

# BERNARDO A. BASTIEN-OLVERA

CURRICULUM VITAE

OCTOBER 2022

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Scripps Institution of Oceanography

8622 Kennel Way, La Jolla, CA 92037

## EDUCATION

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- PhD** Geography  
University of California Davis. June 2022  
Dissertation: “Climate change impacts on natural capital:  
consequences for human well-being and macro-economic growth”
- MSc** Climate Change  
University College London. September 2017
- BSc** Earth Science  
National Autonomous University of Mexico. June 2015

## PROFESSIONAL APPOINTMENTS

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- Institutional Postdoctoral Fellow** Present  
Scripps Institution of Oceanography  
University of California San Diego

## PUBLICATIONS

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### *Refereed Journal Articles*

- 2022 Bastien-Montoya, G.M., Bastien-Olvera, B.A., Pilatowsky-Gruner, R., & Gay García G. (2022). Importancia relativa de los conceptos erróneos sobre el cambio climático. *Enseñanza y Comunicación de las Geociencias*, 1(2).
- 2022 Bastien-Olvera, B. A., & Moore, F. C. (2022). Climate Impacts on Natural Capital: Consequences for the Social Cost of Carbon. *Annual Review of Resource Economics*, 14, 515-532.
- 2022 Bastien-Olvera, B. A., Granella, F. & Moore, F. C. (2022). Persistent effect of temperature on GDP identified from lower frequency temperature variability. *Environmental Research Letters*, 17(8), 084038.

- 2021 Bastien-Olvera, B. A., & Moore, F. C. (2021). Use and non-use value of nature and the social cost of carbon. *Nature Sustainability*, 4(2), 101-108.
- 2019 Bastien-Olvera, B. A. (2019). Business-as-usual redefined: Energy systems under climate-damaged economies warrant review of nationally determined contributions. *Energy*, 170, 862-868.

### ***Book Chapters***

- 2019 Bastien-Olvera, B. A., Carreño-Najera H., Estrada-Porrúa, F. (2019). Chapter: “Caminos paralelos: división metodológica entre las negociaciones de internacionales de cambio climático y la economía climática” in *¿Aún estamos a tiempo para el 1.5C?*, pp.51-67. Ed. Rueda-Abad JC. UNAM, PINCC, 2019. ISBN: 978-607-30-2099-2
- 2017 Bastien-Olvera, B.A., Gay-García C. (2017). Chapter: “Incertidumbre científica y el avance en los modelos climáticos” in *La Gobernanza Climática en México. Volumen II, Retos y Opciones*, pp.37-53, UNAM, PINCC, 2017. ISBN: 978-607-02-9769.
- 2016 Bastien-Olvera, B.A., Gay-García C., Estrada-Porrúa, F. (2016). Chapter: “¿Es factible el 1.5°C de elevación de la temperatura en los acuerdos de París?” in *21 visiones de la COP 21*, pp.43-56, UNAM, PINCC, 2016. ISBN: 978-607-02-8439-.

### ***Manuscripts in submission***

- In Review Bastien-Olvera, B.A., Conte, M.N., Dong, X., Briceno, T., Batker, D. & Moore, F.C. (In Review) Biome range shifts under climate change: impacts on country-level macro-economic production and ecosystem services.

### **AWARDS AND HONORS**

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- 2022 **National Geographic Explorer**  
National Geographic Society
- 2020 **John Muir Institute for the Environment Fellow**  
University of California Davis
- 2020 **The Green Fund Initiative Fellow**  
University of California Davis

- 2020      **Big Ideas Award**  
University of California Berkeley
- 2019      **Blum Institute for Developing Economies**  
University of California Berkeley
- 2019      **Centennial Grant Fellowship**  
American Geophysical Union
- 2017      **Fulbright-Garcia Robles Fellowship**  
Fulbright
- 2016      **Santander's Masters Scholarship**  
Santander
- 2015      **Francisco Medina Martinez Award**  
Unión Geofísica Mexicana
- 2015      **Mitacs Globalink Award**  
Canadian Government

#### **INVITED TALKS**

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- Forthcoming      “The economic geography of natural capital in a changing climate”  
Co-sponsored by the Economics and Geography Departments, San Diego State University, January 2023.
- Forthcoming      “What do we lose when we lose a biome?”  
Earth Science Department, University of Southern California, October 2022.
- 2022      Invited to the “Workshop on New Frontiers on Natural Capital Accounting.”  
Cambridge University, UK, September 2022.
- 2022      “Cambio climáticos, ecosistemas y crisis hídricas”  
Programa Universitario de Estudios sobre la Ciudad, UNAM, September 2022.
- 2020      “Natural Capital in a Regional Integrated Assessment Model”  
Centro Euro-Mediterráneo sui Cambiamenti Climatici, June 2020.
- 2020      “Communicating science to policy makers and the broader public”  
Ensenada Center for Scientific Research and Higher Education (CICESE),  
February 2020.
- 2019      “Creation of open source integrated assessment models of climate change”  
Centro de Ciencias de la Atmósfera, National Autonomous University of Mexico,  
March 2019.

- 2019 “Natural Capital and the Social Cost of Carbon”  
The Natural Capital Project, Stanford University, November 2019.
- 2017 “Climate change impacts on the energy system”  
Instituto de Ciencias Nucleares, National Autonomous University of Mexico,  
September 2017.

#### CONFERENCE ACTIVITY

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##### *Organizer*

- 2019 Mexican, Latinx and Chicanx Academic Symposium. University of California Davis, May 11, 2019. Chair.
- 2018 Transdisciplinary collaboration between academia and California-Mexico relations. Discussion session at the General Mexican Consulate in Sacramento.
- 2013 IV Congreso Nacional de Estudiantes en Ciencias de la Tierra. Facultad de Ciencias, Universidad Nacional Autónoma de México, March 20-23, 2013.

##### *Papers presented*

- Forthcoming Bastien-Olvera, B.A., Conte, M., Dong, X., Briceno, T., Batker, D., Moore, F.C. (2022). Biome range shifts under climate change: impacts on country-level macro-economic production and ecosystem services. *American Geophysical Union Fall Meeting*, Chicago, Il, December 12-16, 2022.
- 2022 Bastien-Olvera, B.A., Conte, M., Emmerling, J., Tavoni, M., Dong, X., Briceno, T., Batker, D., Moore, F.C. (2022). Biome range shifts under climate change: impacts on country-level macro-economic production and ecosystem services. *XXIII Annual BIOECON Conference on Biodiversity, Finance and Economy*, Exeter, United Kingdom, September 4-6, 2022.
- 2022 Bastien-Olvera, B. A., Granella, F. & Moore, F. C. (2022). Persistent effect of temperature on GDP identified from lower frequency temperature variability. *The Occasional Workshop*, University of California Santa Barbara, April 30-May 1, 2022.
- 2021 Bastien-Olvera, B. A., Granella, F. & Moore, F. C. (2021). Efecto persistente de la temperatura sobre el PIB identificado a partir de la variabilidad de la temperatura de baja frecuencia. *Reunión Anual de la Unión Geofísica Mexicana*, Online, October 31 – November 5, 2021.

- 2021 Bastien-Olvera, B.A., Moore, F.C. (2021). El Costo Social del Carbono en Relación a los Valores de Uso y No-uso del Capital Natural. *XXIV Congreso Nacional de Geografía*, Online, October 15, 2021.
- 2019 Bastien-Olvera B.A., Pilatowsky-Gruner, R. (2019). Planeteando: Climate change video-blogging. American Geophysical Union Fall Meeting, San Francisco, December 9-13, 2019.
- 2015 Bastien-Olvera, B.A., Gay-Garcia, C. (2015). Stabilizing Global Temperature Through a Fuzzy Control on CO2 Emissions. *International Conference on Simulation and Modeling Methodologies, Technologies and Applications*, Colmar, France, July 21-25, 2015.

#### **CAMPUS TALKS**

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- 2022 “What do we lose when we lose a biome?”  
Climate, Atmospheric Sciences, and Physical Oceanography. Scripps Institution of Oceanography, University of California San Diego.

#### **TEACHING EXPERIENCE**

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##### ***University of California Davis***

- 1 quarter Course: Environmental Policy Analysis. Teacher Assistant and Discussion Leader, PhD and Masters level.
- 4 quarters Course: Methods of Environmental Policy Evaluation. Teacher Assistant and Discussion Leader. Undergraduate level.

##### ***Summer School on Earth Science and Climate Justice Communication***

- 3 summers Course: Converting research articles into compelling stories. Instructor on record. Undergraduate and Graduate level.

##### ***Informal Education Group for children***

- 2 years Course: Environment, society, and leadership. Instructor on record. Kids 8-12.

##### ***National Autonomous University of Mexico***

- 1 semester Course: Selected Methods for Atmospheric Sciences. Teacher Assistant, Undergraduate level.

## **RESEARCH EXPERIENCE**

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- 2022 – Research collaborator in the Climate and Environmental Change Integrated Assessment Model of Mexico City and its Metropolitan area. National Autonomous University of Mexico.
- 2017 – 2022 Research Assistant in Dr. Fran Moore’s research group at the University of California Davis.
- 2015 – 2016 Red Nacional de Investigación Multidisciplinaria en Cambio Climático, Programa de Investigación en Cambio Climático, National Autonomous University of Mexico.
- 2013 – 2016 Fuzzy logics and climate change modeling, Programa de Investigación en Cambio Climático, National Autonomous University of Mexico.
- 2012 – 2013 Paleoclimatology research group, Geology Department, National Autonomous University of Mexico.

## **SERVICE TO PROFESSION**

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Editorial Board of the Journal Enseñanza y Comunicación de las Geociencias (Geosciences Teaching and Communication) by the National Autonomous University of Mexico (2021-present).

Member of the American Geophysical Union Global Engagement Committee (2020-present).

Manuscript reviewer for: Nature Climate Change; Nature Sustainability; Environment, Development and Sustainability.

## **ADDITIONAL TRAINING**

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- 2020 Graduate Leaders in Socio-Environmental Synthesis workshop. (Winter 2020). The National Socio-Environmental Synthesis Center.
- 2019 Summer School in Sustainable Climate Risk Management. (Summer 2019). Penn State University.
- 2018 Summer School in Resource and Environmental Economics. (Summer 2018). European Association of Environmental and Resource Economists.

2016 International Summer School. Masters course: A changing Arctic. Social, economic, political and physical dynamics of the Arctic. (Summer 2016). University of Oslo.

## **OUTREACH**

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“TierraCamp” Climate justice media production summer camp in partnership National Geographic Society. August 2022. Role: coordinator.

“Bioguardianes” Documentary TV-series on biocultural heritage in Mexico. Aired Nationally in June 2022. Role: researcher, scriptwriter and host.

“Planeteando” Member and co-founder of Planeteando, a climate change communication collective.

## **MEDIA COVERAGE**

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CNN International. Cost of Climate Impacts Severely Underestimated. (2022). <https://twitter.com/holmesCNN/status/1561591963949965312>

Agarwala, M., Coyle, D. Natural capital in climate models. Nat Sustain 4, 81–82 (2021). <https://doi.org/10.1038/s41893-020-00618-x>

Nuccitelli, D. Study: Accounting for value of nature reinforces Paris climate targets. Yale Climate Connections (2021). <https://yaleclimateconnections.org/2021/01/study-accounting-for-value-of-nature-reinforces-paris-climate-targets>

## **LANGUAGES**

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Spanish (native)

English (fluent)

## **AFFILIATIONS**

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American Geophysical Union

American Association of Environmental and Resource Economists

Unión Geofísica Mexicana

Red de Resistencia Climática

## REFERENCES

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Frances C. Moore  
Environmental Science and Policy Department  
University of California Davis  
[fmoore@ucdavis.edu](mailto:fmoore@ucdavis.edu)

Katharine Ricke  
Scripps Institution of Oceanography  
University of California San Diego  
[kricke@ucsd.edu](mailto:kricke@ucsd.edu)

Francisco Estrada-Porrúa  
Instituto de Ciencias de la Atmósfera y Cambio Climático  
National Autonomous University of Mexico  
[feporrúa@atmosfera.unam.mx](mailto:feporrúa@atmosfera.unam.mx)