INSTITUTE *for* CARBON REMOVAL LAW AND POLICY

2021 END OF YEAR REPORT

2021 saw many exciting developments around carbon removal research, development, and policy. To pick out just a few interesting highlights: carbon removal was a feature in the United States of the Infrastructure, Investment, and Jobs Act; the need for carbon removal was further explored through IPCC reports and discussion at COP26, and the US Department of Energy launched the Carbon Negative Shot initiative. These developments reiterate the importance of the work being done at the Institute and have helped to keep us invigorated and motivated despite yet another challenging year. The Institute has made the most out of this difficult year by launching our 1st Annual Conference on Carbon Removal Law and Policy, engaging with the environmental justice community on the equity and justice dimension of carbon removal, and much more.

The Institute thanks The New York Community Trust, Sloan Foundation, Climate Pathfinders Foundation, and the Environmental Defense Fund for their generous support.

BACKGROUND

The Institute for Carbon Removal Law and Policy (ICRLP or the Institute) is a scholarly initiative of the School of International Service at American University in Washington, D.C. The Institute was launched in October 2018 in response to growing scientific and political attention to carbon removal technologies and practices as a potential response mechanism to climate change. We are dedicated to assessing the social, legal, ethical, and political implications of carbon removal and to the characterization and promotion of sustainable carbon removal approaches.

What is carbon removal?

Carbon dioxide removal (CDR) is the process of drawing carbon dioxide out of the atmosphere and locking it away in terrestrial, geological, or marine sinks or in long-lived products for decades, centuries, or millennia, or utilizing captured carbon for purposes such as the generation of energy, chemicals production or to create high-strength materials. The methods for doing so fall into three main camps: biological, geological, and carbon-utilization. Carbon removal can also be referred to as carbon dioxide removal (CDR) or negative emissions technologies (NETs) or as one type of greenhouse gas removal (GGR). For more, see our fact sheets and explainer materials: http://carbonremoval.info/

Why does carbon removal matter?

As a supplement to reducing emissions, carbon removal has the potential to slow, reduce, and reverse the impacts of climate change. Discussions of employing these technologies have emerged in mainstream international climate change response discussions and, on occasion, in domestic climate policy discussions. However, there is still much uncertainty surrounding the technological feasibility and social implications of these technologies. In order to make responsible decisions about the use of carbon removal, these uncertainties must be clarified and critically assessed.

THE INSTITUTE'S 2021 ACCOMPLISHMENTS

PUBLICATIONS

Selected Academic Publications from Institute Staff and Fellows

William R. L. Anderegg, Oriana S. Chegwidden, Grayson Badgley, Anna T. Trugman, **Danny Cullenward**, John T. Abatzoglou, Jeffrey A. Hicke, Jeremy Freeman, and Joseph J. Hamman. 2021."Climate Risks to Carbon Sequestration in US Forests." https://doi.org/10.1101/2021.05.11.443688

- *Forests are currently a substantial carbon sink globally. Many climate change mitigation strategies rely on forest preservation and expansion, but the effectiveness of these approaches hinges on forests sequestering carbon for centuries despite anthropogenic climate change. Yet climate-driven disturbances pose critical risks to the long-term stability of forest carbon.*

Amanda C. Borth and **Simon Nicholson**. 2021. "A Deliberative Orientation to Governing Carbon Dioxide Removal: Actionable Recommendations for National-Level Action." *Frontiers in Climate* 3:74. https://doi.org/10.3389/fclim.2021.684209.

- *Effective and legitimate governance of carbon dioxide removal (CDR) requires that the needs, interests, and perspectives of those liable to bear the burdens of CDR's effects be present in decision-making and oversight processes. This ideal has been widely recognized in prior academic work. How, though, in a practical sense, is this deliberative aspect of CDR governance to be understood?*

Holly Jean Buck. 2021. "Mining the Air: Political Ecologies of the Circular Carbon Economy." *Environment and Planning E: Nature and Space*, December, 25148486211061452. https://doi.org/10.1177/25148486211061452.

- *Can fossil-based fuels become carbon neutral or carbon negative? The oil and gas industry is facing pressure to decarbonize, and new technologies are allowing companies and experts to imagine lower-carbon fossil fuels as part of a circular carbon economy. This paper draws on interviews with experts, ethnographic observations at carbontech and carbon management events, and interviews with members of the public along a suggested CO_2 pipeline route from Iowa to Texas, to explore: What is driving the sociotechnical imaginary of circular fossil carbon among experts, and what are its prospects? How do people living in the landscapes that are expected to provide carbon utilization and removal services understand their desirability and workability?*

Matthias Honegger, **Wil Burns**, and **David R. Morrow**. 2021. "Is Carbon Dioxide Removal 'Mitigation of Climate Change'?" *Review of European, Comparative & International Environmental Law* 30 (3): 327–35. https://doi.org/10.1111/reel.12401.

- *Discussion of CDR governance – despite enjoying growing interest – tends to overlook how key provisions on mitigation apply. Similarly, many climate policy processes have ignored CDR. CDR may have been discursively held separate from 'mitigation' due to a partial conceptual overlap with 'geoengineering'. This article unpacks how the 'mitigation of climate change' – as defined in the United Nations Framework Convention on Climate Change and its Paris Agreement – includes CDR as defined by the Intergovernmental Panel on Climate Change.*

Joseph Jebari, **Olúfẹ́mi O. Táíwò**, Talbot M. Andrews, Valentina Aquila, Brian Beckage, Mariia Belaia, Maggie Clifford, **David Morrow**, **Simon Nicholson**, et al. 2021. "From Moral Hazard to Risk-Response Feedback." *Climate. Risk Management* 33 (January): 100324. https://doi.org/10.1016/j.crm.2021.100324.

- *The Intergovernmental Panel on Climate Change assessments (IPCC) Special Report on 1.5 °C of global warming is clear. Nearly all pathways that hold global warming well below 2 °C involve carbon removal. In addition, solar geoengineering is being considered as a potential tool to offset warming, especially to limit temperature until negative emissions technologies are sufficiently matured. Despite this, there has been a reluctance to embrace carbon removal and solar geoengineering, partly due to the perception that these technologies represent what is widely termed a "moral hazard."*

Sikina Jinnah, **David Morrow**, and **Simon Nicholson**. 2021. "Splitting Climate Engineering Governance: How Problem Structure Shapes Institutional Design." *Global Policy* 12 (S1): 8–19. https://doi.org/10.1111/1758-5899.12900.

- *This article adds conceptual discipline to a well-rehearsed but largely intuitive argument within the climate engineering community that carbon dioxide removal (CDR) and solar radiation management (SRM) should be treated separately – 'split' rather than 'lumped' – in policy discussions*

Simon Nicholson. 2021. "Carbon Removal to the Rescue?" *Current History* 120 (829): 301–6. https://doi.org/10.1525/curh.2021.120.829.301.

- *This article looks at the current state of carbon removal approaches and some of the politics that surround them. It outlines what carbon removal is, charts some of the major challenges and controversies, and sketches some of the work needed to ensure that carbon removal developments are attentive to environmental sustainability and social justice. It also examines some of the major carbon removal options that are either in development or in discussion, starting with biological approaches and then looking at engineered options.*

Laura Pereira, **David Morrow**, Valentina Aquila, Brian Beckage, Sam Beckbessinger, Lauren Beukes, **Holly Buck**, **Simon Nicholson**, et al. 2021. "From FAIrplay to Climate Wars: Making Climate Change Scenarios More Dynamic, Creative, and Integrative." *Ecology and Society* 26 (4). https://doi.org/10.5751/ES-12856-260430.

- *Understanding possible climate futures that include carbon dioxide removal (CDR) and solar radiation modification (SRM) requires thinking not just about staying within the remaining carbon budget, but also about politics and people. However, despite growing interest in CDR and SRM, scenarios focused on these potential responses to climate change tend to exclude feedbacks between social and climate systems (a criticism applicable to climate change scenarios more generally). We adapted the Manoa Mash-Up method to generate scenarios for CDR and SRM that were more integrative, creative, and dynamic.*

Grayson Badgley, Freeman, Joseph Hamman, Barbara Haya, Anna Trugman, William R L Anderegg, **Danny Cullenward**. 2021. "Systematic Over-Crediting of Forest Offsets." (Carbon)Plan. April 20, 2021. https://carbonplan.org/research/forest-offsets-explainer.

- *Carbon offsets are widely used by individuals, corporations, and governments to mitigate their greenhouse gas emissions. Because offsets effectively allow pollution to continue, however, they must reflect real climate benefits. To better understand whether these climate claims hold up in practice, we performed a comprehensive evaluation of California's forest carbon offsets program — the largest such program in existence, worth more than $2 billion.*

Wil Burns, David Dana, and **Simon Nicholson**. 2021. "Climate Geoengineering: Science, Law and Governance." In *Climate Geoengineering: Science, Law and Governance*. 1–13. AESS Interdisciplinary Environmental Studies and Sciences Series. Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-72372-9_1.

- *This volume explores scientific, political and legal issues associated with the emerging field of climate geoengineering. It also encompasses perspectives on both of the major categories of climate geoengineering approaches, carbon dioxide removal and solar radiation management.*

Duncan McLaren and **Wil Burns**. 2021. "It Would Be Irresponsible, Unethical, and Unlawful to Rely on NETs at Large Scale Instead of Mitigation." In *Debating Climate Law*, edited by Alexander Zahar and Benoit Mayer, 241–56. Cambridge: Cambridge University Press. https://doi.org/10.1017/9781108879064.019.

- *NETs range from afforestation to bioenergy with carbon capture and storage. They are seen by many as instrumental in achieving the mitigation objectives of the Paris Agreement. However, uncertainty remains regarding the technical, economic, and political feasibility of the large-scale deployment of NETs. The focus in this chapter is on whether a state may lawfully presume, for instance in the course of determining its long-term low-greenhouse-gas-emission development pathway under Article 4(19) of the Paris Agreement, that a future large-scale deployment of NETs will be realized.*

Evvan Morton. "Ensuring Good Governance of Carbon Dioxide Removal." *Day One Project.* July 15, 2021. https://www.dayoneproject.org//post/ensuring-good-governance-of-carbon-dioxide-removal.

- *Climate change is an enormous environmental, social, and economic threat to the United States. Carbon dioxide (CO2) emissions from burning fossil fuels and other industrial processes are a major driver of this threat. Even if the world stopped emitting CO2 today, the huge quantities of CO2 generated by human activity to date would continue to sit in the atmosphere and cause dangerous climate effects for at least another 1,000 years. The Department of Energy's CDR task force should recommend a governance strategy for CDR implementation to responsibly, equitably, and effectively combat climate change by achieving net-negative CO2 emissions.*

Simon Nicholson. 2021. "Carbon Removal and the Dangers of Extractivism." In *Our Extractive Age*: *Expressions of Violence and Resistance*. Routledge. https://doi.org/10.4324/9781003127611.

- *Our Extractive Age: Expressions of Violence and Resistance emphasizes how the spectrum of violence associated with natural resource extraction permeates contemporary collective life. Chronicling the increasing rates of brutal suppression of local environmental and labor activists in rural and urban sites of extraction, this volume also foregrounds related violence in areas we might not expect, such as infrastructural developments, protected areas for nature conservation, and even geoengineering in the name of carbon mitigation*

Institute Reports

David R. Morrow and **Simon Nicholson**. "Sustainable Carbon Removal." Washington, DC: *Institute for Carbon Removal Law and Policy, American University,* 2021. https://doi.org/10.17606/88h7-nn35

- *Carbon removal, which involves capturing carbon dioxide (CO2) from the atmosphere and sequestering it, can help us meet the goals of the Paris Agreement. The key question is not just how to make large-scale carbon removal operational, but how to make it sustainable. Sustainable practices balance environmental, social, and economic goals. Sustainable carbon removal balances those goals in order to meet the needs of the future without compromising the ability of current generations to meet their own needs. To operationalize this idea, we need to ask two questions: How should we measure the environmental, social, and economic impacts of carbon? How should we decide when carbon removal strikes the right balance between future and present needs?*

Ben Rubin and **Jennifer Brown.** "State of Science: Carbon Dioxide's Role in Achieving the Paris Agreement's Goals." Washington, DC*: Institute for Carbon Removal Law and Policy, American University*, 2021. https://doi.org/10.17606/1q3n-rt82

- *More than a decade's worth of research finds that carbon dioxide removal (CDR), which consists of nature-based and technological efforts to remove carbon pollution from the atmosphere and safely store it, will be necessary to achieve the goals of the Paris Agreement. This resource helps answer these questions on CDR, which is also known as Negative Emissions Technologies (NETs).*

Institute Staff and Fellows in the Media (Selected Mentions)

"Businesses Aim to Pull Greenhouse Gases From the Air. It's a Gamble," *The New York Times,* January, 2021

"CCU: Dangerous distraction or essential for the energy transition?" *Energy Monitor,* January, 2021

"Seeing the Forest for the Trees?: The Role of Afforestation and Reforestation in Combating Climate Change," *American Bar Association,* January, 2021

"Carbon dioxide removal Nature-based and technological solutions," *Toward Climate Neutrality,* February 2021

"Why a Political Philosopher Is Thinking About Carbon Removal," *The Atlantic Weekly Planet,* March, 2021

"Is There Anything Funny About the Climate Crisis?" *The Climate Crisis Newsletter by The New Yorker,* March, 2021

"Clock's running out on climate change. California says it's time for giant carbon vacuums," *Los Angeles Times,* April, 2021

"A Landmark Report Calls for Stopping Fossil Fuel Development in the Next Year," *Gizmodo,* May, 2021

"Controversial geoengineering scheme will dump iron in the sea," New Scientist, June 29th, 2021

"In this choose-your-own-adventure game, you can help save the world - or watch it burn," *Fix,* July, 2021

"Oil companies are gambling the climate on a future that hasn't yet been invented," *The New Statesman,* August, 2021

"Activists Call It A 'False Solution.' But UN Scientists Say We Need To Suck Up CO_2," This *Huffington Post,* August 2021

"How the largest direct air capture plant will suck CO2 out of the atmosphere," *The Verge*, September, 2021

"The World's Biggest Plant to Suck Carbon Dioxide From the Sky Is Up and Running," *Gizmodo*, September, 2021

"The Case for Climate Reparations," *Intelligencer,* November, 2021

"Is Sucking Carbon Out of the Air the Solution to Our Climate Crisis," *Mother Jones,* November & December Issue, 2021

EVENTS

1st Annual Conference on Carbon Removal Law and Policy: Exploring Ocean Based Approaches to CDR

The Institute held its first annual conference this year, which occurred virtually in September. The focus of this year's conference was on law and policy issues associated with ocean-based CDR/NETs approaches, including, but not limited to the following issues:

- Governance of ocean-based carbon dioxide removal approaches at national and sub-national scales, as well as the role of international treaty regimes and principles of customary international law;
- Architectures for facilitating, and effectively regulating, ocean-based CDR research;
- The role and application of principles of equity and social justice in ocean-based carbon dioxide removal research and deployment;
- Methodologies for, and challenges in, constructing effective architectures for public engagement on ocean-based carbon dioxide removal approaches

Recording of the various sessions, as well as relevant supporting materials from each session, are now available on our conference website **here.**

PROJECTS & COLLABORATIONS

Continuing Project: Introducing Carbon Removal Options into GCAM

In 2021, the Institute launched a project to produce a variant of the Global Change Analysis Model (GCAM), a major Integrated Assessment Model (IAM) developed by the Joint Global Change Research Institute. IAMs are computer models that combine a model of the climate system with models of the economy, the energy sector, and land use to help researchers think rigorously about possible climate futures. The variant, GCAM-CDR, introduces several additional carbon removal technologies into the model and expands GCAM's ability to model carbon removal-related policies.

This project continues to be led by Director of Research David Morrow alongside Post-doctoral Researcher Raphael Apeaning, to extend GCAM's ability to model carbon removal. This year, the Institute is pleased to have brought in Research Associate Garrett Guard, a recent graduate from American University, to contribute to the work being done with this

project. The research team is preparing several papers based on GCAM-CDR, including papers on the connection between carbon removal and the sustainable development goals (SDGs) and the role of carbon removal in neutralizing residual emissions from harder-to-abate sectors. Throughout 2021, the team presented its research at several major conferences, including the European Geophysical Union General Assembly, the Integrated Assessment Modeling Consortium Annual Meeting, and the American Geophysical Union Fall Meeting.

The Institute acknowledges the generous support of the Alfred P. Sloan Foundation for this ongoing work.

Equity and Justice Dimensions of Carbon Dioxide Removal

This year, the Institute has pivoted much of our focus to the equity and justice dimensions of carbon removal. Environmental justice and frontline perspectives are essential if carbon removal is ever to be a just, equitable, and sustainable component of climate change response. The Institute has been working with environmental justice leaders to convene a workshop and host other work aimed at providing space for and encouraging learning from environmental justice perspectives on carbon removal proposals and developments. This line of work will continue throughout 2022.

The Institute acknowledges the generous support of The New York Community Trust for this ongoing work.

The Potential for Soil Carbon Sequestration in Croplands: Assessing Agreement Amongst the Scientific Community

Project Manager Jennifer Brown, Institute Fellow Jason Funk, and Independent Consultant Kristy Buckley have been working in conjunction with the Environmental Defense Fund on a multifaceted study aimed at assessing the degree of consensus within scientific and NGO communities on soil carbon sequestration and net GHG mitigation potential in croplands. This study seeks to identify remaining research gaps around the subject. The expected outcomes will be relevant for shaping future research, advocacy, and policymaking related to cropland soil carbon sequestration.

The Institute acknowledges the generous support of the Environmental Defense Fund for this ongoing work.

Carbon Removal Working Group

The Institute has continued to engage with the NGO community through regular meetings working to imagine and promote more just, equitable, and inclusive understandings of carbon removal. This partnership continues to work with the goal of expanding the carbon removal conversation through drawing on the knowledge, interests, and perspectives of a wider array of voices.

The Institute acknowledges the generous support of The New York Community Trust for this ongoing work.

Survive the Century: A Cli-fi Story of Choice and Consequences

Last year, Director Simon Nicholson teamed up with author Sam Beckbessinger and Christopher Trisos, Senior Researcher for the African Climate and Development at the University of Cape Town, in creating a game called "Survive the Century." The game launched this year, and can be played **here.**

Survive the Century is a choose-your-own-adventure-style game about the political, environmental and social choices humans will face between 2021 and 2100 as we adapt to the ravages of climate change. This game is a work of fiction, but it is informed by real science. The creators hope this game helps people to feel less hopeless and nihilistic about the future.

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The message is: Our choices matter. It's not over. There are still a lot of decisions we can make that will lead to dramatically different futures.

EDUCATIONAL RESOURCES

Blog Series

The **Carbon Removal Blog** explores a wide range of subject matters around carbon removal in an easily digestible and accessible manner. Here are some of the Institute's notable blog posts from 2022:

"CO2 Pipelines: Navigating the Complexities and Nuances Through Expert Opinions," Jenn Brown

"Why Orca matters: long-term climate policy and Climeworks' new direct air capture facility in Iceland," David Morrow & Michael Thompson

"ICRLP Webinar Series: 'The Global South in the Imagining of Climate Futures: A Conversation with Kim Stanley Robinson and ICRLP's Olúfẹ́mi O. Táíwò,'"Isabella Corpora

"A Praise for Basalt Potential: In situ Mineral Carbonation," Isabella Corpora

"Net-zero finance? An investor's guide to a net-zero portfolio," David Morrow

Carbon Removal Corporate Action Tracker

In 2019, the Institute created this **Action Tracker** outlining some interesting moves regarding climate action in aviation, energy, heavy industry, and other harder-to-abate sectors, as well as large financial actors and retail companies. In 2021, the number of companies declaring Net Zero Pledges increased, and with that, an increasing number have made climate pledges that entail some use of large-scale carbon removal. Our Action Tracker aims to capture many of the pledges that include carbon removal.

Carbon Removal Bibliography

The Institute maintains a database of citations pertaining to carbon removal which is generously hosted by the Climate Protection & Restoration Initiative. This bibliography includes citations from both peer-reviewed and grey literature on the topic of carbon dioxide removal options to address climate change, often also denominated as "Negative Emissions Technologies." The bibliography also includes citations on carbon capture and sequestration given the pertinence of this approach to many CDR options. Visit the comprehensive list **here.**

Webinar Series

This **webinar series,** launched in 2019, is dedicated to the promotion of meaningful dialogue surrounding CDR by bringing together experts together to examine particular carbon removal technologies. In 2021 we hosted the following webinars:

"Emerging CDR Opportunities in US Legislation," February 2021
The Institute for Carbon Removal Law and Policy presents a webinar on new and emerging legislation opportunities for carbon removal in the US. Topics will include: the Trillion Trees and National Carbon Storage Act, the CREATE Act, carbon removal elements of the stimulus package, and what the new Administration and Congress is likely to consider on carbon removal.

"The Global South in the Imagining of Climate Futures," March 2021
This webinar, unique to our series, featured prolific science fiction writer Kim Stanley Robinson and Olúfẹ́mi O. Táíwò, ICRLP Research Fellow and Associate Professor of Philosophy at Georgetown University, in conversation about visioning climate futures that privilege the Global South. This discussion was moderated by Kate O'Neill, Professor in the Department of Environmental Science, Policy and Management at UC Berkeley.

"Net Zero Targets: The Good, the Bad and the Ugly," June, 2021
In March 2021, The Energy & Climate Intelligence Unit and Oxford's Net Zero Program released a report, entitled "TAKING STOCK: A global assessment of net zero targets." This webinar brought together several of the authors of this report to discuss the systemic problems with most net zero pledges, including in the context of carbon offsets (including those associated with greenhouse gas removal approaches) and their recommendations to expand, clarify and upgrade such pledges.

"Public Perceptions of Carbon Dioxide Removal," July, 2021
What do members of the public and policymakers think about carbon removal? How does the framing of carbon removal, such as presenting specific approaches to carbon removal as "natural," affect people's views? How does political identity or people's level of trust in corporations or scientists affect those views? How do people's attitudes toward carbon removal relate to their attitudes toward other responses to climate change? Three expert panelists discuss these and related questions in this webinar on public perceptions of carbon removal presented by the Institute for Carbon Removal Law and Policy.

"CRISPR Crops: How Scientists are Using Genome Editing to Sequester Carbon," July, 2021
ICRLP hosted a discussion with experts from the Innovative Genomics Institute at the University of California, Berkeley on the use of modern molecular and genomic technologies to develop climate-friendly, inexpensive, crop and soil amendments that dramatically increase the potential to store atmospheric carbon in biomass and minimize the release of GHGs back into the environment. This discussion also focused on the ethical, governance, and public perception questions that arise when scaling new technologies of this nature.

"The Prospects for Carbon Dioxide Removal in California," August, 2021
Given the sheer size of its economy, and the ambitiousness of its climate commitments, California could play a pivotal role in the development of carbon removal options. This webinar focused on potential mechanisms to drive large-scale adoption of carbon dioxide removal in the state. The discussion also focused on key constraints to carbon removal adoption in California, as well as how to ensure that potential deployment comports with critical environmental justice considerations. The respective speakers will drew upon recent reports and articles that they have published on these themes.

"Carbon Dioxide Removal via BECCS in a Carbon-Neutral Europe," September, 2021
This webinar parsed out key messages from a recent study in the journal Energy & Environmental Science, which sought to quantify the potential of Bioenergy and Carbon Capture with Storage (BECCS) in Europe: "Assessment of carbon dioxide removal via BECCS in a carbon neutral Europe." In this webinar, one of the study's authors will discussed these scenarios, including the need for continent-wide cooperation in terms of storage and transportation of biomass to optimize sequestration.

"A New Policy Framework for Incentivizing Negative Emissions," September, 2021
In order to limit global climate change, the world may eventually need to remove more carbon from the atmosphere than it puts in ('negative emissions'). Economists almost universally recommend pricing carbon emissions via a tax or cap, but this policy cannot achieve negative emissions unless paired with potentially massive government spending. In this webinar, Dr. Derek Lemoine made the case that an alternate type of policy, called 'carbon shares', can limit emissions as efficiently as carbon taxes or caps while also properly incentivizing negative emissions.

"The Potential of Artificial Ocean Upwelling and Downwelling in Carbon Dioxide Removal," October, 2021
This webinar examined the prospects for two potential ocean-based carbon removal approaches artificial ocean upwelling and downwelling, to effectuate large-scale sequestration of carbon dioxide. Artificial Ocean Upwelling refers to approaches that seek to boost the primary production of marine organisms that take up carbon dioxide, including phytoplankton and macroalgae, by moving nutrient-rich waters upward in the water column. Artificial Ocean Downwelling refers to approaches that can enhance downward transport of cold CO2-saturated surface waters for storage up to hundreds to thousands of years.

"COP26 Outcomes: Review and Analysis," November, 2021
The stakes on the outcomes of COP26 in Glasgow were higher than ever in 2021. Since the last COP in 2019, the International Energy Agency had released a report advising that all new fossil fuel exploration should end entirely by 2022 in order to keep warming under 1.5 degrees Celsius (2.7 F). Furthermore, in August, the Intergovernmental Panel on Climate Change released the highly anticipated AR6 Working Group 1 report outlining the dramatic changes the planet has already endured and the severity of the climatic changes ahead if immediate action is not taken. The global conversation and atmosphere around climate change was arguably more intense than ever in 2021. This webinar served as a post COP26 roundup in which a panel of experts reflected on their biggest takeaways from the event, including components of carbon removal where relevant.

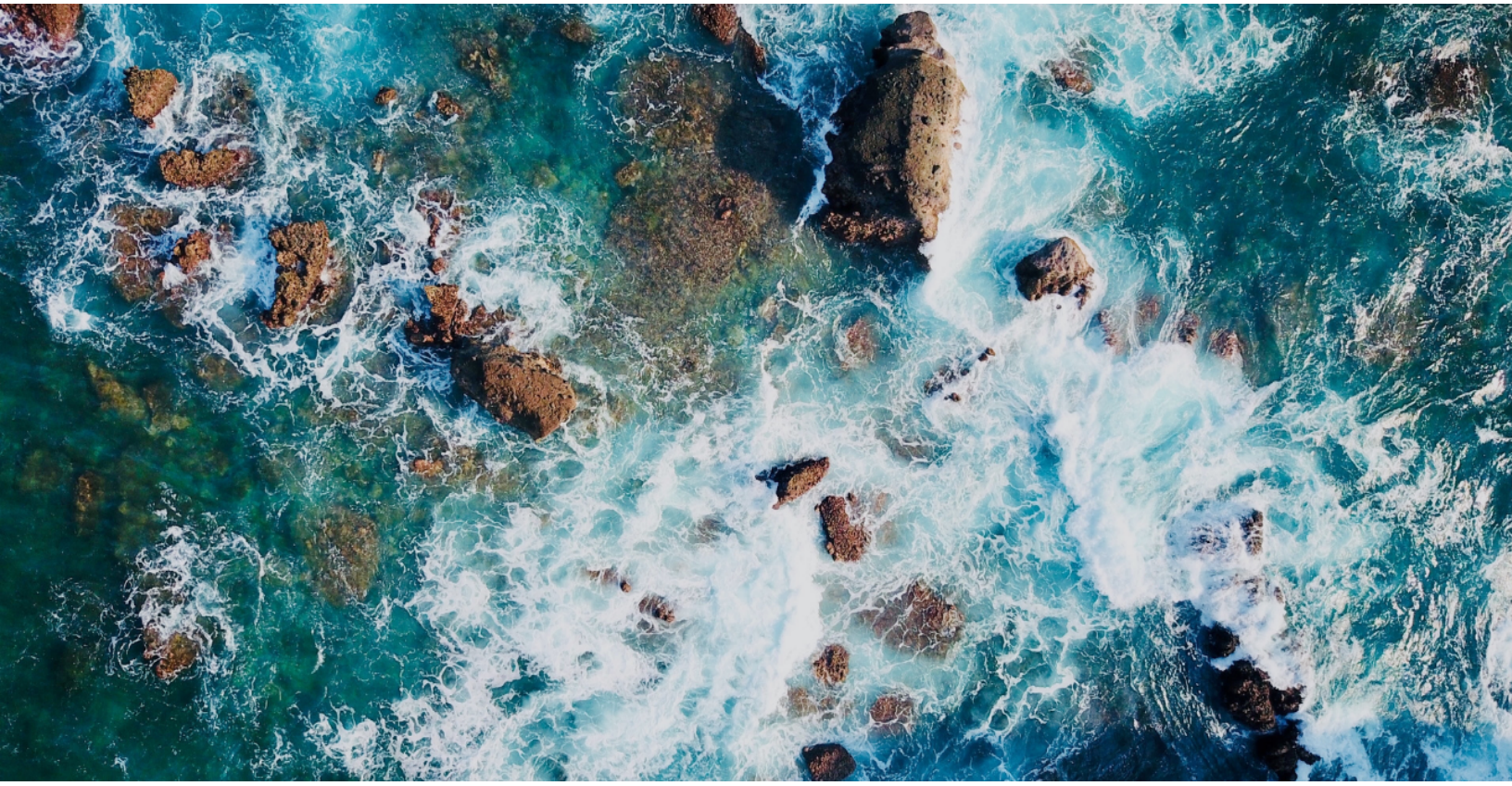
ANNOUNCEMENTS

A New Chapter for Dr. Wil Burns

Dr. Wil Burns, who has served as Co-Director of ICRLP since its inception, stepped down from his role this year and has transitioned to the Northwestern University Program in Environmental Policy and Culture, where he is now a visiting professor. In this role, Dr. Burns will be assisting in the development of this program. Wil will continue to collaborate with ICRLP, most actively through our ongoing webinar series. Many of these events will be

co-branded with Northwestern University going forward. The Institute is looking forward to these collaborative events and wishes Wil success in his new role.

The Institute for Carbon Removal Law and Policy, housed at American University, is committed to the assessment and promotion of sustainable carbon removal technologies and practices.



WHO WE ARE

David Morrow, Director of Research

Simon Nicholson, Director

Jenn Brown, Project Manager

Dr. Raphael Apeaning, Post-doctoral Researcher

Garrett Guard, Research Associate

Wil Burns, Co-Director Emeritus

Jason Funk, Research Fellow

Isabella Corpora, Research Fellow

Michael Thompson, Research Fellow

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