

# Leonardo Calzada

PH.D. CANDIDATE

Department of Geography, Rutgers University

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## Education

### Rutgers University

New Jersey, USA

PH.D. CANDIDATE, GEOGRAPHY

2020–Present

- Dissertation title: “Trailblazing development: Effects of State-led Interventions on Forest Degradation Patterns and Local Governance in the Calakmul—Sian Ka’an Corridor, Mexico”

### National Autonomous University of Mexico

Mexico City, Mexico

M.Sc., BIOLOGICAL SCIENCES

2017–2019

- Thesis title: “Assessment of forest cover change in two communities under Payment for Hydrological Environmental Services Program in the Basin of Mexico” (in Spanish)

### National Autonomous University of Mexico

Mexico City, Mexico

B.Sc., BIOLOGY

2011–2015

- Thesis title: “Socio-environmental analysis of land use/land cover change in the Oaxacan isthmus, Mexico” (in Spanish)

## Professional Experience

### Mexican Biosafety Commission (CIBIOGEM) | National Council for Science and Technology

Mexico

DEPUTY DIRECTOR OF BIOSAFETY COMMUNICATION

2019–2020

- Responsible for the National Biosafety System for GMOs
- Member of the Mexican delegation and manager of the Mexican portal at the United Nations Convention on Biological Diversity.

### National Biodiversity Commission (CONABIO)

Mexico

CARTOGRAPHER

2016–2017

- Strategy for the Conservation and Sustainable Use of Biodiversity in Oaxaca State.
- Biodiversity in Coahuila: A Status Study
- Biodiversity in Mexico City
- Mexico’s National Biodiversity Strategy

### Mexico City Secretary of the Environment

Mexico

SPATIAL MODELING SPECIALIST

2015–2016

- External evaluation of the Program of Support Funds for the Conservation and Restoration of Ecosystems through Social Participation (Proface).
- External evaluation of the program of redistribution for the conservation of environmental services (PRCSA)

### Centre de Coopération Internationale en Recherche Agronomique pour le Développement (CIRAD)

Mexico

FIELD ASSISTANT

2015

- Parc National Nevado de Toluca: un laboratoire socio-environnemental pour des innovations politiques dans la gestion de parc nationaux.

### Conservation International

Mexico

TECHNICAL ASSISTANT

2014–2015

- Participatory community diagnostics in three pilot sites around the Water Forest Strategy

## Research Experience

### Rutgers University

New Jersey, USA

RESEARCH ASSISTANT

2021 – 2023

- Project: “Developing Indices of Vulnerability to Climate Change for Ground Fishing Communities in the Northeast”
- Principal Investigator: Kevin St. Martin, Associate Professor, Rutgers University
- Funding: New Jersey Sea Grant (NJ Sea Grant) 6189-0000. Also funded by NOAA (National Oceanic and Atmospheric Administration).

- Project: “Socioenvironmental analysis of land use/land cover change in tropical dry forests”
- Supervised by José Paruelo
- Funding: National Council for Science and Technology, Research Stay Grant

**National Autonomous University of Mexico**

Mexico City, Mexico

- Project: “Socioenvironmental analysis of conservation and deforestation processes in the tropical dry forest of Mexico”
- Principal Investigators: Fernanda Figueroa, Jorge A Meave & Consuelo Bonfil, UNAM
- Funding: PAPIIT-DGAPA [UNAM], grant no. IA205216

## Publications

### RESEARCH PAPERS

1. Selden, R. L., Kitchel, Z. J., Coleman, K. E., **Calzada, L.**, & St. Martin, K. (2024). Using Historical Catch Flexibility and Fishing Ground Mobility As Measures of the Adaptive Capacity of Fishing Communities to Future Ocean Change. *ICES Journal of Marine Science: Journal Du Conseil*, 81(10), 1972–1987. <https://doi.org/10.1093/icesjms/fsae139>
2. Figueroa, F., **Calzada, L.**, & Meave, J. A. (2020). Integrating Pattern-Based Modelling and Political Ecology in Land-Use Change Research: the Case of Mexican Dry Tropics. *Journal of Land Use Science*, 15(2-3), 252–269. <https://doi.org/10.1080/1747423x.2019.1681527>
3. **Calzada, L.**, Meave, J. A., Bonfil, C., & Figueroa, F. (2018). Lands at Risk: Land Use/Land Cover Change in Two Contrasting Tropical Dry Regions of Mexico. *Applied Geography (Sevenoaks, England)*, 99, 22–30. <https://doi.org/10.1016/j.apgeog.2018.07.021>
4. Wegier, A., Alavez, V., Pérez-López, J., **Calzada, L.**, et al. (2018). Beef or Grasshopper Hamburgers: the Ecological Implications of Choosing One Over the Other. *Basic and Applied Ecology*, 26, 89–100. <https://www.sciencedirect.com/science/article/pii/S1439179117300324>
5. Ortega, T., Mastrangelo, M., Villarroel, D., Piaz, A., Vallejos, M., Saenz, J., Gallego, F., Franquesa, M., **Calzada, L.**, Espinosa, N., Fiestas, J., Gill, L., González, Z., Luna, B., Martinez, C., Ochoa, O., Pérez, L., Sala, J., Sánchez, I., ... M., M. (2014). Estudios Transdisciplinarios En Socio-Ecosistemas: Reflexiones Teóricas Y Su Aplicación En Contextos Latinoamericanos. *Investigación Ambiental, Ciencia y Política Pública*. <https://ri.conicet.gov.ar/handle/11336/43261>

### BOOK CHAPTERS

1. Figueroa, F., & **Calzada, L.** (2019). Gobernanza Del Manejo De Los Recursos Forestales En México. In V. S. Ávila Foucat & M. Perevochtchikova (Eds.), *Sistemas socio-ecológicos: Marcos analíticos y estudios de caso en oaxaca, méxico* (pp. 205–226). Institute of Economic Research, National Autonomous University of Mexico. <https://doi.org/10.22201/iiec.9786073013109e.2019>
2. Puente Uribe, B., **Calzada, L.**, Bonfil, C., & Figueroa, F. (2017). Prácticas Agrícolas Y Conservación De La Agrobiodiversidad En Amatlán De Quetzalcóatl. In Comisión Nacional para el Conocimiento y Uso de la Biodiversidad (CONABIO) & Gobierno del Estado de Morelos (Eds.), *La biodiversidad en morelos: Estudio de estado 2: Vol. III* (pp. 428–433). Comisión Nacional para el Conocimiento y Uso de la Biodiversidad (CONABIO). <https://doi.org/10.5962/bhl.title.118977>

### CARTOGRAPHIC DESIGN IN PUBLICATIONS

1. [CONABIO] Comisión Nacional Para el Conocimiento y Uso de la Biodiversidad, & [SEMA] Secretaria de Medio Ambiente del Estado de Coahuila de Zaragoza. (2017). *La Biodiversidad En Coahuila: Estudio De Estado: Vols. I - II*. CONABIO; SEMA; Quintanilla Ediciones.
2. [CONABIO] Comisión Nacional Para el Conocimiento y Uso de la Biodiversidad. (2016). *Estrategia Nacional Sobre La Biodiversidad De México (Enbiomex) Y Plan De Acción 2016-2030*. CONABIO.
3. [CONABIO] Comisión Nacional Para el Conocimiento y Uso de la Biodiversidad, & [SEDEMA] Secretaria del Medio Ambiente del Distrito Federal. (2016). *La Biodiversidad En La Ciudad De México: Vols. I - III*. CONABIO; SEDEMA.

### SCIENCE COMMUNICATION AND OUTREACH

1. **Calzada, L.** (2024). *El Susurro De Los Árboles - Degradación Y Regeneración De Los Bosques En El Corredor Calakmul*

- Sian Ka'an. <https://arccg.is/10vTeP2>. Accessed: 2025-2-25.
2. **Calzada, L.** (2024). *Yaan Jump'éeel Tsímin K'áak Iche' K'áaxo - There Is a Train Across the Jungle: Voices and Visions on the Maya Train, Sembrando Vida, and the Future of the Maya Forest*. <https://arccg.is/1zj81z1>. Accessed: 2025-2-25.
  3. **Calzada, L.**, Schnieder, L., Peña, A., Monroy, C., Figueroa, F., Mendoza, R. P., Haenn, N., Villalobos, M., & Benítez, M. (2024). *Entre Selvas Y Comunidades: Políticas Públicas, Desarrollo Y Dinámicas Forestales En Los Territorio Del Corredor Calakmul-Sian Ka'an* (L. Calzada, Ed.). Funded by Fulbright-Comexus; National Geographic Society.
  4. Figueroa, F., Bonfil, C., Barrales, B., **Calzada, L.**, Puente-Urbe, B., Romero, M., & García-Sevilla, C. (2018). *Amatlán. Transformación Ambiental Y Social En El Norte De Morelos* (F. Figueroa & L. Calzada, Eds.). Ediciones Quinto Sol, UNAM.
  5. Figueroa, F., Meave, J. A., Pérez-García, E., **Calzada, L.**, & Rangel, V., García-Sevilla, C. (2018). *Nizanda. Transformación Ambiental Y Social En El Istmo Oaxaqueño* (F. Figueroa & L. Calzada, Eds.). Ediciones Quinto Sol, UNAM.
  6. González-Jiménez, D., Franquesa, M., Bueno, I., Lazos, E., Noellemeyer, E., Mwampamba, T., Maass, M., & Balvanera, P. (Eds.). (2014). *Guía Para El Diseño Y Ejecución De Cursos Interdisciplinarios. Aprendizajes Derivados Del Curso De Sistemas Socio-Ecológicos Para La Toma De Decisiones*. CIEco e IIS – UNAM, IAI, UNLPam.

## TECHNICAL REPORTS

1. Bermúdez, G. E., **Calzada, L.**, Cerritos, F. R., Gómez, Z. D. P., Hagman, A. E. L., Mondragón, T. M. E., Orozco, L. B. Y., Peraza, V. H., Pérez, O. G., Lima, V. L., López, L. C., Ruíz Toledo J, Sánchez, C. R., Sánchez, J. A., Sánchez, M. S., Serrano, S. N., Soberanes, G. C. V., & Vides, B. E. (2024). *Scientific Dossier on Genetically Modified Corn and Its Effects. Effects of Gm Corn on Human Health, the Environment and Biodiversity, Including the Biocultural Richness of Native Corn in Mexico*. Consejo Nacional de Humanidades, Ciencias, y Tecnologías [CONAHCYT], Gobierno de México. <https://usrtk.org/wp-content/uploads/2024/11/DOSSIER-MAIZ-2024-ENGfinal-5.pdf>
2. Almeida Leñero, L., Jujnovsky Orlandini, J., Ramos, A., Cetina Arenas, L., Guadarrama Almeida, K., Rivero Aranda, S. L., **Calzada, L.**, & Correa Ayram, C. (2016). *Evaluación Externa Del Programa De Fondos De Apoyo Para La Conservación Y Restauración De Los Ecosistemas a Través De La Participación Social*. Secretaría del Medio Ambiente de la Ciudad de México, UNAM.
3. Almeida Leñero, L., Jujnovsky Orlandini, J., Ramos, A., Cetina Arenas, L., Rivero Aranda, S. L., Guadarrama Almeida, K., Hudler Schimpf, C., Correa Ayram, C., & **Calzada, L.** (2015). *Evaluación Externa Del Programa De Redistribución Por La Conservación De Servicios Ambientales (PrCSA)*. Secretaría del Medio Ambiente de la Ciudad de México, UNAM.
4. Almeida Leñero, L., Figueroa, F., Ramos, A., **Calzada, L.**, & Galván Benítez, L. E. (2014). *Estrategia Para La Conservación Del Bosque De Agua Diagnóstico Participativo De La Comunidad De Coajomulco, Mpio. De Huitzilac, Morelos*. International Conservation; National Autonomous University of Mexico; Gonzalo Rio Arronte foundation.
5. Almeida Leñero, L., Figueroa, F., Ramos, A., **Calzada, L.**, & Galván Benítez, L. E. (2014). *Estrategia Para La Conservación Del Bosque De Agua Informe Final: Reporte General Regional*. International Conservation; National Autonomous University of Mexico; Gonzalo Rio Arronte foundation.
6. Almeida Leñero, L., Figueroa, F., Ramos, A., **Calzada, L.**, & Galván Benítez, L. E. (2014). *Estrategia Para La Conservación Del Bosque De Agua: Diagnóstico Participativo De La Comunidad De San Miguel Topilejo, Distrito Federal*. International Conservation; National Autonomous University of Mexico; Gonzalo Rio Arronte foundation.

## Selected Presentations

1. **Calzada, L.**, Schneider, L., & Peña, A. (2024). *Heterogeneous Landscapes in the Southern Yucatan: Sembrando Vida and Land Use Within State-Led Development Interventions*. 5th Open Science Meeting.
2. **Calzada, L.** (2023). *Patrones De Degradación Forestal Y Sembrando Vida En El Corredor Biológico Calakmul-Sian Ka'an, México*. II Congreso Estatal de Ciencia, Tecnología Agropecuaria y del Mar.
3. **Calzada, L.**, & Schneider, L. (2023). *Forest Degradation Patterns and Sembrando Vida in the Calakmul—Sian Ka'an Biological Corridor, Mexico*. Annual Meeting of the American Association of Geographers.
4. St. Martin, K., **Calzada, L.**, Nogue, B., Selden, B., Kitchel, Z., & Coleman, K. (2023). *Mapping Precarious Fishing Communities As a Foundation for Environmental Justice*. 83rd Annual Meeting of the Society for Applied Anthropology.
5. St. Martin, K., **Calzada, L.**, Nogue, B., Selden, R., Kitchel, Z., & Coleman, K. (2023). *Revealing Fishing Community Precarity and the Foundations of Environmental Justice*. Mare Conference People & the Sea XII.
6. **Calzada, L.**, & Figueroa, F. (2022). *La Transformación Del Istmo Oaxaqueño ' Intervenciones De Desarrollo Y Su Impacto En La Dinámica Agropecuaria Y De Urbanización*. VII Congreso Mexicano de Ecología.

7. **Calzada, L.**, Rader, A., & Schneider, L. (2022). *A Matter of Time - Detecting Vegetation Change and Biomass Temporal Response to Disturbances in the Maya Forest, Mexico*. Annual Meeting of the American Association of Geographers.
8. Kitchel, Z., Coleman, K., Selden, R., **Calzada, L.**, Nogué Algueró, B., & St. Martin, K. (2022). *Distinct Patterns in Historical Mobility and Catch Flexibility Underscore Intra-Port Variation in Potential Adaptive Capacity to Climate Change*. Mid-Atlantic Chapter - America Fisheries Society Annual Conference.
9. Rader, A., Schneider, L., & **Calzada, L.** (2022). *Successional Clustering: Structural and Compositional Recovery in a Seasonally Dry Tropical Forest After Hurricane Disturbance in the Mexican Mesoamerican Biological Corridor*. Annual Meeting of the American Association of Geographers.
10. **Calzada, L.**, Selden, R., Coleman, K., Young, T., & St. Martin, K. (2021). *What Is a Port Without Its Vessels? – Decline and Consolidation in the Fishing Ports of the Northeast*. AAGMSM Annual Conference.
11. Sosa, C., Figueroa, F., & **Calzada, L.** (2019). *Trends of Conservation and Development in Mexican Biosphere Reserves: Spatial Analysis and Linear Mixed Model*. International Conference on Forestry and Rural Development.
12. **Calzada, L.**, Figueroa, F., Romero, M. E., & Rangel, V. (2017). *Socio-Ecological Dynamics Linked to Hydrological Ecosystem Services Provision in Seasonal-Dry Forests in Southern Mexico*. II Open Conference of the Programme on Ecosystem Change and Society.
13. Puente, M. B., **Calzada, L.**, & Figueroa, F. (2017). *Dynamics of Global Change in the Agriculture and Food Sector: Factors Influencing a Case Study in Central Mexico*. II Open Conference of the Programme on Ecosystem Change and Society.
14. Almeida-Leñero, L., Figueroa, F., Ramos, A., **Calzada, L.**, Galván, L., & Hoth, J. (2016). *Participatory Community Assessment: Community Monitoring As a Foundation for the Conservation of the Water Forest in Central Mexico*. Urban Transitions Global Summit.
15. Figueroa, F., & **Calzada, L.** (2016). *Gobernanza En El Manejo De Los Recursos Forestales*. Seminario Estudios de los sistemas socioambientales en Oaxaca.
16. **Calzada, L.**, Almeida-Leñero, L., Figueroa, F., & Vallejos, M. (2015). *Evaluación Multi-Escalar Del Psah En Dos Comunidades De La Cuenca De México*. V Congreso Mexicano de Ecología.

## Awards & Achievements

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### SCHOLARSHIPS

|                                                                          |           |
|--------------------------------------------------------------------------|-----------|
| <b>Wind Institute Offshore Wind (OSW) Fellowship Program</b>             | 2024-2025 |
| NEW JERSEY ECONOMIC DEVELOPMENT AUTHORITY                                |           |
| <b>Student Small Grant</b>                                               | 2024      |
| CENTER FOR LATIN AMERICAN STUDIES, RUTGERS UNIVERSITY                    |           |
| <b>Fulbright – National Geographic</b>                                   | 2023-2024 |
| NATIONAL GEOGRAPHIC SOCIETY                                              |           |
| <b>Fulbright – García Robles</b>                                         | 2023-2024 |
| INSTITUTE OF INTERNATIONAL EDUCATION (IIE)                               |           |
| <b>MaGrann Field Research Award</b>                                      | 2023      |
| DEPARTMENT OF GEOGRAPHY, RUTGERS UNIVERSITY                              |           |
| <b>Field Study Award</b>                                                 | 2023      |
| LATIN AMERICA SPECIALTY GROUP OF THE ASSOCIATION OF AMERICAN GEOGRAPHERS |           |
| <b>Field Study Grant</b>                                                 | 2023      |
| CONFERENCE OF LATIN AMERICAN GEOGRAPHY                                   |           |
| <b>Student Small Grant</b>                                               | 2023      |
| CENTER FOR LATIN AMERICAN STUDIES, RUTGERS UNIVERSITY                    |           |
| <b>Honorable mention</b>                                                 | 2022      |
| FORD FOUNDATION                                                          |           |
| <b>Student Small Grant</b>                                               | 2021      |
| CENTER FOR LATIN AMERICAN STUDIES, RUTGERS UNIVERSITY                    |           |
| <b>Dean's Fellowship for doctoral study</b>                              | 2019-2020 |
| RUTGERS UNIVESITY                                                        |           |

## Graduate scholarship for master's degree

2016-2018

CONACYT

## Research Stay Grant [Universidad de Buenos Aires]

2017

CONACYT

## AWARDS

### Graduate Teaching Excellence Award

2023

DEPARTMENT OF GEOGRAPHY, RUTGERS UNIVERSITY

### Best Student Paper Award

2023

BIOGEOGRAPHY SPECIALTY GROUP OF THE ASSOCIATION OF AMERICAN GEOGRAPHERS

## HONORS

### Bachelor in Biology: Magna Cum Laude

2015

UNAM

### Master in Science: Magna Cum Laude

2019

UNAM

## Teaching Experience

- S1 2025 **Teaching assistant:** Introduction to Environmental Studies (Rutgers University)
- S2 2024 **Guest lecturer:** Remote Sensing (National Autonomous University of Mexico)
- S2 2024 **Teaching assistant:** Transforming the Global Environment (Rutgers University)
- S1 2023 **Main instructor:** Maps Power and the Digital World (Rutgers University)
- S2 2022 **Teaching assistant:** Remote Sensing (Rutgers University)
- S2 2022 **Teaching assistant:** Earth Systems (Rutgers University)
- S2 2022 **Guest lecturer:** Remote Sensing (National Autonomous University of Mexico)
- S1 2022 **Teaching assistant:** Remote Sensing (Rutgers University)
- S2 2021 **Guest lecturer:** Geographic Information Systems (National Autonomous University of Mexico)
- S1 2021 **Guest lecturer:** Latin America (Environment and Society) (Rutgers University)
- S2 2019 **Teaching assistant:** Biostatistics (National Autonomous University of Mexico)
- S1 2019 **Teaching assistant:** Biostatistics (National Autonomous University of Mexico)

## University and Professional Service

- 2021-2022 **President:** The Graduate Geographers Project, Rutgers University (New Jersey , USA)
- 2021-2023 **Trustee fellow:** The Nature Conservancy (New Jersey, USA)
- 2020 **Reviewer:** Journal of Land Use Science (Taylor and Francis press)
- 2024-2025 **Selection Committee for Fulbright-García Robles grantees of the U.S. Scholars:** Fulbright- U.S. - Mexico Commission for Educational and Cultural Exchange (COMEXUS) (Mexico City)
- 2024 **Mentor and evaluator:** US. Forest Service – Colegio de Bachilleres Tecnico Forestal 007 (Campeche)

## Professional Training and Academic Workshops

- 2021 **Openscapes: Better Science for Future Us:** National Center for Ecological Analysis and Synthesis, UC Santa Barbara (Online)
- 2021 **Using Google Earth Engine for Land Monitoring Applications:** National Aeronautics and Space Administration (NASA) (Online)
- 2017 **Place-based transdisciplinary research for Global Sustainability:** Programme on Ecosystem Change and Society (Oaxaca, Mexico)
- 2016 **Forest Monitoring with CLASlite:** Carnegie Institution for Science (Washington D.C., USA)
- 2014 **Methodological approaches to the study of compensation mechanisms focused on conservation:** Institute of Geography, National Autonomous University of Mexico (Mexico City, Mexico)
- 2014 **Management of socio-ecological systems to support decision-making:** Faculty of Sciences, National Autonomous University of Mexico (Mexico City, Mexico)

## Memberships

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- National Geographic Explorers
- Global Land Programme (GLP)
- The Community Economies Research Network (CERN)
- Association for Tropical Biology and Conservation (ATBC)
- American Association of Geographers (AAG)
- Conference of Latin American Geography (CLAG)

## Skills

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**BACK-END:** PHP

**CONTENT MANAGEMENT SYSTEMS:** JOOMLA, QUARTO

**DEVOPS:** DOCKER, MYSQL

**FRONT-END:** MARKDOWN, HTML5, CSS

**GIS:** ARCGIS PRO, IDRISI / TERRSET, DINAMICA EGO, TERRSET

**OFFICE SUITE AND DESING:** PHOTOSHOP, INDESING, MICROSOFT OFFICE (MACROS AND VISUAL BASIC)

**PROGRAMMING:** R, PYTHON, LATEX

**PROJECT MANAGEMENT:** TRELLO, SLACK

**REMOTE SENSING:** ENVI, PCI GEOMATICA, ERDAS, CLASLITE, GOOGLE EARTH ENGINE (JAVASCRIPT)

**SOCIAL DATA ANALYSIS:** UCINET, SUPER DECISIONS, ATLAS.TI

**VERSION CONTROL SYSTEMS:** GIT, GITHUB