

CELINA SCOTT-BUECHLER

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ACADEMIC APPOINTMENTS

Accenture Assistant Professor of Public Policy, 2025 –
Duke University Sanford School of Public Policy

RESEARCH

Interests: Climate policy, carbon dioxide removal, climate and environmental justice, just transition.

Methods: Qualitative: focus groups, interviews, expert elicitation, process tracing, legal analysis.

Quantitative: (multi-)national surveys, natural language processing, regression, participatory geospatial modeling.

EDUCATION

Ph.D. Environment & Resources, Stanford Doerr School of Sustainability 2025
Dissertation: Greenhouse Gas Removal as Just Transition? Social Equity and Public Engagement for Emerging Climate Solutions
Committee: Bruce Cain, Political Science (co-advisor); Rob Jackson, Earth Systems Science (co-advisor); Michelle Anderson, Law; Nicole Ardoin, Environmental Social & Behavioral Sciences; Khalid Osman, Civil & Environmental Engineering
Awards: Knight-Hennessy Scholarship, RAISE (Research, Action, Impact through Strategic Engagement) Fellowship, Stanford Community Impact Award

J.D. Stanford Law School 2025

M.S. Atmospheric Science, Cornell University 2021

B.A. College Scholars Honors: Environmental Science and Policy (*summa cum laude*), 2018
Cornell University

PEER-REVIEWED PUBLICATIONS

Scott-Buechler, C. (2026). Removing carbon, governing deployment: public perceptions of industry and community roles in U.S. carbon dioxide removal policy. *Climatic Change*.

Scott-Buechler, C. & Wang, K.* (2025). Navigating uncertainty: Direct air capture and just transition perspectives in Gulf Coast communities. *Environmental Research Letters*.

*undergraduate co-author

- Policy coverage: [Carbon180 newsletter highlight](#)

Nawaz, S., McLaren, D., Caggiano, H., Hudson, A. D., & **Scott-Buechler, C.** (2024). Carbon removal for a just transition. *Climate Policy*, 1-12.

Scott-Buechler, C. & Jinnah, S. (2024). Early Stakeholder Engagement is Necessary in Advance of Atmospheric Methane Removal Field Trials. *Environmental Research Letters*.

Scott-Buechler, C., Osman, K., Ardoin, N., Fraser, C., Adcox, G., Cain, B., ... & Jackson, R. (2024). Communities conditionally support deployment of direct air capture for carbon dioxide removal in the United States. *Nature Communications Earth and Environment*, 5(175).

Nawaz, S., **Scott-Buechler, C.**, & Caggiano, H. (2024). An independent public engagement body is needed to responsibly scale carbon removal in the US. *Environmental Research Letters*, 19(1), 011002.

Low, S., Boettcher, M., Asayama, S., Baum, C., Borth, A., Brown, C., Clingerman, F., Dauvergne, P., De Pryck, K., Gupta, A., Honegger, M., Lenzi, D., Reitsma, R., Schenuit, F., **Scott-Buechler, C.**, Valenzuela, J.M. (2024). An earth system governance research agenda for carbon removal. *Earth System Governance*, 19, 100204. (Authors listed in alphabetical order following two lead authors.)

Greene, C. H., & **Scott-Buechler, C.** (2022). Algal solutions: Transforming marine aquaculture from the bottom up for a sustainable future. *Plos Biology*, 20(10).

Greene, C. H., **Scott-Buechler, C.**, Hausner, A. L., Johnson, Z. I., Lei, X. G., & Huntley, M. E. (2022). Transforming the Future of Marine Aquaculture. *Oceanography*, 35(2).

Mollica, N.R., Cohen, A.L., Alpert, A.E., Barkley, H.C., Brainard, R.E., Carilli, J.E., DeCarlo, T.M., Drenkard, E.J., Lohmann, P., Mangubhai, S., Pietro, K.R., Rivera, H.E., Rotjan, R.D., **Scott-Buechler, C.**, Solow, A.R., Young, C.W. (2019). Skeletal records of bleaching reveal different thermal thresholds of Pacific coral reef assemblages. *Coral Reefs*, 38(4).

Scott-Buechler, C., & Greene, C. H. (2019). Role of the ocean in climate stabilization. In *Bioenergy with Carbon Capture and Storage: Using Natural Resources for Sustainable Development* (pp. 109-130). Pires, J.C.M. & da Cunha Goncalves, A.L., eds. Elsevier.

SUBMITTED MANUSCRIPTS

Scott-Buechler, C. & Reiner, D. Support for methane removal linked to knowledge, risk, and governance. (*Submitted: Global Environmental Change*). [Part of EU-funded consortium, Quantifying and Deploying Responsible Negative Emissions.]

Scott-Buechler, C. Policy innovation is necessary to support land-based carbon dioxide removal. (*Submitted: Global Change Biology*).

MANUSCRIPTS IN PREPARATION

Scott-Buechler, C., Cotsman, A., Asensio, O., Nava, L., & Reiner, D. Mapping perceptions of carbon dioxide removal: A global analysis of organizational sentiments across time, sector, and geography. (*Target Journal: PNAS*). [Part of EU-funded consortium, Quantifying and Deploying Responsible Negative Emissions.]

CONFERENCES

Session/Workshop Organizer

Learning from Experience: Community and Policy Engagement on mCDR
Carbon to Sea Annual Convening 2026

Research and Policy for Just Transitions
Democracy and Environmental Sustainability Conference, Stanford University 2024

Methane Abatement & Removal Session (co-chair) American Geophysical Union (AGU) Annual Conference	2023
Presenter	
Learning from Experience: Lessons from Community and Policy Engagement on mCDR USC Wrigley Institute Convening on Carbon Dioxide Removal (CDR)	2026
From Projectized Participation to Portfolio Governance Energy Geographies Conference	2026
Who Owns the Drawdown? (invited, plenary speaker) 4th International Conference on Carbon Dioxide Removal	2026
Constructing Feasibility: Governance of Open-System Climate Interventions 4th International Conference on Carbon Dioxide Removal	2026
Building Public Trust and Equity into CDR [Markets?] (invited, plenary speaker) Carbon to Sea Annual Convening	2026
Whose Backyard Matters? Place Attachment, Procedural Power, and the Distribution of Climate Mitigation Infrastructure (1) Where Do We Grow from Here? Global Environmental Justice Conference; (2) American Association of Geographers Annual Conference; (3) Political Ecology Annual Conference	2026
Social Science Considerations for Marine Carbon Dioxide Removal (mCDR) Duke University Oceans Week	2026
Community-Led Just Transitions Amid Shifting Federal Priorities (invited) American Association of Geographers (AAG) Annual Conference, JEDI Session	2025
Tradeoffs in Scaling Renewable Energy and Carbon Removal (invited) Eccles Family Rural West Conference	2025
Social Science Perspectives on Methane Removal (invited) Methane Removal Summit & Workshop	2025
Emerging Applications of Generative AI in Sustainability Reporting Association for Public Policy Analysis & Management (APPAM) Annual Conference	2024
Community Perceptions of Carbon Dioxide Removal & Carbon Capture Projects (invited) Stanford University Carbon Capture Summit	2024
Fair-Share Climate Infrastructure Adoption is Necessary for Climate Justice (invited) Democracy and Environmental Sustainability Conference, Stanford Graduate School of Business	2024
Early Lessons from Community-Engaged Direct Air Capture (invited) Earth Systems Governance Conference	2024
Just Transitions in Fossil Fuel Communities via Emerging Climate Infrastructure Industries (1) Association for Environmental Studies and Sciences (AESS) Annual Conference; (2) Harvard Climate Pipeline Political Science Workshop	2024
Meaningful Community Involvement for Climate Infrastructure (invited) American University Institute for Carbon Removal Law & Policy Symposium	2023
European Stakeholder Engagement in CDR: NLP Sentiment & Topic Analysis International Conference on Negative Emissions Technologies	2022

Federal Opportunities for Direct Air Capture (invited) VERGE22: The Climate Tech Conference	2022
Marine Microalgae Viability Across Geophysical & Sociopolitical Axes (invited) Algae Biomass Association Annual Summit	2021
Geospatial Modeling of Marine Microalgae Viability for Sustainable Nutrition Ocean Visions Summit	2021
Communicating Science to Policymakers (invited) American Geophysical Union (AGU) Science Policy Workshop	2020
Federal & State Environmental Justice Legislation (invited) Community Engagement, Environmental Justice & Health Conference	2020
US Policymaking for Environmental Justice (invited) Environmental Justice & Health Disparities Symposium	2020
Role of US Foreign Policy in Global Environmental Peacebuilding First International Conference of Environmental Peacebuilding	2019
Communicating Negative Emissions Strategies to Lay Audiences International Conference on Negative CO ₂ Emissions	2018
Constraining Thermal Thresholds using Paleo-Bleaching Proxy (poster) Ocean Sciences Meeting	2018
Discussant	
Solar Radiation Modification to Help Address Climate Change? Prospects, Risks, Governance Duke Center on Risk Panel	2026
Urban Governance and Policy Responses to Environmental Challenges in Cities Association for Public Policy Analysis & Management (APPAM) Annual Conference	2024

SERVICE

University Service

Sanford MPP Admissions Committee	2026 cycle
Sanford Committee for Inclusive Academic Excellence	2026 – 2027
Sanford Climate Education Representative (Duke Climate Commitment)	2025 – 2026
Stanford Doerr School of Sustainability Diversity, Equity, & Inclusion (DEI) Liaison	2024 – 2025
Decolonizing Academia - Knight Hennessy group	2023 – 2024
Graduate Student Advisory Committee, Stanford Doerr School of Sustainability	2022 – 2023
Emmett Interdisciplinary Program in Env. & Resources Seminar Coordinator	2022 – 2023

Journal Peer Reviewer

Climate Policy (2)
Discover Sustainability (1)
Policy Studies Journal (1)
Environmental Research Letters (3)
Environmental Research Communications (1)
Nature Communications Earth & Environment (2)

Guest Editor , Environmental Research Letters Focus on Methane Drawdown	2022 – 2024
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Board Member

Center for Environmental Peacebuilding	2020 – 2022
Telluride Association	2016 – 2021

Invited Expert Reviewer

Marine Carbon Dioxide Removal (mCDR) Policy Modeling, Climate Interactive	2026
US Federal Policy Opportunities for Ocean CDR, Energy Futures Initiative	2020
Accelerating Underexplored Solutions to the Climate Crisis, Energy Futures Initiative	2021

GRANTS, SCHOLARSHIPS & FELLOWSHIPS

Grants – Principal Investigator

SCALES Postdoctoral Fellows Research Award (~\$600,000)	2026
Bass Discretionary Funds (\$100,000)	2026
ClimateWorks Foundation Research Grant (\$50,000)	2026
Duke Bass Connections (\$20,900)	2026
Spark Climate Research Grant (\$102,432)	2025
ClimateWorks Foundation Research Grant (\$169,000)	2025

Grants – Lead Investigator

ClimateWorks Foundation Research Grant (\$100,000) [Data for Progress]	2024
Research, Action, Impact through Strategic Engagement Research Grant (\$9,000)	2024
Emmett Interdisciplinary Program in Environment & Resources Research Grant (\$4,000)	2024
National Wildlife Federation Research Grant (\$62,000) [Data for Progress]	2024
Stanford Doerr School of Sustainability Research Grant (\$2,500)	2024
Emmett Interdisciplinary Program in Env.t & Resources Collaboration Grant (~\$40,000)	2024
Chan Zuckerberg Initiative Research Grant (\$80,000)	2023
ClimateWorks Foundation Research Grant (\$176,000) [Data for Progress]	2023
Emmett Interdisciplinary Program in Environment & Resources Research Grant (\$4,000)	2023
McGee-Levorson Grant (\$2,300)	2023
Breakthrough Energy Research Grant (\$73,300) [Data for Progress]	2022
ClimateWorks Foundation Research Grant (\$98,000) [Data for Progress]	2022
Carbon180 Research Grant (\$197,000) [Data for Progress]	2022
Emmett Interdisciplinary Program in Env. & Resources Collaboration Grant (~\$40,000)	2022
Ocean Visions Early Career Research Grant (\$5,000)	2021
Ocean Visions Research Grant (\$20,000)	2020
Atkinson Biodiversity Fund Grant (\$8,000)	2019

Scholarships & Fellowships

Research, Action, Impact through Strategic Engagement Doctoral Fellowship (~\$50,000)	2024
Stanford Knight-Hennessy Scholarship (~\$500,000) ~1% acceptance rate	2021 – 2024
John Knauss Policy Fellowship for climate & ocean policy (\$75,000)	2020 – 2021
Gates Cambridge Scholarship (<i>offered, but declined</i>) (~\$180,000) ~1% acceptance rate	2020
Cornell Presidential Graduate Research Fellowship (~\$100,000)	2018 – 2019
University of New Hampshire Sustainability Fellowship (\$12,000)	2019
Harry S. Truman Scholarship for civic leadership (~\$40,000)	2017
Udall Scholarship for environmental leadership (\$7,000)	2017
NOAA Ernest F. Hollings Scholarship (\$19,000)	2017
Hunter R. Rawlings Presidential Research Scholarship (\$5,000)	2016
Cornell Lynch Scholars Ocean Research Fellowship (\$7,500)	2016

TEACHING & MENTORSHIP

Primary Instructor

PUBPOL 590: Climate Policy in Practice: Infrastructure, Justice, and Systems Design Sanford School of Public Policy, Duke University	Spring 2026
ENERGY 394T/796T: Community Ownership in Fossil Fuel–Dependent Regions Bass Connections, Duke University	Spring 2026
PUBPOL 804: Policy Analysis II Sanford School of Public Policy, Duke University	Spring 2026, '27
ENERGY 393T/795T: Community Ownership in Fossil Fuel–Dependent Regions Bass Connections, Duke University	Fall 2026
PUBPOL 590: Climate Policy Sanford School of Public Policy, Duke University	Fall 2025

Independent Study Supervisor

Abena (Sekum) Appiah-Ofori, Grace Ryan, Lily Mefford (UNC) Sanford School of Public Policy, Duke University	Spring 2026
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Guest Lectures

Community-Engaged Research Leadership for Social Change (PUBPOL 290) Prof. Hy Huynh, Duke Sanford School	Spring 2026
The Political Economy of Policymaking (PUBPOL902): Community Partnerships PhD-level course, Prof. Mallory Sorelle, Duke Sanford School	Spring 2026
Climate Change Law (LAW520): Climate Justice and Carbon Dioxide Removal Law course, Prof. Jonathan Wiener, Duke University Law School	Spring 2026
Environmental Ethics Undergrad. course, Prof. Ann C Thresher, Northeastern University	Fall 2024
Carbon Dioxide and Methane Removal Grad. course, Profs. Chris Field & Rob Jackson, Stanford University	Fall 2023, Fall 2024
Carbon Removal, Capture, and Use Mixed grad. & undergrad. course, Prof. Wil Burns, Northwestern University	Fall 2022, Spring 2024
Will Technology Save the World? Techno-Optimism & Ethics Undergrad. course (fulfills ethics requirement), Prof. Rob Jackson, Stanford University	Spring 2024
Social, Ethical & Governance Considerations for Greenhouse Gas Removal Grad. course (Climate & Society M.A. program), Romany Webb, Columbia University	Summer 2023
Geodynamics Seminar Grad. course, Prof. Scott Lindell, MIT/Woods Hole Oceanographic Institution	Winter 2022

Trainee

Inclusion, Diversity, Equity, Access in Learning Environments (IDEAL) Pedagogy Stanford University	Summer 2024
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Graduate Student Instructor

Control of Nature Undergrad. course (fulfills ethics requirement), Prof. Rob Jackson, Stanford University	Spring 2022
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Cornell Satellite Remote Sensing Training Program Grad. course, Prof. Bruce Monger, Cornell University	Summer 2019
Cornell Ocean Research Apprenticeship for Lynch Scholars (research instructor) Undergrad. field semester, Profs. Drew Harvell & Chuck Greene, Cornell University	Spring 2019
Dynamics of Marine Ecosystems in a Changing Ocean Undergrad. course, Prof. Chuck Greene, Cornell University	Fall 2018

ADVISING

PhD Advisor

Beck Woollen University Program in Environmental Policy (UPEP), Duke University	2026 –
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Public Policy Master's Project Advisor

MPP: Olivia Grobmyer, Grace Doane (second reader) Sanford School of Public Policy, Duke University	2026 – 2027
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MPP: Abena Appiah-Ofori, Sanford School of Public Policy, Duke University	2025 – 2026
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MIDP: Irene Esquivel Hermosilla, Mazhar Bhuyan (second reader) Sanford School of Public Policy, Duke University	2025 – 2026
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Public Policy Undergraduate Honors Thesis Advisor

Lola Castorina, Kelly Gibbs Sanford School of Public Policy, Duke University	2026 – 2027
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PhD Committee Member

Dunsin Fadojutimi Civil & Environmental Engineering, Carnegie Mellon University	2025 –
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Research Advisor

Eads Family Research Endowment Fund Research Assistantship (1 undergrad) Sanford School of Public Policy, Duke University	2025 – 2026
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Climate Scholars Program (1 undergrad) Nicholas School of the Environment, Duke University	2025 – 2026
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Bill Lane Center for the American West (7 undergrads) Stanford University	Fall 2021 – present
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Mentoring Undergraduates in Interdisciplinary Research (2 undergrads) Stanford Doerr School of Sustainability	Summers 2022 & 2024
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Summer Undergraduate Program in Energy Research (1 undergrad) Stanford School of Earth	Summer 2022
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Sustainability Undergrad. Research in Geoscience & Engineering (1 undergrad) Stanford University (DEI initiative for underrepresented students in STEM)	Summer 2022
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Department of Earth & Atmospheric Sciences (2 undergrads, 1 masters) Cornell University	2018 – 2021
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POLICY

Infrastructure Grant Reviewer, U.S. Department of Energy	2023 – 2025
Major accomplishment(s): Oversaw over \$1 billion in climate funding	
Senior Fellow for Climate Innovation, Data for Progress	2020 – 2025
Major accomplishment(s): Regularly briefed fed. agency officials on climate policy	
Co-Chair, Marine Circular Economy Taskforce, Ocean Visions	2020 – 2025
Major accomplishment(s): Facilitated creation of roadmap for algae-based carbon dioxide removal	
Legislative Fellow (Climate & Environmental Justice), U.S. Senator Cory Booker	2020 – 2021
Major accomplishment(s): Co-wrote Environmental Justice Legacy Pollution Cleanup Act; Lead pipe environmental justice provisions included in the Inflation Reduction Act (\$15 billion)	
Policy Fellow, CarbonPlan	2020
Project Consultant, UN Environment Programme	2019 – 2020
Deputy Director & Policy Director, Center for Environmental Peacebuilding	2019 – 2020
Climate Policy Advisory Network, 2020 Presidential Campaign	2019 – 2020

SELECTED POLICY SPEAKING ENGAGEMENTS

Invited Speaker

Career Pathways in Public Policy	2025
University of Massachusetts, Amherst Public Policy Student Association	
Navigating Marine Carbon Dioxide Removal: From Science to Regulation	2025
Sabin Center for Climate Change Law, Columbia Law School (NYC Climate Week Event)	
Getting Atmospheric Carbon Removal Right for People and Communities	2025
Australia Net Zero Futures Forum, Climate Recovery Institute	
Mapping Just Carbon Removal	2024
National Wildlife Federation Webinar Series	
Engaging Publics for Equitable Climate Solutions	2024
The Institute for Science & Policy	
Agenda for a Progressive Political Economy of Carbon Removal	2024
American University Institute for Responsible Carbon Removal	
Charting a Path for Just Direct Air Capture Hubs	2022
American University Institute for Responsible Carbon Removal	
Carbon Dioxide Removal (CDR) & Carbon Capture and Storage (CCS) in California	2022
California Air Resources Board Environmental Justice Advisory Council	
Environmental Justice (EJ) & Carbon Dioxide Removal	2022
OpenAir Collective: This is CDR	
Climate Solution Series: Direct Air Capture	2022
Foundation for Climate Restoration Webinar	
Environmental Justice & Climate Justice	2020
Telluride Association Summer Program	

Invited Podcast Guest

Community Insights on Equitable CDR Deployment 2022
Carbon Curve Podcast

What Polling Says About CDR 2022
Nori Carbon Removal Newsroom Podcast