

AREIDY BELTRAN-PEÑA

PhD Candidate

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EDUCATION

2018 – Present	UNIVERSITY OF CALIFORNIA BERKELEY Ph.D. Environmental Science Policy and Management <ul style="list-style-type: none">▪ <i>Focus on Water-Energy-Food Nexus, Hydrology, Climate Modelling, and Data Science</i>▪ <i>Designated Emphasis in Development Engineering</i>	Berkeley, CA
2016 – 2017	Masters in Earth and Planetary Science	
2010 – 2015	Bachelor's in Environmental Earth Science <ul style="list-style-type: none">▪ <i>Minor in Global Poverty and Practice</i>	

PROFESSIONAL EXPERIENCE

Feb 2018- August 2018	ENVIRONMENTAL RESOURCES MANAGEMENT <i>Project Scientist- Environmental Consultant II</i> <ul style="list-style-type: none">▪ Performed phase 1 and phase 2 environmental site assessments and developed follow-up corrective actions to ensure compliance with federal, state, and local regulations.▪ Prepared the pollution prevention permit compliance program for the Caltrain system under the Water Resources Control Board Phase II Small Municipal Separate Storm Sewer Systems (MS4) Permit.	San Francisco, CA
Sept 2015 – Aug 2016	INTERTEK-PROFESSIONAL SERVICE INDUSTRIES <i>Environmental/Geotechnical Engineer</i> <ul style="list-style-type: none">▪ Conducted due diligence investigations through in-depth quantitative analysis including but not limited to – contamination investigations, site characterization, remediation services, groundwater monitoring programs, storage tank services, and compliance permitting for hazardous materials.▪ Performed preliminary geotechnical investigations; earthwork, foundation, and slope evaluations; seismic hazard analysis; completed laboratory testing of soils; and indoor air quality surveys.	Oakland, CA

ACADEMIC AND RESEARCH EXPERIENCE

Summer 2019	NASA JET PROPULSION LABORATORY <i>NASA Center for Climate Science Summer School</i> <ul style="list-style-type: none">▪ Learned to use satellite observations to advance climate models through lectures and group projects. Particularly, worked on a case study that focused on India's depleting water storage using GRACE satellite data.	Pasadena, CA
Summer 2017	TUCK SCHOOL OF BUSINESS AT DARTMOUTH <i>Tuck Business Bridge Program</i> <ul style="list-style-type: none">▪ Participated in a highly-selective 4-week program taught by MBA faculty, providing an in-depth study of marketing, management, finance, microeconomics, accounting, and strategy.▪ Performed a team-based valuation analysis for Cinemark Holdings, Inc., which included financial, marketing, and strategic assessments, a DCF analysis, and a final presentation to industry executives and faculty.	Hanover, NH
Winter 2016	TAVTECH GLOBAL FELLOWSHIP <i>Computer Programming and Entrepreneurship Fellow</i> <ul style="list-style-type: none">▪ Applied coding and entrepreneurship trainings to design a startup business addressing food waste, created a pitch deck, and presented the value proposition to venture capitalists.	Tel Aviv, Israel
Summer 2016	COLUMBIA UNIVERSITY SCHOOL OF INTERNATIONAL AND PUBLIC AFFAIRS <i>Alliance Summer School in Science and Policy</i>	Paris, France
Summer 2015	U.S. DEPARTMENT OF STATE- INDONESIAN CRITICAL LANGUAGE SCHOLARSHIP PROGRAM <i>Indonesian Language Scholar</i>	Malang, Indonesia
Fall 2013	U.S. DEPARTMENT OF STATE- BENJAMIN A. GILMAN INTERNATIONAL SCHOLARSHIP <i>Hindi Language Scholar; Study Abroad</i>	New Delhi, India
AY 2012- 2013	LAWRENCE BERKELEY NATIONAL LABORATORY <i>Undergraduate Researcher</i> <ul style="list-style-type: none">▪ Tested and prepared Stove Use Monitoring Systems (SUMS) for application on the Berkeley-Darfur Stove to collect accurate stove use data in Ashok Gadgil's Cookstove Lab.	Berkeley, CA

- Evaluated the safety and efficiency of the Berkeley-Darfur Stove using the Iowa State University Stove Safety Testing Protocol.

COMMUNITY SERVICE AND OUTREACH

AY 2016 – 2017 & AY 2018-2019	UNIVERSITY OF CALIFORNIA OFFICE OF THE PRESIDENT <i>Carbon Neutrality Initiative Systemwide Fellow, Office of Energy and Sustainability</i> <ul style="list-style-type: none"> ▪ Spearheaded the design of Sustainability Learning Objectives by conducting stakeholder analyses and collaborating with the UC Global Climate Leadership Council in support of the UC-wide goal of achieving carbon neutrality by 2025. 	Oakland, CA
Fall 2016	BERKELEY INNOVATIVE SOLUTIONS CONSULTING <i>Graduate Student Consultant</i> <ul style="list-style-type: none"> ▪ Performed in-depth market assessments and policy research for Fornax, a chemical engineering start-up company, and contributed to a proposal for a U.S. Department of Energy grant. 	Berkeley, CA
AY 2014 – 2015	UC BERKELEY BLUM CENTER FOR DEVELOPING ECONOMIES <i>Global Poverty and Practice Minor Academic Peer Advisor</i> <ul style="list-style-type: none"> ▪ Advised multiple students per week regarding GPP Minor requirements, declaring the minor, and selecting the practice experience; organized and led publicity events; managed the GPP Minor social media pages; and recruited 131 students to the minor. 	Berkeley, CA
Summer 2014	UC BERKELEY BIG IDEAS PROGRAM <i>Pachamama Project Team Lead</i> <ul style="list-style-type: none"> ▪ Collaborated with Fundación Cántaro Azul to identify improvements needed to increase access to clean water, sanitation, and hygiene in rural communities. ▪ Assisted the technology engineer in determining potential improvements to the UV water filtration system through trial and error and tested the performance of the new components. 	Chiapas, Mexico
Spring 2014	COMMUNITY WATER CENTER <i>Undergraduate Intern</i> <ul style="list-style-type: none"> ▪ Collected water samples and tested water quality (particularly for nitrate contamination) of 40 households in Tulare County, California dependent on domestic wells for drinking water. ▪ Assisted in monitoring the performance of the water filters, replacing cartridges, and providing residents with real-time evidence regarding their household water quality. 	Visalia, CA

TEACHING ACTIVITIES

Summer 2020	<ul style="list-style-type: none"> ▪ <i>Graduate Student Instructor, Introduction to Culture and Natural Resource Management (ESPM 50AC).</i> Lecturing and grading for a 6-week long course with ~326 students of which I was responsible for 69.
Spring 2019	<ul style="list-style-type: none"> ▪ <i>Graduate Student Instructor, Introduction to Environmental Research Methods (ESPM 100ES).</i> Lecturing, grading, and lesson planning for a 4-month long course with ~60 students of which I was responsible for 30.

PUBLICATIONS

- Rosa L, Chiarelli DD, Sangiorgio M, **Beltran-Peña A**, Rulli MC, D'Odorico P & Fung I (2020). Potential for sustainable irrigation expansion in a 3C warmer climate. *Proceedings of the National Academy of Sciences*.
- **Beltran-Peña A**, Rosa L, D'Odorico P (2020). Global food self-sufficiency in the 21st century under sustainable intensification of agriculture. *Environmental Research Letters*.
- Jenkins W, Rosa L, Schmidt J, Band L, **Beltran-Peña A**, Clarens A, Doney S, Glassie A, Quinn J, Rulli MC, Shobe W, Szeptycki L, D'Odorico P. Values-based scenarios of water security: rights to water, rights of water, and commercial water rights (2021). *BioScience*, 20, pp. 1-14.
- **Beltran-Peña A** and D'Odorico P (2022). The future of food security in Africa in a 3°C warmer climate. *Under Review*.

PRESENTATIONS

- **Beltran-Peña A** (2021) “The Future of Food Security in Africa under Climate and Societal Change”, *Poster Presentation*, American Geophysical Union, Online.
- **Beltran-Peña A** (2021) “Adaptation Pathways Toward Zero Hunger and Malnutrition in Africa under 3°C”, *Poster Presentation*, Ford Foundation Conference, Online. **Invited**.
- **Beltran-Peña A** (2020) “First-Gen Journey to a PhD Pathway: Mitigating the Impacts of Climate Change”, *Oral Presentation*, Cal New Experiences for Research and Diversity in the Sciences, Berkeley, CA. **Invited**.
- **Beltran-Peña A** (2020) “A Global Assessment of Future Food Security in the 21st Century”, *Oral Presentation*, Berkeley Energy and Resources Collaborative Symposium, Berkeley, CA. **Invited**.
- **Beltran-Peña A** (2020) “Hydrological impacts on food security in the 21st century under societal and climate changes”, *Oral Presentation*, UC Berkeley Climate Impacts Research Hub, Berkeley, CA. **Invited**.
- **Beltran-Peña A**, Rosa L (2019) “Climate change and the global water-energy-food nexus”, *Oral Presentation*, United Nations Framework Convention on Climate Change Conference of Parties 25, Madrid, Spain. **Organized a 2-hour side-event in the Italian Pavilion**.

- **Beltran-Peña A** (2019) “Evaluating the Effects of Climate Change and Sustainable Irrigation Intensification on Global Food Security”, *Oral Presentation*, American Geophysical Union, San Francisco, CA.
- **Beltran-Peña A**, Liu Y, Sadeghi M, Biswas N, Bartkowiak P (2019) “An Investigation of Land Water Storage Variability as a Function of Climate Change and Human Activities Over India Using Satellite Remote Sensing”, *Oral Presentation*, NASA Jet Propulsion Laboratory Center for Climate Sciences, Pasadena, CA.
- **Beltran-Peña A**, Davis A, Moore G, Putra G, Wu Y, Zhong V (2018) “Technical and Business Model Analysis of VIVIR Environmental Toolbox for Fecal Sludge Management in India”, *Oral Presentation*. UC Berkeley Haas School of Business, Berkeley, CA.
- **Beltran-Peña A** (2017) “Financial Valuation of Cinemark Holdings Inc”, *Oral Presentation*, Tuck School of Business at Dartmouth College, Hanover, NH.
- **Beltran-Peña A** (2017) “Introduction of UC Sustainability Learning Outcomes”, *Poster Presentation*, California Higher Education Sustainability Conference, UC Santa Cruz, Santa Cruz, CA.
- **Beltran-Peña A** (2017) “The Implications of Geologic Properties and Seismic Activity in the Arctic Region on Undiscovered Oil and Gas Field Exploration”, *Oral Presentation*, UC Berkeley Department of Earth and Planetary Science, Berkeley, CA.
- **Beltran-Peña A** (2012) “Safety Evaluation of the Berkeley-Darfur Stove Using the Iowa State University Stove Safety Testing Protocol”, *Poster Presentation*, Society for the Advancement of Chicanos and Native Americans in Science, Seattle, WA.

RESEARCH INTERESTS

- Water-Energy-Food Nexus, Global Environmental Change, Climate Change, Sustainability, Hydrology, Food Security, Water and Society, Land - Atmosphere Interactions, Earth Science, Satellite Remote Sensing, Environmental Engineering, Data Science, Development Engineering

SELECTED MEDIA COVERAGE

- 2021
- Youth 4 Nature Blog. “*Perspectives in Nature and Climate*”. June 23, 2021
<https://www.youth4nature.org/blog/areidy-perspectives-in-nature-climate>
 - The Daily Californian. “*UC Berkeley doctoral candidate awarded 2 national fellowships*”. June 8, 2021
<https://www.dailycal.org/2021/06/08/uc-berkeley-doctoral-candidate-awarded-2-national-fellowships/>
 - UC Berkeley Rausser College of Natural Resources. “*Areidy Beltran awarded two national fellowships*”. June 2, 2021
<https://nature.berkeley.edu/news/2021/06/06/areidy-beltran-awarded-department-energy-scgsr-fellowship>
 - U.S. Department of Energy. “*DOE’s Office of Science Graduate Student Research (SCGSR) Program selects 78 outstanding U.S. graduate students*”. April 29, 2021
<https://www.energy.gov/science/articles/does-office-science-graduate-student-research-scgsr-program-selects-78-outstanding>

AWARDS AND FELLOWSHIPS

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| 2022-2023 | ▪ U.S. Department of Energy Office of Science Graduate Student Research Program |
| 2021-2022 | ▪ Ford Foundation Dissertation Fellowship |
| 2020-2021 | ▪ Foreign Language and Area Studies (FLAS) Fellowship for Italian Language |
| 2020-2021 | ▪ UC Berkeley Institute of European Studies Grant for the Study of Italian Language and Culture |
| 2020-2021 | ▪ Ford Foundation Fellowship Honorable Mention |
| 2019-2020 | ▪ NSF Innovations in Food Energy and Water Systems (InFEWS) Fellowship |
| 2018-2019 | ▪ The National GEM Consortium University Fellow |
| 2018-2019 | ▪ UC Berkeley Department of Environmental Science Policy and Management Starter Grant |
| 2016 - 2017 | ▪ University of California Graduate Opportunity Masters Fellowship |
| 2016 - 2017 | ▪ University of California Office of the President Carbon Neutrality Initiative Fellow |
| 2016 - 2017 | ▪ Hispanic Scholarship Fund Scholar |
| Summer 2015 | ▪ U.S. Department of State Critical Language Scholarship |
| Spring 2015 | ▪ Educational Opportunity Program Achievement Award Scholarship Recipient |
| 2012 - 2015 | ▪ Cal New Experiences for Research and Diversity in the Sciences (Cal NERDS) Fellow |
| Spring 2014 | ▪ UC Berkeley Rudd Family Foundation Big Ideas Third Place Contest |
| Spring 2014 | ▪ IES Abroad Photo Contest 1 st Place Winner |
| Spring 2014 | ▪ Institute of International Education 5 th Annual Photo Contest Winner |
| Fall 2013 | ▪ U.S. Department of State Benjamin A. Gilman International Scholarship |
| Fall 2013 | ▪ International Education Abroad Travel Scholarship Recipient |
| Fall 2013 | ▪ University of California Education Abroad Program Scholarship Recipient |
| Summer 2013 | ▪ Blum Center for Developing Economies Global Poverty and Practice Fellowship |
| 2012 – 2013 | ▪ National Science Foundation California Alliance for Minority Participation Fellowship |
| 2012-2015 | ▪ UC Berkeley’s Earth and Planetary Science Department -Charles H. Ramsden Scholarship |
| Fall 2012 | ▪ Award for Outstanding Participation and Service to the Community by The Native American Recruitment and Retention Center and The American Indian Science and Engineering Society |
| Fall 2010 | ▪ Ronald McDonalds House of Charities HACER Scholarship Recipient |
| Spring 2010 | ▪ President of the United States Award for Educational Excellence (signed by President Obama) |

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- Spring 2010 ■ U.S. Department of Treasury and U.S. Department of Education 2010 National Financial Capability Challenge Top Scorer Award
 - Spring 2010 ■ California Scholarship Federation Life Membership and Highest Honor for Superior Scholarship and Service
 - Spring 2010 ■ Academic Excellence First Honors Bishop Amat Memorial High School
 - Spring 2010 ■ International Baccalaureate Diploma Recipient
 - 2006 - 2010 ■ First Honors French 1, French 2, French 3, and IB French, AP Spanish

SKILLS

- Fluent in English (native), Spanish (native), Italian, and French; and elementary proficiency in Indonesian and Hindi.
- Experienced with Microsoft Office Suite, Salesforce, website design, ArcGIS, Google Earth Engine, Python, and JavaScript.