

THE VANCOUVER DECLARATION & Policy Framework

On Global Cooperation to Remove Carbon Dioxide

BRIEFING KIT



CDRANet

Carbon Dioxide Removal Action Network

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CORE MATERIALS



EXECUTIVE SUMMARY

Purpose

The purpose of the Vancouver Declaration is to establish a voluntary, non-binding, government-led forum for coordinating the policy, technical, and institutional frameworks necessary to scale carbon dioxide removal (CDR) to climate-relevant levels.

Challenge

Scientific consensus (IPCC, UNEP) indicates that limiting global warming to 1.5°C or 2°C requires deep emissions reductions and large-scale CDR. While private markets are emerging, they lack the coordination, standards, and public-sector leadership required for responsible, gigaton-scale infrastructure. Current climate agreements do not offer a dedicated, government-to-government forum focused specifically on the myriad issues and challenges of CDR implementation.

Solution: The Vancouver Declaration

The Declaration is a “soft-law” instrument—a shared framework for engaging in common cause on CDR, particularly at the government level. It complements existing frameworks (like the Paris Agreement) by providing the only venue for comprehensive peer-to-peer collaboration on all CDR-related issues and challenges.

The Consultative Process (The “Vancouver Process”)

We are currently in an exploratory phase intended to support mutual learning and coordination. Participants in this process may, at their discretion: share information on national or institutional priorities, policies, and needs related to CDR; identify opportunities for collaboration, alignment, or joint initiatives; contribute to discussions regarding possible policy approaches, including but not limited to the Vancouver Declaration; and more. This process is non-binding, flexible in terms of time commitments and engagement opportunities, confidential, and led by neutral expert CDR policy organizations such as the Stockholm Environment Institute, Clean Air Task Force, and Negative Emissions Platform.

Action Requested

Governments, IGOs, and key public sector agencies are invited to nominate focal points (representatives) to participate in the upcoming consultative process:

- **Timeline:** Initial orientation work will begin in mid-June, with a focus on asynchronous updates over the summer to accommodate holiday schedules.
- **Milestone:** A remote plenary session will be tentatively scheduled for mid-September.
- **RSVP:** Please nominate a focal point by mid-June by emailing info@cdranet.org. Later nominations are also welcome.



THE VANCOUVER DECLARATION

On Global Cooperation to Remove Carbon Dioxide

Our world is heating rapidly, and the stable climate that has long supported human civilization is beginning to erode in ways that may soon become irreversible. Confronting this crisis responsibly requires not only deep reductions in carbon dioxide emissions, but also the urgent development of our carbon dioxide removal (CDR) capabilities.

The science is clear:

- Over the past decade, the average near-surface temperature of our planet has risen faster and to higher levels than at any other period in recorded human history.
- Greenhouse gases—above all, carbon dioxide—are the primary drivers of this rise. Excess carbon dioxide has accumulated in our planet’s atmosphere, and this legacy pollution will continue trapping heat for generations.
- The impacts of increasing temperatures are already significant and will only intensify over the coming decades. Adapting to these changes will not be possible in many parts of the world.
- Simply reducing carbon dioxide emissions will not keep temperatures from reaching catastrophic levels by the end of this century. Climate experts recognize that removing carbon dioxide is also essential.

Developing our CDR capabilities is therefore among the most consequential challenges humanity has ever faced. Yet these capabilities are still emerging, and refining and responsibly scaling them to climate-relevant levels will require significant international engagement and cooperation. It will also require decisive government engagement, given the unique abilities and historic roles of governments in rapidly scaling infrastructure systems that serve the public good.

Recognizing the urgent need for collective action, through this Declaration, we come together in common cause across borders and governments to begin addressing this challenge in earnest. Building upon and working alongside existing climate agreements and programs, we will develop and mobilize new pathways and partnerships to support the research, finance, policy, governance, infrastructure development, and other elements that responsible CDR scaling requires, and devote to this challenge the priority, resources, and focus necessary for rapid and sustainable progress.

We stand at a pivotal moment in human history—one that requires trust in science, shared responsibility, and bold, united action. Through this Declaration, we act together today so we may better protect our present, and preserve a livable future for generations yet to come.

STRATEGIC CONTEXT

And Implementation Rationale

Purpose

To establish a voluntary, non-binding, government-led forum for coordinating the policy, technical and institutional frameworks necessary to scale carbon dioxide removal (CDR) to climate-relevant levels.

Background

Climate models developed by IPCC researchers have long noted that CDR will be required—alongside deep emissions reductions—to stabilize our global temperatures. To-date, we have relied on the marketplace to scale CDR to the size needed to achieve the IPCC's recommendations. However, this approach has failed. We now recognize that significant government involvement will be required, as has been the case for every major infrastructure development project throughout history (think roads, electrification, and sanitation systems).

For this challenging task, new intergovernmental policy mechanisms for CDR will need to be developed. Existing policies only address CDR indirectly, primarily through accounting rules or market-based mechanisms. There is no instrument focused on facilitating the development of government-to-government CDR policy, standards, capacity-building, and institutional readiness.

What is the Vancouver Declaration?

The Vancouver Declaration on Carbon Dioxide Removal is a voluntary, non-binding soft-law instrument designed to:

- Support dialogue among governments on CDR policy and governance structures;
- Encourage information-sharing and capacity-building on issues such as standards, best practices, regulation and investment;
- Promote coordination across governments, jurisdictions, and regions; and
- Complement existing national and international climate frameworks without replacing them.

What the Declaration Does Not Do

The Declaration is enabling rather than prescriptive, and is designed to lower barriers to engagement on a complex and emerging policy domain. The Declaration does *not*:

- Create legal obligations;
- Require legislative approval;
- Mandate specific technologies, targets, timelines, or funding commitments;
- Establish a negotiating forum or require consensus decision-making;
- Prejudge the role, scale, or suitability of specific CDR approaches; or
- Create a centralized authority with decision-making power over national actions.

Relation to the Policy Framework

The Declaration is accompanied by a Vancouver Declaration *Policy Framework*, which offers a preliminary, non-binding outline of potential areas for coordination across research, finance, markets, governance, and implementation. The Policy Framework:

- Is not part of what governments sign;
- Serves as a living reference document, not an agreed plan; and
- Will evolve over time through voluntary engagement, experience, and dialogue.

Endorsement of the Declaration does not imply endorsement of the Policy Framework or participation in any specific activity.

Who Developed It?

The Declaration has been developed by CDRANet, an international network of several hundred experts spanning climate science, policy, industry, and civil society. Contributors include individuals with experience in IPCC assessment processes, national climate agencies, and international organizations.

The CDRANet initiative has been convened by the Science Communication Institute, a US-based non-profit organization acting as a neutral, non-advocacy convener in support of international policy dialogue.

What Does Participation Involve?

Participation in the Vancouver process is intentionally flexible, modular, and scalable. Governments can engage at different levels and through different pathways, including:

- **Policy and governance dialogue:** Information-sharing on regulatory approaches, safeguards, and institutional design;
- **Science and research coordination:** Engagement on assessment needs, monitoring approaches, and knowledge gaps;
- **Technology-specific collaboration:** Voluntary engagement focused on particular CDR approaches (e.g., direct air capture, biomass-based removal, mineralization, ocean-based methods), without implying endorsement of any pathway;
- **Markets and finance readiness:** Dialogue on standards, accounting, procurement, and investment frameworks; and
- **Regional or sectoral initiatives:** Participation in regionally relevant or sector-specific coordination efforts.

Participation in any pathway is optional and does not imply participation in others. As well, signing the Declaration is not required, and signing does not require participation in specific initiatives, technologies, or policy positions.

Current Engagement

The Vancouver Declaration is currently being reviewed by many national and subnational governments. Outreach efforts began in December of 2025. Engagement updates will be reported on the CDRANet website at cdranet.org.

Future Engagement

An interim secretariat will oversee 2026 conversations between participants, expected to begin in mid-June, and advised by several prominent climate policy organizations. A permanent secretariat will be established later in the year, as described elsewhere in this briefing kit.

The Declaration will be the centerpiece of future conferences to be coordinated by CDRANet, likely on an annual basis, in order to continue building and reporting on international and intergovernmental collaboration and capacity on CDR.

Next Steps

Interested governments are invited to:

- Appoint a representative who can serve as a point of contact for further discussions on the Vancouver Declaration and surrounding process; and/or
- Take any other steps that align with government needs and interests, including formally endorsing the Declaration (signing), offering to help support the Vancouver Secretariat, or other actions; and/or
- Request additional materials or a personal briefing.

Contact

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STRATEGIC ALIGNMENT

Existing climate policies and institutions address important but distinct pieces of the carbon dioxide removal (CDR) challenge. What has been missing is an international network that joins these pieces together and mobilizes governments work together to deploy CDR at scale.

This is where the Vancouver Declaration fits. It does not duplicate other efforts or treaties (the Declaration itself is not a treaty), but instead connects and enhances them, offering a practical complement: a better way for governments to compare approaches, learn from peers, and focus together on shared questions around CDR infrastructure, standards, procurement, finance, regulation, public administration, and more. In doing so, it helps governments get more out of existing CDR efforts. At the same time, the Vancouver process is not a national government-only endeavor. Effective CDR deployment will depend on close collaboration with subnational authorities, researchers, civil society, and the private sector. The Vancouver process provides a neutral, goal-oriented space to integrate these perspectives and work together to ensure the global CDR policies we deploy are informed, coordinated, safe, effective, and equitable.

Initiative	Focuses on CDR?	Mobilizes governments?	Comprehensive?*	Primary function	What Vancouver adds
Paris Agreement / NDCs	No	Partly	No	Sets national climate goals and reporting frameworks	Provides a practical venue for implementing CDR-related commitments through real policy coordination
Article 6.4 mechanism	Partly	No	No	Establishes rules for carbon crediting and international transfers	Adds a non-market coordination layer for governments regardless of whether crediting is used
COP / UNFCCC processes	No	No	No	Negotiation, diplomacy, and consensus-building	Enables sustained, working-level collaboration beyond formal negotiation settings
Mission Innovation (overall)	No	Partly	No	Accelerates clean energy innovation across sectors	Narrows focus to CDR governance and deployment rather than cross-sector innovation
Mission Innovation – CDR Mission	Yes	Partly	No	Advances CDR RD&D and early deployment	Extends beyond innovation into public policy design, procurement, and administration
Climate High-Level Champions	No	No	No	Mobilizes non-state actors and political ambition	Translates high-level ambition into operational government collaboration
Carbon Management Challenge	No	Partly	No	Accelerates carbon management projects and investment	Focuses on public-sector frameworks needed to support and scale these efforts
UNEP	No	Partly	No	Provides policy support, assessments, and capacity-building	Offers a dedicated intergovernmental collaboration forum to complement UNEP's role
IPCC	Partly	No	No	Assesses climate science and mitigation pathways	Converts scientific conclusions into coordinated policy action among governments
GONE (Group of Negative Emitters)	Yes	No	No	Coordinates buyers and suppliers of high-quality CDR; supports market development and standards	Provides a much broader government-led forum to help align policy and action globally
Research / NGO ecosystem	Partly	No	No	Produces analysis, advocacy, and technical insight	Provides a neutral government-led venue to operationalize this knowledge
Vancouver Declaration	Yes	Yes	Yes	Peer-to-peer government coordination on CDR policy and implementation	–

TERMS OF REFERENCE

For Participating in the Vancouver Process

Objective

The Vancouver Process is an informal, government-led collaboration among national, subnational, and intergovernmental institutions exploring opportunities for cooperation on carbon dioxide removal (CDR) under the Vancouver Declaration. The process is intended to help governments and public institutions share knowledge, identify priorities, develop practical pathways for cooperation, and lay the groundwork for a future Vancouver Declaration Secretariat that will support long-term collaboration. Participation in the Vancouver Process does not constitute a treaty commitment, legal obligation, or formal endorsement of the Vancouver Declaration.

Role of Participants

The Vancouver Process is collaborative and exploratory in nature and is intended to support mutual learning and coordination among participants. Participants in the Vancouver Process may, at their discretion:

- Share information on national or institutional priorities, policies, and needs related to CDR;
- Exchange knowledge, resources, and experiences with other governments and institutions;
- Identify opportunities for collaboration, alignment, or joint initiatives;
- Contribute to discussions regarding governance, coordination, and implementation of the Vancouver Declaration;
- Help shape the design, priorities, and functions of a future Vancouver Declaration Secretariat.

Participation

Participation is designed to be flexible and accessible, allowing governments and institutions to engage at a level appropriate to their interests and capacity.

- Flexible engagement: Participants may engage in the Vancouver Process through consultations, workshops, written exchanges, or other discussions. There are no required meetings, deliverables, or minimum participation thresholds.
- No voting or binding decisions: The Vancouver Process does not operate through formal voting or decision-making procedures. Discussions are intended to facilitate collaboration and knowledge exchange rather than produce binding decisions.
- No financial obligations: Participation does not involve membership fees, financial commitments, or fundraising responsibilities.
- No compensation: Participants take part as part of their institutional roles and are not compensated for their participation.

Independence of Views

Participation in the Vancouver Process does not imply agreement with, or endorsement of, any specific policy proposals, recommendations, or actions discussed within the process. Similarly, the views expressed by participants during discussions do not necessarily represent official positions of their governments or institutions unless explicitly stated.

Participation in Institutional Capacity

Participation in the Vancouver Process generally occurs through institutions rather than individuals. Governments, government agencies, intergovernmental organizations, and other public institutions may designate representatives to participate in discussions. Institutions may change or expand their representation at any time as appropriate. Participation does not imply formal endorsement of the Vancouver Declaration unless explicitly stated by the participating institution.

Public Acknowledgment of Participants

To ensure transparency and facilitate collaboration, organizers of the Vancouver Process may publicly list participating institutions on websites, outreach materials, and related communications.

Confidentiality and Use of Input

Discussions within the Vancouver Process may include non-public information or informal exchanges of views. Participants are asked to exercise discretion regarding the public disclosure of such discussions, and organizers will not attribute comments to individual participants or institutions without permission.

Liability

Participation in the Vancouver Process does not create legal, fiduciary, or governance responsibilities for participants. Participants assume no liability for the actions, policies, or outcomes associated with the Vancouver Process or the Vancouver Declaration.

Duration of Participation

There is no fixed term of participation. Institutions may join or withdraw from the Vancouver Process at any time. Participation in the Vancouver Process may evolve over time as the initiative develops, including through the establishment of a Vancouver Declaration Secretariat to support long-term collaboration.

Coordination

The Vancouver Process is currently coordinated by SCI and CDRANet through an Interim Secretariat. As the initiative develops, participants may contribute to discussions regarding the structure, governance, and functions of a future Permanent Secretariat.

ANNEX



THE VANCOUVER DECLARATION & Policy Framework

On Global Cooperation to Remove Carbon Dioxide



CDRANet

Carbon Dioxide Removal Action Network

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A Letter of Gratitude and Hope

October 20, 2025

To my fellow members of the Global Carbon Dioxide Removal Action Network (CDRANet), and to all climate advocates around the world,

I want to extend my deepest gratitude for your contributions to the development of the Vancouver Declaration and its companion policy framework. Together, these documents offer a shared vision and a common platform for action to help steer the world toward long-term climate stability and restoration through carbon dioxide removal (CDR) at scale.

The science is clear: Reducing carbon dioxide emissions and removing the excess carbon dioxide from our planet's atmosphere are both essential for stabilizing our climate and eventually restoring it to safer conditions. But this won't happen on its own. CDR must first be supported by clear policy signals, durable institutions, and sound public governance, or it risks being too slow, too fragmented, or misused.

The Vancouver Declaration and policy framework are early contributions to this vital work. They are not the final answers, but a beginning, meant to help guide global cooperation, and support the hard work of implementation that still lies ahead. In the months and years to come, success will depend on our sustained engagement, and our global commitment to this challenge we must face together.

As we carry forward the momentum and optimism that have brought us to this point, let us work together to begin transforming this shared vision into tangible progress for the benefit of our planet and future generations.

With sincere appreciation and hope,

A handwritten signature in black ink, appearing to read 'Glenn Hampson', with a long horizontal flourish extending to the right.

Glenn Hampson
Program Director, CDRANet
Executive Director, Science Communication Institute (SCI)

DEFINITIONS & ABBREVIATIONS

Expanded definitions for selected terms are included in Annex 1.

Term	Definition	Abbreviation
Additionality	The principle that carbon removal or reduction projects must result in climate benefits that would not have occurred without the specific intervention; a safeguard to ensure that investments lead to real, incremental gains.	
Advance market commitments	Binding commitments by governments or institutions to purchase products or services (such as carbon removals) once they are developed to specified standards, creating strong early market demand.	AMCs
Annual removal target	The estimated amount of carbon dioxide that must be removed from the atmosphere each year to achieve our climate goals. See the Annex for context and assumptions.	
Avoidance	The prevention of greenhouse gas emissions that would otherwise occur under a projected baseline scenario (e.g., avoided deforestation). Avoidance relies on counterfactual assumptions, making verification and additionality more complex.	
Carbon dioxide removal	The process of capturing carbon dioxide from the atmosphere and storing it durably in geological, terrestrial, oceanic, or engineered reservoirs.	CDR
Climate repair	The broader process of redressing the consequences of climate change, encompassing both temperature stabilization and climate restoration. Although climate repair may also involve other measures, this framework focuses specifically on carbon dioxide reduction and removal as the primary means of repair.	
Climate restoration	The long-term goal of reducing atmospheric greenhouse gas levels and global temperatures to conditions that support a more stable climate, continued planetary habitability, and resilient ecosystems.	
Durability	The length of time that carbon dioxide remains sequestered once removed from the atmosphere, ranging from decades to millennia depending on the method used.	
First-of-a-kind project	Initial demonstration or deployment projects that test the feasibility and performance of new technologies or systems at commercial scale.	FOAK
Government	Governments and quasi-government agencies at all levels have an important role to play in CDR. Therefore, the term “government” in this declaration refers to a broad ecosystem of actors—from national and local authorities to multilateral institutions, regulators, and regional alliances—each with a critical role in scaling CDR.	
Greenhouse gases	Gases that trap heat in the atmosphere, contributing to global warming. Key examples include carbon dioxide, methane, and nitrous oxide.	GHGs
Measurement, reporting, and verification	The systems and protocols used to ensure that carbon removal activities achieve their intended climate outcomes in a transparent, measurable, and verifiable manner. In some contexts, the “M” can also stand for monitoring, which is often used interchangeably “measurement.” Both words describe the need to develop a strict accounting of how much carbon we’re removing, and what happens to removed carbon over time.	MRV
Net zero	A state in which greenhouse gas emissions released into the atmosphere are balanced by equivalent amounts of emissions removed or offset.	
Offsets	Activities intended to compensate for emissions produced elsewhere, typically through emissions reduction or carbon capture projects; offsets differ from durable removals and must be distinguished to maintain integrity in climate accounting.	
Public-private partnerships	Collaborative agreements between public sector entities and private companies to finance, develop, and implement projects and initiatives.	PPP
Research, development & deployment	The process of moving technologies from early research through development and pilot-scale testing to demonstrate their effectiveness, safety, and readiness for deployment.	RD&D
Safe temperature	A planetary surface temperature compatible with the long-term survival and flourishing of human societies and natural ecosystems, generally understood to be pre-industrial levels. See the Annex for expanded definitions and thresholds.	
Soft-law agreements	Non-binding agreements—such as codes of practice, joint declarations, and voluntary standards—that guide cooperation without requiring formal treaty ratification.	
Temperature stabilization	The near-term goal of halting further increases in global average temperature. This process begins by reaching net zero emissions and continues through the removal of excess carbon dioxide already in the atmosphere. Temperature stabilization alone does not result in climate stabilization, as climate instability will persist until temperatures are restored to safe levels.	
Transitional crediting	Interim systems that enable recognition and support for high-integrity carbon removal activities during the shift toward globally aligned standards. Unlike temporary credits under the UNFCCC’s Clean Development Mechanism (CDM), these are not meant to expire based on project duration, but to evolve as governance frameworks mature.	

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SCOPE, PURPOSE & ORIGINS

About the Vancouver Declaration

The Vancouver Declaration is a nonbinding agreement in principle—a shared statement of intent to work together in common cause to rapidly scale our global carbon dioxide removal (CDR) capabilities. Although CDR has been referenced in several international agreements in recent years, it has not yet been the central focus of any such agreement. The Vancouver Declaration fills this need, establishing the first international framework devoted to building this essential pillar of climate action. Informed by expertise from across regions, institutions, and sectors, it offers a common foundation for aligning our global efforts, guiding policy dialogue, and fostering sustained government collaboration and cooperation on CDR.

The Vancouver Declaration also responds to the limitations of formal international treaty processes, which are important but often take years to ratify and implement. In contrast, this declaration is more akin to a soft-law agreement—a voluntary mechanism for fostering immediate cooperation without requiring formal treaty ratification. This declaration invites broad cooperation between national and subnational governments, industry sectors, research, and civil society partners, and encourages policy alignment, joint investment and innovation, and shared learning.

Finally, this declaration responds to a growing imperative. Climate policy has long focused—rightly so—on reducing greenhouse gas emissions. While reducing future emissions remains urgent, the consequences of past emissions are now pressing and accelerating. The need to act is no longer abstract or distant, but concrete and immediate as the toll from global warming increases. This declaration gives us an instrument through which coordinated and carefully planned immediate action is both possible and realistic.

About the Policy Framework

The policy framework companion to the Vancouver Declaration is the first draft of a more detailed plan to help realize the aspirations of this declaration. Like the declaration itself, the policy framework's specific recommendations are nonbinding, serving as a mechanism to help governments, industries, and institutions align around and act on a shared vision of CDR as an urgent and essential pillar of the 2030 Agenda for Sustainable Development Goal 13—climate action.

This policy framework is a living document, designed to evolve through continued engagement, dialogue, and iteration. Additional sections will be added over time to include more detailed provisions, descriptions of key initiatives, lessons learned, success stories, and other elements. It marks the beginning of a process, not an end. We invite governments, researchers, businesses, and communities to engage actively: to adapt, annotate, translate, test, improve, and expand on these recommendations.

Each chapter of this framework serves a distinct purpose. Chapter 1 outlines the urgency of the climate crisis and articulates our shared goals. Chapter 2 maps the financial, scientific, technical, and governance structures needed to scale CDR responsibly. And Chapter 3 describes the path forward, detailing how stakeholders can engage, coordinate, and adapt the framework over time.

Finally, readers will note that the specific operational details of this policy framework are yet to be determined. These details will be developed through the multi-stakeholder processes described in Chapter 3 and in the annex section, and included in future editions of this document.

Understanding Key Terms

The Vancouver Declaration and Policy Framework articulate four distinct but interrelated concepts: emissions reductions, carbon removals, temperature stabilization, and climate restoration. Each of these concepts describes a specific climate objective that involves different tools, risks, policy mechanisms, and time horizons.

The first two concepts—reductions and removals—refer to lowering the levels of carbon dioxide in our planet’s atmosphere. Emissions reductions occur by limiting the ongoing release of greenhouse gases into our atmosphere, especially carbon dioxide. Removals occur by removing existing carbon dioxide and storing it securely to prevent re-release.

The second two concepts—temperature stabilization and climate restoration—refer to different stages of planetary repair. Temperature stabilization is the process of slowing and eventually halting further warming, beginning with reaching a state of net-zero emissions. However, while net zero is an important milestone in this process, additional action—including large-scale carbon removal—is needed to prevent continued temperature rise. Climate restoration goes further still, aiming to reduce atmospheric carbon dioxide concentrations, and in doing so, not just halt warming but reverse it so our planet can cool back to safe levels.

These differences and their interrelatedness are key to understanding this declaration and policy framework. While we need emissions reductions to stabilize global temperatures, reductions alone cannot stop further warming, or restore climate stability. To reach these goals, removals are necessary. Removals can also accelerate our progress toward temperature stabilization.

In addition to these four concepts, we use the term “climate repair” to describe the twin goals of carbon dioxide removal—stabilization and restoration—achieved through reductions and removals. As noted in the expanded definitions section of the annex, climate repair might also include other mechanisms such as solar radiation modification, but for the purposes of this declaration and policy framework, climate repair refers specifically to the goals of stabilization and restoration through carbon dioxide removal.

About the Carbon Dioxide Removal Action Network (CDRANet)

This declaration and its companion policy framework were developed through the efforts of the Carbon Dioxide Removal Action Network (CDRANet)—a global coalition of scientists, policy experts, legal scholars, industry leaders, civil society representatives, and other key stakeholders working together to advance responsible carbon dioxide removal. Convened in 2024 and composed of 250 climate and CDR experts from 200 institutions, 20 stakeholder groups and 35 countries, the goal of CDRANet was to provide an inclusive, science-grounded forum to explore the policies, ethics, economics, and governance mechanisms required to scale carbon removal equitably and effectively.

The Vancouver Declaration and Policy Framework (provisionally named the Athens Declaration during the development process) represent the public output of this collaboration. These documents are not a final product, but a starting point—as described previously in the “About the Policy Framework” paragraph, a foundation for continued dialogue with the broader global community, shared learning, and iterative refinement. CDRANet’s successor management structure, as described in Chapter 3 of the policy framework, will continue to coordinate the development of future versions of this framework through ongoing consultation, open feedback, and engagement with governments, institutions, and communities around the world.



THE VANCOUVER DECLARATION

On Global Cooperation to Remove Carbon Dioxide

Our world is heating rapidly, and the stable climate that has long supported human civilization is beginning to erode in ways that may soon become irreversible. Confronting this crisis responsibly requires not only deep reductions in carbon dioxide emissions, but also the urgent development of our carbon dioxide removal (CDR) capabilities.

The science is clear:

- Over the past decade, the average near-surface temperature of our planet has risen faster and to higher levels than at any other period in recorded human history.
- Greenhouse gases—above all, carbon dioxide—are the primary drivers of this rise. Excess carbon dioxide has accumulated in our planet’s atmosphere, and this legacy pollution will continue trapping heat for generations.
- The impacts of increasing temperatures are already significant and will only intensify over the coming decades. Adapting to these changes will not be possible in many parts of the world.
- Simply reducing carbon dioxide emissions will not keep temperatures from reaching catastrophic levels by the end of this century. Climate experts recognize that removing carbon dioxide is also essential.

Developing our CDR capabilities is therefore among the most consequential challenges humanity has ever faced. Yet these capabilities are still emerging, and refining and responsibly scaling them to climate-relevant levels will require significant international engagement and cooperation. It will also require decisive government engagement, given the unique abilities and historic roles of governments in rapidly scaling infrastructure systems that serve the public good.

Recognizing the urgent need for collective action, through this Declaration, we come together in common cause across borders and governments to begin addressing this challenge in earnest. Building upon and working alongside existing climate agreements and programs, we will develop and mobilize new pathways and partnerships to support the research, finance, policy, governance, infrastructure development, and other elements that responsible CDR scaling requires, and devote to this challenge the priority, resources, and focus necessary for rapid and sustainable progress.

We stand at a pivotal moment in human history—one that requires trust in science, shared responsibility, and bold, united action. Through this Declaration, we act together today so we may better protect our present, and preserve a livable future for generations yet to come.



THE VANCOUVER DECLARATION POLICY FRAMEWORK: PRIORITIES

The policy framework companion to the Vancouver Declaration provides a first draft of recommendations that Vancouver Declaration participants can consider as their collaborative efforts move forward. The framework is centered around ten key actions needed to scale CDR with integrity, effectiveness, equity, and urgency.

1. Position CDR as a core pillar of climate action.

CDR must be fully integrated into the global climate agenda—reflected in Nationally Determined Contributions (NDCs), national strategies, and international agreements—as an essential complement to emissions reductions, both to stabilize global temperatures and eventually restore our climate to safe conditions. See also Ch. 2, Sec. 3, Art. 1 and Ch. 3, Sec. 1, Art. 1.

2. Strengthen government leadership in early action, infrastructure, investment, and reform.

Governments at all levels—including through public-private partnerships—must play a central role in scaling CDR. This includes de-risking early deployment, investing in first-of-a-kind (FOAK) projects, supporting enabling infrastructure, streamlining permitting, addressing legal and regulatory barriers, and embedding CDR in policy frameworks. See also Ch. 2, Sec. 2, Art. 1-2; also Ch. 2, Sec. 3, Art. 4 and Ch. 3, Sec. 1, Art. 2 and 5.

3. Create a globally coordinated CDR system.

We need a coherent international framework to align standards, facilitate data sharing, enable oversight, and avoid fragmentation. Global coordination is critical for the efficiency, equity, and legitimacy of CDR. Built-in mechanisms for accountability and progress review must be core to this effort. See also Ch. 2, Sec. 1, Art. 3 and Ch. 3, Sec. 1, Art. 2-3.

4. Advance next-generation market and financial tools.

Carbon removal markets must evolve from fragmented voluntary initiatives to robust, high-integrity systems—including regulated and, where feasible, mandatory mechanisms. These should prioritize real removals aligned with climate goals. Broader financial reforms (e.g., insurance, credit, public finance) must also adapt to support CDR. See also Ch. 2, Sec. 2, Art. 1-6.

5. Establish credible global MRV standards.

A harmonized system for monitoring, reporting, and verification (MRV) is essential for transparency, trust, and enforcement. MRV frameworks should cover full carbon lifecycles, operate across jurisdictions, ensure data accessibility, and distinguish between emissions reductions, removals and avoidance. See also Ch. 2, Sec. 1, Art. 1 and 3; Ch. 2, Sec. 2, Art. 3; and Ch. 2, Sec. 4, Art. 3-4.

6. Harness the economic benefits of CDR.

Scaling CDR can drive job creation, industrial innovation, community resilience, and sustainable development. Public and private investment should be aligned to maximize these benefits and support just economic transitions. See also Ch. 2, Sec. 2, Art. 6 and Ch. 3, Sec. 2, Art. 4.

7. Apply a balanced, risk-informed policy lens.

CDR governance must weigh the risks of various approaches against the escalating risks of climate inaction. Adaptive, opportunity-aware policies are needed to safeguard against harm without slowing critical progress. See also Ch. 2, Sec. 4, Art. 1–4.

8. Center equity, public engagement, and legitimacy.

Equity must guide decisions about financing, access, and benefit-sharing. Transparent engagement with communities—especially those historically marginalized—is essential to earn public trust and ensure legitimacy in CDR development. See also Ch. 2, Sec. 4, Art. 6 and Ch. 3, Sec. 2, Art. 1 and 5.

9. Support innovation with integrity safeguards.

All scientifically credible CDR methods should be eligible for support under clear, accountable, transparent rules. Policy frameworks should preserve technology neutrality while enforcing rigorous environmental and social safeguards. See also Ch. 2, Sec. 1, Art. 2–3.

10. Ensure CDR reinforces—not replaces—emissions reductions.

CDR must supplement, not undermine, urgent efforts to cut emissions. Policies must guard against moral hazard, and prevent misleading claims about climate impact, or excessive reliance on removals or avoidance. See also Ch. 1, Sec. 2, Art. 1; Ch. 2, Sec. 2, Art. 3; and Ch. 2, Sec. 3, Art. 2.

These ten actions represent a shared starting point for global coordination on CDR. Details are described in the following section.

THE VANCOUVER DECLARATION POLICY FRAMEWORK

CHAPTER 1: THE CHALLENGE

The strategic case for carbon dioxide removal

SECTION 1: NEED

The world has crossed a critical threshold. We must act now, together.

The Earth's average surface temperature is now approaching 1.5°C above pre-industrial levels, a limit once seen as a warning, now a reality. While emissions reductions and avoidance remain essential for controlling global warming, these measures alone have never been sufficient. The best available science has consistently demonstrated that meeting the goals of the 2016 Paris Agreement require not only reducing and avoiding emissions, but removing the excess carbon dioxide that has accumulated in our atmosphere over centuries of human activity.

As our global temperatures continue to rise, we must now accelerate our progress toward addressing this need. Without large-scale carbon dioxide removal (CDR), our global temperatures will continue to increase along with risks to human and ecological systems. Most models that limit warming to 1.5°C rely on removing 400 to 1400 gigatons (Gt) of carbon dioxide by 2100, often requiring annual removals of 10 Gt or more by 2050. See the Annex section for more detail.

CDR is a viable path forward for removing our historical carbon dioxide emissions, and in doing so, stabilizing global temperatures and laying the foundation for longer-term climate restoration.

SECTION 2: GOALS

Stabilize our planet's temperature. Support adaptation. Lay the foundation for long-term climate restoration.

We affirm these three goals as essential to a successful global CDR strategy:

Article 1: Stabilize our temperature.

CDR must work alongside existing climate strategies to help stabilize our planet's temperature. This is a process that begins with reaching net zero but will require carbon dioxide removal to prevent continued temperature increase. Toward this goal, CDR must never be used as an excuse to delay emissions reductions. The integrity of our climate response depends on reducing emissions as quickly and deeply as possible, with CDR serving as a vital complement—not a substitute—for this effort.

Article 2: Support near-term adaptation and resilience.

Even under the most optimistic emissions scenarios which capitalize on the deployment of a range of emissions reduction and avoidance mechanisms, global warming will continue for decades. CDR must therefore complement investments in adaptation and scaling up of emissions reduction technologies to reduce the impacts on communities and ecosystems by strengthening their climate resilience and ability to adjust to near-term climate impacts.

Article 3: Lay the groundwork for long-term climate restoration.

As our CDR capacity scales and technology matures, we must also aim to restore safe temperatures and climate conditions to our planet, gradually drawing atmospheric carbon back down toward levels consistent with long-term planetary habitability. Climate restoration will be a generational effort, but one that must begin now.

CHAPTER 2: OPERATIONAL FOUNDATIONS

Building the systems needed to scale carbon dioxide removal

SECTION 1: SCIENCE AND INNOVATION

We must accelerate the science that makes climate repair possible.

Scaling CDR requires an unprecedented global effort to advance research, development, and deployment (RD&D). New ideas must be tested openly, proven approaches rapidly scaled, and inclusive innovation prioritized across all regions and sectors. Governance systems must support experimentation and learning while ensuring that science remains central to both climate policy and public trust.

Article 1: Greatly expand support for CDR research and demonstration.

Public and private investment in RD&D must increase dramatically to meet the scale of the challenge. In particular, this includes more support for FOAK demonstrations, carbon dioxide storage systems, field trials under open MRV conditions, carbon reuse innovation, and community-based initiatives.

Article 2: Maintain technology diversity and scientific neutrality.

Policies should encourage exploration across a wide range of CDR pathways—including engineered, biological, ocean-based, and hybrid approaches. Diversity reduces systemic risk and enables context-specific deployment.

Article 3: Acknowledge method-specific readiness.

Not all carbon removal methods are equally mature, scalable, or durable. Policy frameworks should recognize these differences and design support mechanisms accordingly, ensuring that risk, readiness, and permanence are considered in planning, funding, and oversight.

Article 4: Coordinate international research and data sharing.

Global progress depends on open standards, aligned research priorities, and interoperable data platforms. International coordination can speed development and deployment, avoid duplication, accelerate learning, and ensure equitable access to knowledge. Research and data funded by public investment should be made openly accessible to maximize global learning, support transparency, and enable equitable participation.

Article 5: Broaden the scientific agenda beyond carbon dioxide.

Climate repair requires addressing methane, nitrous oxide, and other greenhouse gases, as well as interdisciplinary research on ecological resilience—including how land and ocean systems respond to stress, recover from disturbance, and interact with large-scale removal interventions—alongside ethical risk governance, long-term monitoring of carbon storage systems, and emergency measures to cool our planet should the need arise. It is vital to be prepared for all climate scenarios that may develop in the coming decades.

SECTION 2: FINANCE AND MARKETS

Scaling CDR will require strong public investment and well-regulated markets.

Carbon removal must be treated as a public good and a global economic priority. This means mobilizing capital at scale, building enabling infrastructure, and structuring carbon markets that are transparent, reliable, and fair. Urgent government action is needed to steer investment and build confidence in early-stage deployment.

Article 1: Treat early CDR development as an investment priority.

Public investment (including public-private partnerships) should focus on FOAK projects, critical infrastructure, and market guarantees such as advance market commitments. These actions will reduce risk and unlock private capital. Additional tools—such as early purchase agreements, offtake contracts, and transitional crediting—can also help stabilize demand, lower investment risk, and support learning during market formation.

Article 2: Build the infrastructure backbone for removals.

Governments must lead in constructing carbon dioxide transport systems plus advanced storage and monitoring systems that support a safe, durable, investable carbon removal ecosystem.

Article 3: Design carbon markets that reward integrity.

High-integrity carbon markets require clear standards, transparent rules, and pricing structures that support durable climate outcomes. This framework encourages convergence around such benchmarks without prescribing a single global model. Diverse national and regional systems will coexist; the goal is alignment and interoperability based on shared principles. As part of this, markets should clearly distinguish between removals, reductions, and avoidance, recognizing that each entails different policies and levels of permanence. Markets must also guard against the misclassification of offset credits as removals, ensuring that credited activities are additional, verifiable, and durable.

Article 4: Guarantee equitable access to finance.

All countries must have fair access to CDR investment. This includes concessional finance, debt swaps, technical assistance, and participation in credit markets.

Article 5: Align CDR with broader financial reform.

Financial regulators, banks, and insurers should embed CDR into net-zero planning, risk disclosures, and climate-aligned investment portfolios. They should also explore safeguards such as liability insurance, long-term monitoring funds, and decommissioning escrows to ensure that carbon removal is not only financed, but responsibly managed across its full lifecycle.

Article 6: Create sustainable economic opportunity.

CDR at scale will also mean new jobs, preserving traditional livelihoods, spurring industrial innovation, and revitalizing communities. Governments and markets must work together to ensure that our CDR policies and investments are properly aligned with these projections.

SECTION 3: GOVERNANCE AND ACCOUNTABILITY

CDR must be governed transparently and inclusively from the start.

As carbon removal scales, so too must the systems that govern it. Public trust, environmental integrity, and long-term legitimacy depend on clear laws and governance, consistent standards, and meaningful community participation.

Article 1: Set national and international CDR standards and targets.

CDR should be integrated into national climate strategies (including setting and meeting national and global removal targets aligned with safe climate thresholds and Nationally Determined Contributions) and supported through multilateral cooperation, regulatory alignment, and legal clarity.

Article 2: Adopt a three-track strategy for CDR standards and MRV development.

Standards organizations and governments should adopt a three-track approach: (1) ensure that reliable, durable, and substantial carbon dioxide removal is occurring; (2) encourage the development of science-based, interoperable standards over time (capable of tracking carbon over time and across jurisdictions) to improve efficiency and integrity; and (3) invest in innovative approaches that hold promise for greater CDR speed, scale, and permanence.

Article 3: Evaluate improved mechanisms for net-zero accounting.

New accounting mechanisms should be evaluated to ensure carbon dioxide is physically removed rather than offset. To facilitate this, governments and industries should establish separate targets for reductions, avoidance and removals so each receives the appropriate policy attention and support.

Article 4: Ensure long-term storage safety, responsibility and oversight.

MRV systems should cover the full lifecycle of carbon removal—from capture to storage—to ensure transparency, accountability, and long-term integrity. Operators must also be accountable for monitoring, liability, and safe decommissioning. Maintaining robust oversight

and grievance pathways is essential toward these goals. Legal reforms may also be needed to support accountability, ensuring that permitting, enforcement, and redress systems are equipped to manage long-term storage risks—including potential reversal—and uphold public trust across jurisdictions.

Article 5: Embed transparency and public access throughout.

All CDR activities—financial and technical—should be publicly disclosed under reporting rules that are transparent, aligned, and interoperable across systems. This framework does not prescribe a single global standard but encourages consistent approaches that enable comparability, accountability, and trust.

Article 6: Protect environmental and human rights.

CDR deployment must be aligned with biodiversity protection, human rights (in particular Indigenous sovereignty), and procedural justice. Legal safeguards are required for long-term safety and to build legitimacy and prevent exploitation.

SECTION 4: RISK AND RESPONSIBILITY

Climate repair is a risk-management challenge.

A responsible carbon removal strategy and governance framework must be fair, balance precaution with urgency, recognize and equitably manage uncertainty, and evolve as science and experience grow.

Article 1: View CDR as a risk mitigation tool.

Governance frameworks must balance the risks of deploying CDR with the broader systemic risks of climate change. While every reasonable precaution should be taken to prevent environmental and social harm, overly rigid standards could delay needed action. Safeguards should be proportionate—designed to build trust, ensure accountability, and support responsible deployment at the speed and scale required.

Article 2: Learn by doing, while addressing emerging risks.

Given the need to scale CDR solutions rapidly, a large amount of learning by doing will be required, which will necessarily involve more risk than might otherwise be acceptable. Every effort should be made to accommodate this need within reason. Governance frameworks should enable responsible experimentation while identifying and managing risks through oversight and adaptive policy.

Article 3: Diversify pathways to reduce systemic failure.

A diversified portfolio of carbon removal methods improves resilience, hedges against failure, and enables adaptation across geographies and timeframes. Each CDR solution should be tailored for local success, assessed for tradeoffs (including land use, cost, and permanence), and supported by enabling policies that ensure no single point of failure jeopardizes our broader global goals.

Article 4: Institutionalize adaptive management and learning.

All CDR efforts must incorporate mechanisms for adjusting course as our knowledge evolves. Governments and institutions should promote international cooperation, collaborative research and learning, open sharing of information, stakeholder feedback, public access to results, and the continual refinement of standards and safeguards.

Article 5: Embed shared ethics and accountability.

While carbon dioxide removal will follow its own government and business logic, it must also be guided by ethical principles such as intergenerational equity, respect for Indigenous rights, and a shared sense of responsibility for our future. These principles must be upheld through high-integrity transparency, governance, and oversight mechanisms, accessible grievance pathways, and a culture of mutual learning supported by effective communication and collaboration.

Article 6: Acknowledge equity, responsibility, and financing considerations without delaying urgent action.

Equity, responsibility, and financing considerations—including questions of who pays for climate repair, and the loss and damage from climate change—are central to the global climate dialogue. These concerns are important, but their resolution lies in other venues. Within this framework, our singular focus is to work together to advance climate repair.

CHAPTER 3: MOBILIZING ACTION

Turning shared principles into coordinated progress

SECTION 1: COLLABORATION AND ALIGNMENT

No nation or sector can do this alone.

Achieving the scale and speed of carbon removal required demands deep cooperation—across borders, sectors, and communities. Governments, industries, and civil society must work together to align strategies, share resources, and coordinate action at every level. Global collaboration is not only a supplement to national action; it is a precondition for our success.

Article 1: Embed CDR in the heart of global climate cooperation.

Carbon removal must be recognized and prioritized within international climate processes, regional alliances, and bilateral agreements.

Article 2: Establish cross-sector partnerships and regional compacts.

Public-private partnerships (PPPs), subnational coordination, and transboundary infrastructure planning are all essential to implementation. These efforts should be supported by legal cooperation among jurisdictions, including shared standards for permitting, liability, and long-term oversight of cross-border removal systems.

Article 3: Ensure participation by low-income and climate-vulnerable countries.

Collaboration frameworks must include financing, capacity-building, and inclusive governance mechanisms that enable full participation regardless of access to resources and capital.

Article 4: Promote transparency, knowledge-sharing, and technical assistance.

Open data, joint research, and peer learning across jurisdictions should be supported to accelerate trust and uptake.

Article 5: Align legal frameworks to support coordination.

Governments must address legal barriers to action and align permitting processes across jurisdictions. Regional compacts, shared infrastructure planning, and joint environmental reviews can reduce delays, streamline coordination, and support responsible deployment.

SECTION 2: COMMUNICATION, EDUCATION, AND PUBLIC TRUST

Public trust is a foundation, not a byproduct, of effective climate action.

CDR policy must be built in the open, with communities—not just experts—involved from the start. Clear communication, education, and inclusive engagement are required to earn legitimacy and ensure that our carbon removal efforts incorporate the concerns of affected communities and equitably distribute costs, risks, and benefits.

Article 1: Center public understanding, transparency, and civic dialogue.

Governments and institutions must proactively explain carbon removal, clarify its role, and engage communities in decision-making.

Article 2: Address misinformation and disinformation directly.

Coordinated efforts are needed to counter organized denialism and deliberate distortion of climate and carbon removal science.

Article 3: Integrate climate repair into formal education systems.

Educational institutions at all levels should incorporate climate repair and carbon removal into relevant curricula to help normalize public understanding, foster innovation, and prepare future leaders in science, policy, and practice.

Article 4: Invest in workforce development and institutional capacity.

Preparing a new generation of climate professionals will require training programs, retraining support, and expanded public-sector expertise.

Article 5: Promote ethical framing, justice, and inclusive narratives.

Public communication must highlight climate justice, intergenerational equity, risks, and local benefits—not just technology.

SECTION 3: IMPLEMENTATION

Declarations mean nothing without action to follow.

The Vancouver Declaration is a call to organized, near-term action. Detailed action plans and recommendations will be developed by the Vancouver Declaration Transition Process as described in Article 1 and Annex 4.

Article 1: The Vancouver Declaration Transition Process

To help transform this declaration into meaningful and measurable outcomes, the Vancouver Declaration will be supported by a phased, collaborative implementation process grounded in institutional learning and coalition-building. This process will bring together a core group of countries and institutions who will begin discussing how to align carbon removal policy and finance tools in advance of a formal global launch of the Vancouver Declaration in 2026. See Annex 4 for details.

ANNEXES

ANNEX 1: EXPANDED DEFINITIONS

- **How we reference 1.5°C:** According to the World Meteorological Organization, global average temperatures in 2024 reached approximately 1.55°C above pre-industrial levels. However, the IPCC's official warming levels are defined using 20-year averages, and it is therefore premature to declare that temperatures crossed the 1.5°C threshold in 2024. This said, the IPCC's methodology is intended to smooth short-term variability, not delay recognition of sustained long-term change, and the sustained long-term trendline is clear: temperatures are rising quickly and will not return to safer levels without deliberate, large-scale intervention. The 2015 Paris Agreement committed Parties to, in its words, "holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels." Since then, research has increasingly confirmed that 1.5°C is not just symbolic, but a likely inflection point beyond which the risk of irreversible climate changes escalates sharply (see IPCC 2018 and UNEP 2024 in the reference section). Therefore, our framing in this declaration does not conflict with the IPCC's more cautious framing. Rather, it accurately reflects the urgency of responding to what the data already make clear.
- **Annual removal target:** There is broad scientific consensus regarding the need to remove large amounts of carbon dioxide from the Earth's atmosphere as soon as possible. Estimates vary, however, regarding precisely how much carbon dioxide to remove and by what date, considering assumptions such as how successful our emission reduction efforts will be, how much warming we are willing to accept, and how quickly various approaches like direct air capture can or should scale. On the lower end, some scientists predict the need to remove only a few billion tons of carbon dioxide per year by 2050, continuing this level of removal through at least the year 2100 to draw down legacy emissions. On the higher end, other scientists predict the need to remove around 10 gigatons per year (Gt/yr) of carbon dioxide from the Earth's atmosphere by the year 2050 and as much as 20 Gt/yr by 2100. The annual State of CDR report (2nd Edition) provides the most detailed methodological analysis of annual removal targets and concludes that given our current state of emissions, we should expect to remove 7-9 Gt/yr by 2050 through a combination of "conventional" CDR efforts such as forestry, and "novel" methods such as direct air capture. This figure is in the 25th-75th percentile across a set of 34 published Integrated Assessment Model runs that a) keep to 1.5C with at least a 50% probability and with minimal overshoot, and b) meet additional sustainability criteria regarding protecting biodiversity, limiting land and water needs for biomass use, enhancing energy access and alleviating hunger.
- **Carbon dioxide removal (CDR):** For the purposes of this report, CDR refers to the process of removing carbon dioxide from the environment (or enhancing natural processes that do so) and storing the gas in a way that prevents its release back into the environment for a reasonably long period of time—typically 100 years or more. This definition is consistent with scientific consensus on the essential features of CDR: removal from the biosphere and atmosphere, and long-term storage. It differs slightly from the IPCC's formal definition, which focuses specifically on anthropogenic removals from the atmosphere, and emphasizes durable storage in reservoirs. We adopt a slightly broader framing here to avoid

ambiguity around system boundaries (e.g., air vs. ocean vs. land), the origin of carbon flows (natural vs. anthropogenic), and the precise threshold for what constitutes “durability.” Our goal is to maintain scientific rigor while offering clarity and usability for policymakers, who must often work across sectors and methods. We also recognize that other institutions and reports—including national governments, scientific bodies, and policy assessments—may define CDR differently depending on their context and purpose. Where differences exist, they are typically matters of emphasis or scope, not disagreement about the fundamental concept.

- **Avoidance, offsets and additionality:** These three concepts are closely linked within the context of carbon markets and mitigation strategies. Each plays a distinct role, but all are critical to the integrity of climate accounting and policy frameworks. **Avoidance** refers to actions that prevent greenhouse gas emissions from occurring relative to a projected baseline scenario. Common examples include forest conservation, landfill methane capture, and halting planned infrastructure development. Avoidance can play an important role in climate mitigation, especially in contexts facing pressures from economic development or land-use change. As with all mitigation activities, the integrity of avoided emissions depends on credible baselines, monitoring, and verification. Avoidance is distinct from emission reductions (e.g., switching to cleaner energy) and removals (e.g., capturing and storing carbon dioxide). A carbon **offset** is a credit representing a quantified reduction or removal of greenhouse gas emissions, used to compensate for emissions occurring elsewhere. Offsets may be generated through avoidance, reduction, or removal activities. While they can help channel funding into climate mitigation, the environmental value of offsets depends on strong safeguards around measurement, verification, permanence, additionality, and usage. Offset credits balance emissions on paper, but do not by themselves reduce global net emissions unless the credited climate benefits exceed the amount used for compensation. **Additionality** is a core requirement for any credited climate activity. It means that the emissions reduction or removal would not have occurred without the incentive provided by the crediting mechanism. Activities that were already planned, legally required, or likely to happen anyway are considered non-additional and should not be credited. Ensuring additionality helps maintain the environmental integrity of carbon markets and prevents the issuance of credits that do not represent genuine climate progress.
- **“Safe” temperature:** The IPCC has long recommended that our climate should not warm more than 1.5C (or worst case, “well below 2°C”) above pre-industrial levels because exceeding this mark is likely to have significant environmental and socioeconomic consequences for our planet, as well as lead to cascade failures in our climate system that could push temperatures even higher (through feedback mechanisms like increased methane emissions from permafrost currently hidden under melting polar regions). The average surface temperature of our planet has fluctuated slightly above and below pre-industrial levels throughout human history (the 12,000-year-long Holocene Period), until very recently, as global average temperatures have now started to spike outside this range. Restoring our planet’s temperatures to “safe” levels means restoring them to any levels closer to the average temperatures experienced throughout human history—certainly “well below 2°C” above pre-industrial levels, but with no specific figure in mind.
- **What we mean by “climate repair”:** Climate repair refers to a broad set of strategies aimed at restoring the Earth’s climate system to safer, more stable conditions after decades of accumulated greenhouse gas emissions. It encompasses both temperature stabilization (slowing and eventually halting the rise in global temperatures, beginning with the achieve-

ment of net-zero emissions) and climate restoration (actively removing excess carbon dioxide to lower atmospheric concentrations and reduce long-term warming). While temperature stabilization is often framed as the primary goal of climate policy, climate damage will continue for as long as excess carbon dioxide remains in our planet's atmosphere. In this sense, real stabilization doesn't begin until these levels are reduced. Climate repair therefore goes beyond temperature stabilization and necessitates carbon dioxide removal to begin restoring balance to our planet's natural systems. Within a broader scientific and policy perspective, other potential climate interventions beyond those described in this document might also be required for climate stabilization and restoration, such as solar radiation modification, cryosphere refreezing, methane removal, and related geoengineering approaches. The Vancouver Declaration and policy framework aren't agnostic on this possibility, acknowledging the need to better understand our possible climate futures and prepare appropriate responses. However, beyond our recommendation to be prepared, our focus in this declaration and policy framework is on carbon dioxide removal as the most immediate and actionable vehicle for climate restoration and repair.

ANNEX 2: KEY CDR-RELATED POLICIES

European Commission. 2023. Proposal for a Regulation Establishing a Union Certification Framework for Carbon Removals. Brussels: European Commission. <https://climate.ec.europa.eu/eu-action/carbon-removals/carbon-removal-certification>.

European Union. 2021. European Climate Law (Regulation (EU) 2021/1119). <https://eur-lex.europa.eu/eli/reg/2021/1119/oj>.

United Nations. 1998. Kyoto Protocol to the United Nations Framework Convention on Climate Change. https://unfccc.int/kyoto_protocol.

United Nations. 2015. Paris Agreement. Article 6.4. <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>.

United States Congress. 2008. Internal Revenue Code Section 45Q: Credit for Carbon Sequestration. <https://www.irs.gov/pub/irs-drop/n-09-83.pdf> (as amended by subsequent legislation).

ANNEX 3: SELECTED REFERENCES

Boston Consulting Group. 2025. "The Economic Case for Climate Investment Is Clear, but Not Broadly Understood." March 12, 2025. <https://www.bcg.com/press/12march2025-economic-case-climate-investment>.

Boyd, J., A. Krupnick, E. Joiner, and M. A. Toman. 2024. Policies for Scaling Up Carbon Dioxide Removal in the United States. Resources for the Future. <https://www.rff.org/publications/issue-briefs/policies-for-scaling-up-carbon-dioxide-removal-united-states/>.

CarbonPlan. 2023. "Rethinking Removals." <https://carbonplan.org/research/rethinking-removals>.

CFA Institute. 2025. Enhancing the Voluntary Carbon Market: Gaps and Solutions. February 2025. <https://rpc.cfainstitute.org/research/reports/2025/enhancing-the-voluntary-carbon-market>.

Climate Action Tracker. 2024. "Climate Insights: November 2024." <https://climateactiontracker.org/publications/climate-insights-november-2024/>.

Grant Thornton. 2023. "Mandatory Climate Reporting Is Here: Are You Ready?" <https://www.grant-thornton.com/insights/articles/esg/2023/mandatory-climate-reporting-is-here-are-you-ready>.

Intergovernmental Panel on Climate Change (IPCC). 2018. Global Warming of 1.5°C: An IPCC Special Report on the Impacts of Global Warming of 1.5°C Above Pre-Industrial Levels and Related Global Greenhouse Gas Emission Pathways. Geneva: IPCC. <https://www.ipcc.ch/sr15/>.

Intergovernmental Panel on Climate Change (IPCC). 2023. AR6 Synthesis Report: Climate Change 2023. Geneva: IPCC. <https://www.ipcc.ch/report/ar6/syr/>.

International Monetary Fund. 2021. "Climate Risks and Financial Stability." April 29, 2021. <https://www.imf.org/en/Blogs/Articles/2021/04/29/blog-climate-risks-and-financial-stability>.

Liu, Z., et al. 2023. "Global Carbon Budget 2023." *Nature Reviews Earth & Environment* 4 (1): 1-12. <https://doi.org/10.1038/s43247-023-01077-4>.

Livermore Lab Foundation. 2025. "Roads to Removal." <https://roads2removal.org/>.

McKinsey & Company. 2023. "Carbon Removals: How to Scale a New Gigaton Industry." December 4, 2023. <https://www.mckinsey.com/capabilities/sustainability/our-insights/carbon-removals-how-to-scale-a-new-gigaton-industry>.

National Academies of Sciences, Engineering, and Medicine. 2019. *Negative Emissions Technologies and Reliable Sequestration: A Research Agenda*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/25259>.

National Academies of Sciences, Engineering, and Medicine. 2024. *A Research Agenda Toward Atmospheric Methane Removal*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/27157>.

OECD, The World Bank, and UN Environment. 2018. *Financing Climate Futures: Rethinking Infrastructure*. Paris: OECD Publishing. <https://doi.org/10.1787/9789264308114-en>.

Rhodium Group. 2024. "The Landscape of Carbon Dioxide Removal and U.S. Policies to Scale Solutions." <https://rhg.com/research/the-landscape-of-carbon-dioxide-removal-and-us-policies-to-scale-solutions/>.

RMI. 2025. *Scaling Technological Greenhouse Gas Removal: A Global Roadmap to 2050*. <https://rmi.org/insight/scaling-technological-greenhouse-gas-removal-a-global-roadmap-to-2050/>.

Smith, P., et al. 2021. "The Role of Nature-Based Solutions in Mitigating Climate Change." *Conservation Science and Practice* 3 (9): e1287. <https://doi.org/10.1111/csp2.1287>.

Stoddard, I., et al. 2021. "Three Decades of Climate Mitigation: Why Haven't We Bent the Global Emissions Curve?" *Climate Policy* 21 (6): 1-17. <https://doi.org/10.1080/14693062.2021.1992010>.

Sustainability Directory. 2024. "What Are the Key Considerations for Public-Private Partnerships in Carbon Dioxide Removal?" <https://sustainabilitydirectory.org/articles/what-are-the-key-considerations-for-public-private-partnerships-in-cdr/>.

United Nations Environment Programme (UNEP). 2024. Emissions Gap Report 2024: Broken Record—Temperatures Hit New High as Emissions Break Records Again. Nairobi: UNEP. <https://www.unep.org/resources/emissions-gap-report-2024>.

U.S. Department of Energy. 2025. Carbon Dioxide Removal: Purpose, Approaches, and Recommendations. Washington, DC: DOE. <https://www.energy.gov/sites/default/files/2025-01/CDR%20Purpose%2C%20Approaches%2C%20and%20Recommendations%20Report.pdf>.

U.S. Environmental Protection Agency. 2023. Report on the Social Cost of Greenhouse Gases: Estimates Incorporating Recent Scientific Advances. December 2023. <https://www.epa.gov/environmental-economics/report-social-cost-greenhouse-gases-estimates-incorporating-recent-scientific>.

Wilcox, J., et al. 2023. The State of Carbon Dioxide Removal: Second Edition. CDR Primer. <https://cdrprimer.org/state-of-cdr-2nd-edition.html>.

World Bank. 2025. "What Is Carbon Pricing?" <https://carbonpricingdashboard.worldbank.org/what-carbon-pricing>.

World Meteorological Organization. 2025. "2024 Warmest Year on Record." <https://public.wmo.int/en/media/press-release/2024-warmest-year-record>.

ANNEX 4: THE VANCOUVER DECLARATION TRANSITION PROCESS

Transitioning the Vancouver Declaration and Policy Framework from concept to action will take place in three stages between June 2025 and October 2027.

Phase 1 (Sept-Dec 2025): Strategy

Strategic planning will be overseen by the Vancouver Transition Committee (VTC).

Expectations	Key Goals	Additional Activities
<ul style="list-style-type: none"> • Make clear and steady progress on developing workable plans for implementing the declaration • Support the administrative structure needed to make the Vancouver transition process effective and sustainable 	<ul style="list-style-type: none"> • Edit the declaration and policy framework as needed • Pressure test assumptions and strategies with expert working groups 	Internally (conducted by CDRANet, not VTC members), this stage will also involve ramping up CDR outreach, education, engagement, capacity-building and conference planning efforts.

Phase 2 (Jan 2026–Sep 2027): Expand Engagement and Lay Foundations

Beginning in early 2026, outreach to countries and institutions will get underway, as well as efforts to construct the secretariat and manage early Vancouver Declaration implementation efforts. This work will be advised by the Vancouver Permanent Advisory Group (VPAG).

Expectations	Key Goals	Additional Activities
<ul style="list-style-type: none"> Strengthen this group's organization and operational capabilities Build more trust and familiarity between coalition members as management systems get built out, better lines of communication are established, and lessons of experience are solidified 	<ul style="list-style-type: none"> Broaden engagement by encouraging governments and IGOs to participate Solidify governance coordination pathways for international coherence Explore interagency alignment and cooperative oversight frameworks 	Internally (conducted by CDRANet, not VPAG members), this stage will also involve continuing CDR outreach, education, engagement, capacity-building and conference planning efforts.

Phase 3 (Sep 2027–): Official Launch

In late 2027, CDRANet will convene a capstone conference to officially launch the Vancouver Declaration as a global policy platform. This event will mark the transition from momentum-building to full-scale mobilization. Participants may also choose to formally endorse the declaration at this event as a public gesture of support.

Expectations	Key Goals	Additional Activities
<ul style="list-style-type: none"> Slingshot out of this event with good visibility and momentum 	<ul style="list-style-type: none"> Showcase CDR technology developments for policymakers, the public, and investors Announce policy innovations and pilot results from 2026-7 work Announce commitments and financial contributions Present draft technical standards and regulatory frameworks for discussion Propose long-term governance structures for oversight and coordination 	The newly-formed Vancouver Secretariat will also build on the additional opportunities from this event for CDR outreach, education, engagement, and capacity-building.



CDRANet

The Vancouver Secretariat

April 2026 edition



Overview

1. **Evolution & Purpose:** To organize and oversee the process of transforming the Vancouver Declaration into action.
2. **Rationale:** Governments need this body, and there are significant advantages to establishing it now while governments can still shape the contours of their engagement.
3. **Objectives:** Members will pick and choose from the secretariat's offerings to supplement their CDR policy priorities and activities as needed.
4. **Structure & Function:** Determined by the bylaws (a draft version has been developed).
5. **Finance & Sustainability:** Members will contribute a set amount toward the sustainability of this organization, with equitable levels to be determined by the group. Additional funding will be provided by philanthropies as available.

1. Evolution & Purpose

In the fall of 2025, fifteen senior government policy experts from within CDRANet convened online as the Vancouver Transition Committee (VTC). The purpose of the VTC was to examine how best to transition the Vancouver Declaration from aspiration to global action and to identify the issues the future Vancouver Secretariat will need to address. Participants emphasized that successful implementation will require building bridges among key stakeholders—including researchers, industry leaders, civil society, and national governments—to ensure carbon removal technologies are deployed safely, effectively, and equitably. Overcoming political inertia will also be critical. To maintain momentum toward the initial conference for this initiative, the group encouraged pairing the launch with concrete deliverables that demonstrate the initiative's practical value. Ultimately, the goal is to develop a focused, transparent, and achievable roadmap for atmospheric carbon removal—not a diffuse set of aspirational objectives, but a practical plan for drawing down atmospheric CO₂ grounded in real action.

To continue advancing this work, a broader engagement phase—referred to as the Vancouver Process—will begin by mid-2026. This phase will bring together participating governments and other stakeholders, alongside advisors, to identify the most realistic and effective pathways for collaboration under the Vancouver Declaration. An early milestone in this process will be the establishment of the Vancouver Secretariat: a fully funded, appropriately staffed body designed to support coordination and implementation across the participating community. While the Vancouver Process can proceed without full funding for the Secretariat, securing adequate resources will significantly strengthen its ability to serve this high-level international effort.

2. Rationale

The Vancouver Declaration Secretariat will serve as the neutral coordination body supporting voluntary, nonbinding collaboration among governments on CDR. Its role is to translate high-level political intent into practical cooperation—across policy design, science coordination, technology pathways, finance readiness, and regional initiatives—while preserving flexibility, sovereignty, and optionality. But why this body, and why now?

- **Governments have crossed the coordination threshold**
Governments are no longer asking whether CDR will be needed, but how they will govern it responsibly. Officials are beginning to compare approaches, identify gaps, and explore collaboration. The Vancouver Declaration fills this gap, but the Declaration’s work needs to be coordinated. Without a neutral coordination body, early momentum risks dissipating into bilateral conversations, duplicative pilots, and inconsistent standards. Funding now preserves institutional memory and converts exploratory dialogue into durable cooperation.
- **The pre-Secretariat window is where leverage is highest and costs are lowest**
The 2026 Vancouver Process is intentionally lightweight: small staff, focused outputs, rapid learning. This is precisely the point where modest, catalytic funding has outsized impact. If support waits until after governments formalize structures, the Secretariat will be forced to retrofit coordination after paths diverge. Funding now allows the Secretariat to be designed with governments, not imposed on them, avoiding later friction, inefficiency, and mistrust.
- **Markets aren’t evolving fast enough**
Private CDR activity is accelerating unevenly across jurisdictions, technologies, and standards. Governments are under pressure to respond, but most lack comparative policy insight, shared guardrails, or venues for peer learning. Absent coordination, governments will default to fragmented rules or solutions that don’t leverage or scale. The Secretariat provides a forum for governments to learn together and scale together.
- **No existing institution is positioned to do this job**
UN bodies, standards organizations, and market platforms all play important roles—but none are structured to facilitate voluntary, government-to-government coordination across the full CDR landscape. The Secretariat is intentionally non-binding, non-promotional, technology-neutral, and government-centered. Funding now avoids the vacuum being filled by actors whose mandates, incentives, or credibility do not align with public-interest governance.
- **Early funders are catalytic**
Supporting the Secretariat now enables a global transition to get underway from market-led solutions to government-led. This is a sea-change in our approach to

CDR, and the success of this new approach will catalyze investment in CDR, catalyze participation in CDR policy, and make real the full potential of CDR for halting global warming. Demonstrating the effectiveness of this approach through early investment will be key to the Secretariat’s success, so it can be properly staffed to meet the moment.

- **Delay has asymmetric downside**

If funding is delayed, governments will disengage quietly, coordination will become harder to recover, and norms will be set elsewhere, by default. If funding moves now, governments retain agency, cooperation remains flexible, and the cost of course-correction stays low.

3. Objectives

The objectives of both the Vancouver Process and the Vancouver Secretariat will be to connect stakeholders; convene discussions on issues of shared need and interest—such as MRV policy—while leveraging existing expertise and resources; de-risk early action by building networks of first movers; collect and communicate best practices; provide outreach materials and engagement support; and develop concrete action plans that respond to the needs of participating members. Multiple pathways for engagement will be available, as outlined in the Structure & Function (Bylaws) section.

4. Structure & Function

January 2026 Draft Bylaws

Article I – Purpose

The Vancouver Declaration Secretariat (“the Secretariat”) exists to facilitate voluntary, non-binding collaboration among participating governments on the policy, institutional, and governance challenges associated with carbon dioxide removal (CDR). The Secretariat does not advocate, negotiate, regulate, or bind its participants.

Article II – Nature of the Secretariat

1. The Secretariat is facilitative, not directive.
2. It has no independent policy agenda.
3. It acts at the request of, and for the benefit of, participating governments.
4. Participation in all Secretariat-supported activities is voluntary and opt-in.

Article III – Participation

1. Participation is open to governments that express interest in the Vancouver Declaration.
2. No participant is required to engage in all activities.
3. Different groups of participants may engage at different depths and speeds (“variable geometry”).
4. There is no requirement for consensus for activities to proceed.

Article IV – Activities

The Secretariat may support, at the request of participants:

1. Information sharing and peer learning
2. Policy comparison and synthesis
3. Convening of interested participants
4. Time-bound working groups or task forces
5. Capture and dissemination of lessons learned

Article V – Initiation of Workstreams

Workstreams may be initiated through:

1. A request from two or more participating governments; or
2. A time-limited pilot proposed by the Secretariat and taken up voluntarily.

No vote or consensus approval is required.

Article VI – Governance and Oversight

1. The Secretariat may be advised by a Government Steering Group, if established.
2. The Steering Group:
 - provides strategic guidance
 - reflects participant priorities
 - does not exercise fiduciary control
3. The Steering Group does not require unanimity.

Article VII – Hosting and Legal Status

1. The Secretariat may be hosted by an external organization for administrative and legal purposes.
2. Hosting does not confer agenda-setting authority.
3. Any change in hosting or legal status shall be participant-driven.

Article VIII – Relationship to Other Bodies

1. The Secretariat does not replace or supersede existing initiatives.
2. It may draw on external expertise, including expert networks such as CDRANet, without delegating governance authority.
3. The Secretariat serves as a coordination interface, not a gatekeeper.

Article IX – Amendment and Evolution

These Terms may evolve based on participant experience and demand. No amendment shall create binding obligations without explicit participant agreement.

5. Finance & Sustainability

Year 1: Vancouver Process (2026)

Staffing: 3 × \$150k = \$450k

Administrative & engagement costs = \$50k

Focus: Inventory priorities, identify capacity gaps, design initial structure, catalyze financial support

Total Year 1: \$500k

Year 2: Operational Secretariat (2027)

Staffing: 6 × \$150k = \$900k

CDR27 conference support = \$250k

Administrative & engagement costs = \$250k

Focus: Program delivery, expanded government participation, global visibility

Total Year 2: \$1.4m

Year 3: Scaling & Global Coordination (2028)

Staffing: 12 × \$150k = \$1.8m

CDR28 conference support = \$250k

Administrative & engagement costs = \$500k

Focus: Multiple workstreams, regional initiatives, sustained presence

Total Year 3: \$2.55m

Fiscal Growth

Short term funding will be provided by institutional supporters. Long-term funding will include a mix of institutional and government support, as well as other revenue streams as warranted to ensure capacity.

Hosting

During its initial phase, the Secretariat will operate under the administrative and legal auspices of the Science Communication Institute (SCI), the US-based nonprofit which oversees CDRANet. This hosting arrangement is explicitly transitional and exists solely to provide fiduciary oversight, staffing, and operational continuity while governments determine the Secretariat's long-term institutional home. As set out in the Secretariat's draft bylaws, hosting does not confer agenda-setting authority, and any change in legal status or institutional placement will be participant-driven and may occur as early as Year 2, should governments choose to establish an independent entity or alternative hosting arrangement.



The Vancouver Declaration on Carbon Dioxide Removal is a voluntary, non-binding soft-law instrument designed to:

- Support dialogue among governments on CDR policy and governance structures;
- Encourage information-sharing and capacity-building on issues such as standards, best practices, regulation and investment;
- Promote coordination across governments, jurisdictions, and regions; and
- Complement existing national and international climate frameworks without replacing them.

The Declaration is enabling rather than prescriptive, and is designed to lower barriers to engagement on a complex and emerging policy domain. The Declaration does not create legal obligations; require legislative approval; mandate specific technologies, targets, timelines, or funding commitments; or create a centralized authority with decision-making power over national actions.

The Declaration process is a secretariat-governed forum developed by CDRANet, an international network of several hundred experts spanning climate science, policy, industry, and civil society. The CDRANet initiative has been convened by the Science Communication Institute, a US-based non-profit organization acting as a neutral, non-advocacy convener in support of international policy dialogue.

For more information, contact Glenn Hampson, CDRANet program director, at ghampson@sci.institute.

Why Carbon Dioxide Removal (CDR) Is Required

Emissions reductions alone will not stop global warming. Humans deposit around 40 gigatons of CO₂ into the Earth's atmosphere every year. This pollution accumulates over time—only a portion gets absorbed by natural sinks like trees, grasslands and oceans. Today, these natural sinks are weakening because they're saturated. Combined with temperatures that are rising faster than ever before in human history, and emissions reduction efforts that have fallen far short of goals, carbon dioxide removal is more important than ever.

1. Global warming is driven by cumulative CO₂

The concentration of CO₂ in our atmosphere is now higher than ever before in human history. Because of this, temperatures are also higher and climbing faster than ever before. Reducing emissions will only slow the rate of warming. The only way we can stop warming and restore temperatures to their historically safe levels is to start removing huge amounts of carbon dioxide from our atmosphere as soon as possible, preferably before the damage caused by warming becomes irreversible.

2. We're out of time

Relying on emissions reductions alone, there is no credible solution for keeping our planet's temperature to below 1.5°C. Even the "well below 2°C" goal established in the 2016 Paris Agreement is now unrealistic. Current projections indicate that, without additional interventions, global warming is likely to approach 3°C by 2100. Some estimates put this increase even higher since projection models break down after 1.5°C.

3. Adaptation isn't feasible in a 3C world

Many climate impacts—such as sea-level rise, ice-sheet loss, extreme heat thresholds, and ecosystem collapse—cannot be fully adapted to, particularly as warming increases. This is especially true for the vast majority of the world's equatorial regions. As temperatures rise, the scale and costs of adaptation will become economically and physically untenable, and the consequences will be mass migration and sociopolitical collapse.

4. Carbon dioxide removal is a complement, not a substitute

CDR has never been optional or speculative. It has simply been overshadowed by our emissions reduction efforts. CDR is essential, however. Without it, we have no realistic way to keep our planet from overheating. At the same time, emissions reductions efforts remain essential as well. Without these, the scale of CDR required may become unachievable.

5. This is real

CDR research and industry are both highly developed, and more and more governments are beginning to add CDR to their Paris Agreement NDCs. The next step in the evolution of CDR is for governments to unite behind the Vancouver Declaration so they can begin working together on the challenge of rapidly scaling CDR.

6. Key references

Smith, Steve, et al. *The State of Carbon Dioxide Removal: Second Edition*. Oxford: Oxford Institute for Carbon Removal, 2024.

Intergovernmental Panel on Climate Change (IPCC). *Climate Change 2022: Mitigation of Climate Change*. Cambridge: Cambridge University Press, 2022.

Lawrence Livermore National Laboratory. *Roads to Removal: Options for Carbon Dioxide Removal in the United States*. Livermore, CA, 2023.



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For more information, contact Glenn Hampson, CDRANet program director, at ghampson@sci.institute.

Why Governments Should Care About Carbon Dioxide Removal (CDR)

Carbon dioxide removal (CDR)—the durable removal and storage of CO₂ from the atmosphere—is now widely recognized as a necessary complement to emissions reductions. For governments, the central question is no longer whether CDR will be needed, but whether public institutions will help shape its development early, or face higher costs and fewer choices later.

1. CDR helps control long-term public costs

Climate change is already driving rising government expenditures on disaster response, infrastructure repair, health systems, water management, and ecosystem protection. As warming continues, these costs escalate rapidly. By slowing and eventually stabilizing global temperatures, CDR can help reduce future adaptation burdens and long-term public liabilities, making it a practical tool for fiscal risk management rather than a speculative climate intervention.

2. Governments are essential to scaling CDR responsibly

CDR depends on long-lived infrastructure, environmental safeguards, monitoring, and long-term stewardship—functions that markets alone cannot provide. As with energy systems, transportation networks, water infrastructure, and public health, governments are uniquely positioned to set standards, coordinate deployment, and ensure public accountability. Early public leadership reduces the risk of fragmented or poorly governed deployment later.

3. CDR represents a major economic opportunity

Most credible global energy and climate analyses project CDR to become a trillion-dollar-plus industry by mid-century, supporting millions of skilled jobs across engineering, construction, operations, environmental management, and monitoring. Government engagement helps ensure this growth occurs under clear rules, delivers public value, and contributes to long-term economic resilience rather than short-term speculation.

4. CDR can help protect livelihoods and natural systems

Unchecked warming threatens ecosystems and the industries that depend on them, including fishing, forestry, agriculture, and mining. Well-governed CDR can help repair environmental damage, restore natural systems, and reduce climate volatility over time, supporting the ecological foundations of traditional livelihoods rather than undermining them.

5. CDR strengthens climate policy integrity

CDR does not replace emissions reductions; it addresses legacy emissions and sectors that are difficult to fully decarbonize. All credible pathways to climate stabilization include both. Government involvement ensures CDR complements existing climate commitments and strengthens the durability and credibility of climate policy overall.

6. What governments can do next

A practical first step is to engage with the Vancouver Declaration on Carbon Dioxide Removal—a non-binding, government-led process designed to support coordination, information sharing, and institutional readiness. Participation in the Declaration process does not create legal or financial obligations, but allows governments to learn from peers, help shape emerging norms, and prepare for future policy and investment decisions. Early engagement ensures governments help lead the development of CDR rather than reacting to it later. For more information, see the box to the left, or the Vancouver Declaration website at <https://cdranet.org>.



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