., K., Moanga., D., AGU. (Poster presentation).
- United States Wetland to Cash Crop Conversion*. Moanga., D. ESRI User Conference. San Diego, CA. (Poster presentation).
- 2022      *Mapping and Monitoring Extreme Heat and King Tide Flooding in North Miami Beach with the Help of Citizen Scientists*. ESRI User Conference. San Diego, CA. (Poster presentation).
- 2021      *Understanding Miami’s urban heat with the help of citizen science*. International Congress of Biometeorology (ICB).
- Understanding the different dimensions of Coastal Resilience* Seminar in Marine Science at the University of Miami.
- 2020      *Modelling land use and land cover changes for conservation*. Sustainable Seminars The Associated Students of the University of California.
- 2019      *Introduction to GIS and remote sensing: potential applications*. Forest Management Seminar at UC Berkeley.
- Map design: creating effective visualizations*. Introduction to GIS at UC Berkeley.

*The space time cube as an approach to quantifying future wildfires in California (2000-2100).* ESRI User Conference. San Diego, CA. (Poster presentation).

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### Media Mentions

- 2023 Gewin, V. (2023). *City-based scientists get creative to tackle rural-research needs.* Nature Science cities 2023. <https://www.nature.com/articles/d41586-023-02992-w>
- 2022 Skinner, A. (2022). *California Wildfires Threaten Nearly All of State's Cannabis Crops.* NewsWeek. <https://www.newsweek.com/california-wildfires-threaten-nearly-all-states-cannabis-crops-1742111>

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### Grants

- 2023 The Stanford Woods Institute Environmental Venture Projects (EVP) (Contributor)
- 2022 The Stanford UPS Endowment for Transportation, Logistics and Urban Issues (Contributor)

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### Technical Skills

Software: ArcPro, R, STATA, C++, Python, arcPy, Google Earth Engine (GEE), eCognition, InVEST, ENVI, Tableau.

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### Languages and Certificates

Languages: Romania (native), English (proficient), Spanish (conversational), French (conversational).

ESRI Cartography Certificate (June 2020); ESRI Spatial Data Science Certificate (August 2023); ESRI Imagery in Action Certificate (October 2023).

Collaborative Institutional Training Initiative (CITI) Program, Social/Behavioral Human Research Course (August 2021).

CITI Physical Science Responsible Conduct of Research; CITI Social and Behavioral Responsible Conduct of Research (August 2023).

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### Outreach and Community Service

- 2023 Stanford Woods Institute MUIR 2023 - Mentoring Undergraduates in Interdisciplinary Research.
- 2022 Represented the FIU Sea Level Solutions Center at Natural Disaster Expo.  
Organized and lead workshops for the Resilient305 Collaborative in Miami, FL.  
Represented FIU at the Phillip and Patricia Frost Museum of Science for Earth Day Celebration.  
Helped lead "Science for Kids" event during Earth Week at the museum
- 2021 Organized citizen science events and community engagement opportunities at FIU Sea Level Solution Center (SLSC).
- 2018 Organized and lead the Mature & Historic Tree Stands Management Symposium in Berkeley, CA.
- 2014 Volunteer at the Coral Reef Futures Lab at University of Miami.
- 2013 Member of the University of Miami Propeller Club.

## **Awards and Accomplishments**

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Florida International University Postdoctoral Scholar Travel Award (2022)  
Part of the Southeast Florida Regional Citizen Science Climate Action Network – Second place in the Climate Challenge Cup at the UN Climate Change Convention COP 26 (2021)  
Florida International University Postdoctoral Scholar Research Recognition Award (2021)  
UC Berkeley Travel Grant Summer (2019)  
UC Berkeley Travel Grant Spring (2019)  
Outstanding Graduate Student Instructor (GSI) Award (Spring 2019)  
UC Berkeley Starter Grant Award (2015)  
RSMAS Graduate Career Development Fund (2014)  
Master of Professional Science (MPS) Partial Tuition Scholarship (2014)  
Graduated Summa Cum Laude (4.0 GPA), top 1% of graduating class of University of Miami (2013)  
University of Miami Honor: President's & Provost's Honor Rolls & Dean's List (2012-2013)  
University of Miami Dean's Scholarship (2012)  
Florida International University Student Government Association Recognition award (2011-2012)  
FIU SAGE Scholarship (2011)  
Sally Goldman Scholarship (2011)  
Philip and Euline Honors College Scholarship (2010)  
Florida International University Dean's List (every academic semester between 2008 and 2012)  
Florida International University Presidential Scholarship (2008)