Chapter 5

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Women from the Gond community in Central India rest in the shade of a mango tree near forest-adjacent paddy fields. By Aaran Patel

Chapter 5 | Policy making and governance

CDR is, above all, a global public good, and the benefit it provides – removing atmospheric CO_2 – means that appropriate policy and governance frameworks are needed to ensure it can be scaled effectively and deployed responsibly.[1,2] While policies supporting conventional CDR have long been a focus, though not necessarily with CDR as the topline objective, policies for novel CDR have increased in recent years, particularly in terms of developing CDR supply. But they remain fragmented, with less focus on creating demand and developing governance frameworks.

Key insights

- Analysis of novel and conventional CDR policies across G20 countries, which together represent three-quarters of global GHG emissions[3] and the majority of countries with novel CDR policy, shows that most novel CDR policy focuses on building CDR capacity through supply-side support, with less attention so far on creating demand and ensuring robust governance. Conventional CDR policy is both more prevalent and more developed across countries, focusing on afforestation and reforestation.

- The most significant recent policy shift has been in the United States, which had been a leader in CDR policy, but under the Trump administration has frozen or dismantled funding and support for climate action, including CDR. Policy dismantling and uncertainty pose a broader risk to CDR momentum: while progress in other geographies may partly offset reversals, there remains a risk that the overall pace of CDR development will slow, particularly if net-zero targets are weakened or deprioritized. Aside from the United States, policy for novel CDR is progressing in other countries including Canada, Germany and the United Kingdom, but remains in development.

- On the demand side, while purchases of novel CDR on the voluntary carbon market have been the primary driver of growth, interest in adding carbon removals into compliance regimes is growing. The European Union, United Kingdom and Switzerland are actively exploring frameworks that could enable the future use of novel CDR in regulatory schemes.

- Governance frameworks for novel CDR remain largely underdeveloped, with some exceptions, such as the CRCF.

- More than 100 countries have set net-zero targets,[4] implying a role for CDR (and a need for policy to follow). However, only around one-third of countries mention novel CDR in their long-term strategies (LTSs) and few mention it in their NDCs.[5] In both, greater specificity would improve the transparency and comparability of national CDR commitments. Ultimately, translating targets into policy will depend on domestic political processes; among the G20, only the EU's land sector net removal target is legally binding.

- Tracking the sequence and focus of CDR policy, including the evolution of targets into policy, can provide blueprints for other countries taking initial steps to advance CDR and an understanding of where commitment is leading to action.

Because CDR is a public good, policy plays an outsized role in supporting its development and deployment.[6] CDR generally lacks a natural market – unlike other climate change mitigation technologies like solar photovoltaics or electric vehicles that provide essential services (i.e. electricity and transport) and are entering incumbent markets. As such, policy intervention — whether through legislation, regulation or other mechanisms — will be needed to create both supply and demand for CDR.

Robust governance frameworks are also critical to ensuring that CDR is scaled responsibly. Responsible scaling is defined in different ways but often includes: establishing safeguards to ensure that CDR approaches and technologies are not inhibiting emissions reductions;[7] minimizing negative impacts on the environment;[8] using robust and consistent MRV protocols regarding quantities of CO_2 removed;[9] and engaging with local communities.

This chapter assesses the current state of policy and governance for CDR at the national level; the regional level, in the case of the European Union; and the international level.[i] National and EU CDR policies assessed in this chapter are included in the data portal for *The State of CDR 3rd Edition*, and each is tagged based on the policy typology described below.

Our analysis of CDR policy focuses on G20 countries and uses a suite of policy databases. For novel CDR, we use: IEA's Policies and Measures Database; Climate Change Laws of the World; Carbon Gap's EU & International Carbon Removal Policy Database; and Carbon Removal Standard Initiative's Carbon Removal Quantification, Integration and Policy Database. We supplement these with country-specific databases and research. For conventional CDR, we rely on the Food and Agriculture Policy Decision Analysis Tool from the Food and Agriculture Organization of the United Nations (FAO) and the Policy Inventory for Mitigation Actions in the Agriculture, Forestry and Other Land Use Sectors (PIMA-AFOLU) database of the Organisation for Economic Co-operation and

[i] While subnational policies may also be important for advancing CDR, we do not cover them in this chapter.

Development (OECD); the latter provides the most comprehensive overview of mitigation-specific policies in the AFOLU sector in OECD and G20 countries and has been verified by country experts. Covering more than three-quarters of 2023 global GHG emissions[3] and most novel CDR policy, the G20 countries are a manageable and representative subset of global developments in CDR policy.

Additionally, because the countries (plus the European Union[ii] as a supranational organization) that make up the G20 closely match the list of largest historical GHG emitters, they are important to track, as they arguably have a distinct responsibility to develop the technologies that can help address their historical emissions.[10]

5.1 Status of CDR policy

Policy and governance for CDR is advancing but remains fragmented across countries. Only a few jurisdictions have taken far-reaching steps, such as the binding quantitative land sector net removal target in the European Union, emerging quantitative CDR ambitions in national strategies, and targeted [iii]-creation instruments such as tax credits and purchase schemes for novel CDR in the United States. Overall, CDR-relevant measures remain scattered and often underdeveloped, suggesting that it is not yet seriously treated as a public good and an integral component of climate policy. In the following section, we set out a typology of CDR policy and assess policy focus and sophistication for both novel and conventional CDR across G20 countries.

Types of CDR policy

Recent years have seen an expansion in systematic tracking of climate policy via databases including the Climate Policy Database,[11] Climate Change Laws of the World[12] and the IEA Policies and Measures Database.[13] These efforts enable assessment of which governments are acting to address climate change and which instruments they deploy.[14] While CDR, as a component of climate policy, lacks a dedicated global policy tracker, initiatives such as Carbon Gap's EU & International Carbon Removal Policy Database[15] and taxonomies tailored to CDR policies are advancing.[16,17]

A central challenge in developing a taxonomy for CDR policy is including broad enabling measures that are relevant to CDR alongside CDR-specific instruments – especially across sectors where energy, land and ocean regulations intersect. Additionally, legislative frameworks in many countries are evolving rapidly, creating a dynamic regulatory landscape. For example, Germany's High Seas Dumping Act (*Hohe-See-Einbringungsgesetz*)

[ii] The African Union is also a member of the G20, but we did not assess it here because it does not set legally binding climate policy for its member countries as the European Union does.
[iii] The CDR purchase pilot prize has stalled under the current Trump administration, but there is Congressional direction in FY26 appropriations to continue it.

previously permitted the introduction of substances into the marine environment only under narrowly defined research exemptions. As a result, certain ocean-based CDR activities were effectively constrained until the law was amended in 2026 to allow commercial storage of CO_2 in the seabed. Because the Act is not framed as climate legislation, it is typically excluded from standard climate policy databases, despite its relevance for CDR deployment.

Similarly, measures that are not framed as climate policy may be critical enablers of CDR activities. Indirect policies – those that do not target removals explicitly but create foundational conditions for CDR or indirectly incentivize supply or demand – are, therefore, relevant for CDR policy analysis. They vary widely in design across countries, complicating comparative assessment and progress tracking. This includes interventions in the agriculture sector and the LULUCF sector that result in durable carbon storage.[18] Furthermore, some conventional CDR-related policies have existed for decades and have gradually been repurposed towards a carbon focus; for instance, Canada's natural resource framework now explicitly emphasizes ecosystem-based forest management with carbon sequestration as one objective.[19] Policies that broadly promote land-based mitigation measures[20] such as afforestation, reforestation and soil carbon enhancement. These approaches, often labeled as nature-based solutions, require careful disaggregation to distinguish between those elements that are genuinely CDR-relevant and those aimed primarily at reducing emissions.

Another challenge is separating policies focused on CDR from those supporting point-source fossil carbon capture and use or storage (CCU/CCS), which can result in reduced emissions – not atmospheric removal. In the United States, for instance, many activities fall under the term "carbon management", which encompasses both CDR, CCU and CCS.[21] Additionally, numerous jurisdictions are advancing regulations for geological carbon storage and/or CO_2 transport primarily with fossil CCU or CCS in mind; nevertheless, these frameworks can also enable deployment of some types of novel CDR. Owing to the definitional challenges and extensive interlinkages with adjacent sectors, a comprehensive, global inventory of CDR-relevant policies is lacking.

CDR policy analysis

In this chapter we develop a FOAK database of CDR-relevant policies across G20 countries and the European Union. This database captures some core elements of CDR policy action and enables a broader understanding of emerging governance trends.

We define a CDR policy as one that covers any single public measure – such as a law, regulation, strategy, target or official communication – that is in force, enacted or formally announced. Policies may span multiple instrument types and sectors and are included when they have a clear, demonstrable connection to the CDR methods considered in this report, including enabling or constraining relevant land- or ocean-based activities.

Building on existing literature on CDR governance, we organize these policies into three categories – foundational, supply-side and demand-side – spanning both conventional and novel CDR (see Table 5.1). Foundational measures create or remove legal barriers for CDR and address externalities, thereby enabling CDR and further policies. These include binding and non-binding economy-wide GHG targets and frameworks, MRV systems, environmental safeguards and community engagement provisions. Supply-side instruments lower the cost, risk or uncertainty of delivering verified removals through public funding, tax incentives, infrastructure support and early-stage funding for RD&D. Demand-side instruments create or expand markets for verified removals via method-specific targets and obligations, public procurement and integration into carbon markets, including ETSs. This demand/supply framing is consistent with earlier policy analyses[22,23] and is especially salient for CDR because there is little demand without clear incentives. It is, therefore, crucial to examine which strategies and instruments countries use to generate robust and ongoing demand signals for CDR.

Understanding the sequencing of policies in terms of focus area, instrument type and stringency can also provide insight on what is most effective under different circumstances. Within the typology assessed here, foundational policies can form the baseline that supply-side policies can refer to, while demand-side policies subsequently expand the market for CDR purchases. Such a sequencing can be observed in the European Union,[24] while others have favoured initiating CDR policymaking with supply-side measures and instituting foundational policies later.

Typology for CDR policy assessment

Policy category	Policy objective	Examples
Foundational	Introduce or remove legal barriers for CDR, laying the groundwork for CDR development and deployment	Framework documents that set strategic direction for climate policy or economywide targets MRV policies Policies for environmental safeguards Policies for community protection
Supply-side	Reduce cost, risk or uncertainty of supplying CDR	Funding for RD&D Tax incentives Contracts for difference Funding for CO_2 transport and storage infrastructure
Demand-side	Create or expand markets or other incentives for buyers to purchase CDR	CDR method or sector-specific targets Integration of CDR into compliance markets Tax incentives for buyers Government procurement of CDR (e.g. through reverse auction)

Table 5.1

CDR policies around the world

Previous analyses indicate that CDR policy is still relatively sparse across developed and emerging economies[16,17] and across the geographies considered in earlier editions of *The State of CDR* (i.e. Brazil, Canada, China, the European Union, Japan, Saudi Arabia, the United Kingdom and the United States). Across the G20 and other countries considered in this report, several have adopted binding, economy-wide, net-zero targets including Australia, Canada, the European Union, Japan, Republic of Korea, the Russian Federation and the United Kingdom (see Section 5.2). However, only the European Union – and, by extension, all 27 EU Member States – has adopted a binding, quantitative land sector target in law.[iv] It requires 310 $MtCO_2e$ of annual net removal by 2030, corresponding to an increase of the land carbon sink by 42 $MtCO_2e$ compared with average levels from 2016 to 2018. This comparison is particularly important because estimates of the land carbon sink can change as forest and land-use data are updated over time. However, this conventional net removal target may not be reached, with the European Environment Agency concluding that it is highly unlikely to be realized by 2030 and research indicating that the forest sink is declining.[25,26] As of the end of 2025, no G20 country has an explicit, legally binding, CDR-specific quantitative target, though several emerging frameworks, strategy documents and long-term plans signal growing interest in removals and set non-binding goals, including sectoral or method-specific targets.[v]

Compliance carbon markets can represent a powerful demand signal for CDR, though the strength of this signal depends critically on the type of market and the role assigned

[iv] LULUCF Regulation (Regulation (EU) 2018/841, amended 2023)
[v] Mitigation targets, including net-zero targets, are often designed as net targets that rely on CDR in one way or another.

to removal units within it. Carbon market arrangements that involve CDR can be differentiated according to both the type of units traded and the level of compliance obligations attached to them.[27] At one end are full compliance systems, such as ETSs, where removals are integrated directly into the main carbon market. In these systems, certified removals can function analogously to emissions allowances, serving as the strongest instrument for creating demand for CDR. In the middle are quasi-compliance systems, where regulators allow a limited share of obligations to be met with CDR credits from government-led or UN-administered crediting programmes. At the other end are voluntary mechanisms (see Chapter 4), generally operated by private organizations, which issue CDR credits but do not yet create legally binding demand – though they may be linked to regulated markets.[28]

Only a small subset of ETSs currently creates explicit compliance demand for CDR.[29,30] Among existing ETSs, New Zealand remains the clearest example of structural integration. Forest-based removals are fully embedded in the main allowance market and can be used for compliance.[29–31] Recent announcements signal the government's intention to amend legislation so that "non-forestry removals" could be recognized as ETS activities and an Assessment Framework for Carbon Removals has been published. However, methodologies for non-forestry removals remain to be developed, and the timing of legislative enactment is uncertain.[32] Similarly, Australia's reformed Safeguard Mechanism allows Australian Carbon Credit Units (ACCUs) generated through voluntary abatement activities under the ACCU Scheme, including from conventional CDR projects, to be used for compliance. Additionally, Japan considered novel CDR in the voluntary phase of GX-ETS. The compliance phase, which began in April 2026, accepts limited types of carbon credits, and discussion is ongoing as to how to incorporate novel CDR.[33,34]

Important developments are taking place in European compliance markets. In the United Kingdom, the UK ETS Authority has committed to integrating novel CDR into the UK ETS. Following a multi-year consultation process culminating in the government's July 2025 response, the United Kingdom intends to incorporate removals such as BECCS and DACCS into the scheme, with legislation in 2028 aiming for implementation in 2029. The proposed design includes a dedicated treatment for removal units within the UK ETS, with further technical details subject to additional consultation.[35] In the European Union, the 2023 EU ETS Directive requires the European Commission to assess by July 2026 how CDR could be integrated into the EU ETS, potentially opening another major compliance market to removals in the medium term.

A larger set of compliance markets creates demand through more limited, credit-based approaches. A 2025 International Carbon Action Partnership thematic brief on CDR inclusion in selected ETSs finds that several compliance systems — including those in Australia, Canada, China and the Republic of Korea — allow conventional CDR units, mainly from forestry, to be surrendered for compliance obligations.[36] In most of these

systems, eligible units are generated via domestic crediting mechanisms operating in parallel to the main compliance market, with quantitative limits applied in several (though not all) cases.[31,34] China's national ETS allows covered entities to use domestic China Certified Emission Reduction (CCER) offsets for up to 5% of their verified emissions, and the relaunched CCER framework includes afforestation and mangrove restoration methodologies.[31,34] The Republic of Korea's ETS similarly permits a capped share of up to 5% of compliance requirements to be met with credits from conventional CDR, including forest and certain ocean-based projects.[31]

Other emerging systems are adopting similar structures. Brazil's 2024 Sistema Brasileiro de Comércio de Emissões de Gases de Efeito Estufa defines Certificates of Verified Emission Reduction or Removal as eligible compliance assets from the outset, with specific limits and methodologies to be set through secondary regulation.[31]

We assess existing policies through a qualitative, expert-based review of each country's regulatory framework, instruments and implementation status across both conventional and novel CO_2 removal groups (see Table 5.2). The assessment considers the presence and strength of supply-side support and demand-side mechanisms (such as quantitative targets, public procurement and the type of integration into compliance markets) and whether those are binding. Based on this, countries are classified into four levels of policy development.

1. Emerging: where initial frameworks exist;

2. In active development: where a broader mix of instruments and non-binding demand signals is in place;

3. Advanced: where strong, often binding demand-side measures exist; and

4. Not evident: where no meaningful policy signal can be identified.

Across the considered entities, most policy activity is still concentrated on conventional CDR, primarily by repurposing and strengthening land-use, forestry, agriculture and ecosystem restoration policies to function explicitly as carbon sinks. A smaller group of countries places stronger emphasis on novel CDR. The United States and the United Kingdom, for example, focus on DACCS and BECCS; Brazil stands out for its pioneering enhanced weathering framework; and the European Union provides more support for biochar than other regions. In many other jurisdictions, policy for novel CDR remains limited and largely indirect, emerging mainly through CCU/S-oriented regulations and infrastructure that can support both point-source capture and future deployment of novel removal methods.

Overview of conventional and novel CDR policy development across G20 countries and regions

Country/ Region	Conventional CDR	Novel CDR	Major foundational, supply and demand policies
European Union	✓✓✓	✓✓	Binding LULUCF net removal target for 2030; regulatory framework for CO_2 storage and CDR certification.
United Kingdom	✓✓+	✓✓+	Planned integration of novel removals into emissions trading; conventional removals under review; legislative foundation (Energy Act, 2023) and RD&D for BECCS and DACCS; GHG Removals Business Model; contracts for differences framework; and non-binding quantified CDR ambition.
Canada	✓✓+	✓✓+	Robust carbon-pricing and offset systems that credit land-based removals (DACCS protocol under development; BECCS protocol development to begin in 2026),[37] combined with substantial grants, tax credits and early procurement to support novel CDR projects.
United States	✓+	✓✓	Conventional CDR supported through broad land policies, but without dedicated or binding targets. Novel CDR was driven by federal funding, but much of this is now uncertain. One key policy support, the 45Q tax credit, remains and supports deployment of some types of novel removal.
Brazil	✓✓+	✓+	Extensive regulation and incentive schemes for conventional CDR; pioneering policy framework for enhanced weathering (Remineralizer Law and National Fertilizer Plan); new ETS to create space for removal certificates.
India	✓✓+	✓+	National non-binding land-use sink target and extensive regulations; enabling regulation for BECCS and DACCS.
Germany	✓✓	✓✓	Regulation and incentive schemes for conventional CDR; existing CCU/S policy and pilot projects; novel CDR in exploratory/early phase; budget for government procurement of CDR.
Japan	✓✓	✓+	Regulation and incentive schemes for conventional CDR; growing RD&D, pilot funding and J-Credit scheme coverage for novel methods, with integration of some types of removal into the GX-ETS.
Australia	✓✓+	✓	National carbon crediting for land-based removals via the ACCU Scheme and extensive land policies; novel removals are still at an early, mainly supply-side development stage.
Saudi Arabia	✓+	✓+	National plans for expanding land-use sinks; GHG Crediting and Offsetting Mechanism that creates early market space for future CDR and novel removals.
China	✓✓	✓	Regulation and incentive schemes for conventional CDR; novel CDR in exploratory/early phase mainly through CCUS projects.
France	✓✓	✓	Regulation and incentive schemes for conventional CDR; existing CCU/S policy and pilot projects; novel CDR in exploratory/early phase.
Indonesia	✓✓+	+	National non-binding land-use sink target and extensive regulations; emerging regulation of novel removals through geological storage.
Italy	✓✓	+	Regulation and incentive schemes for conventional CDR; novel CDR activity remains limited, with national efforts focused mainly on the regulation of CO_2 storage and transport rather than dedicated removal support.
Republic of Korea	✓✓+	–	Extensive forest and land-use sink programmes and inclusion of conventional removal credits in the national ETS; no identifiable novel removal policies.
South Africa	✓✓	–	Programmes supporting land-use sinks and non-binding targets (NDC 2021); no identifiable novel removal policies.
Türkiye	✓✓	–	Programmes supporting land-use sinks and highlighting the role of conventional CDR in NDC; no identifiable novel removal policies.

Country/ Region	Conventional CDR	Novel CDR	Major foundational, supply and demand policies
Mexico	✓✓	–	Programmes supporting land-use sinks and a non-binding target (NDC 2025); no identifiable novel removal policies.
Argentina	✓✓	–	Land-use sink policies backed by instruments such as the Argentine Carbon Fund, which procures afforestation/ reforestation credits; no identifiable novel removal policies.
Russian Federation	✓✓	–	Land-use sinks included in domestic crediting; no identifiable novel removal policies.

Table 5.2 *Notes: Countries are classified along four levels of policy development: ✓ = Emerging, ✓✓ = In active development, ✓✓✓ = Advanced, – = Not evident/ no policy signal, and + = halfway between categories. Elements mentioned in the table are not exhaustive of all CDR policy in the jurisdiction. Based on an analysis of sources including IEA, 2025[13]; OECD, 2025[18]; CRSI, 2025[38]; FAO, 2025[39].*

International CDR policy and governance

International policy and governance can complement national CDR policy, enabling cooperation and accelerating action by:

- Facilitating cooperation across countries, sharing lessons learned, improving the efficiency of technology and policy development, and avoiding duplication of effort;
- Establishing common rules and approaches to manage cross-boundary risks, trade-offs and negative impacts of CDR approaches;
- Addressing questions of international equity around distribution of effort; and
- Establishing mechanisms for public participation.[40]

CDR policy remains in early, fragmented stages of development across regions and countries, so international coordination is needed to help chart a coordinated path forward (see Box 5.1), particularly because the benefit of CDR is global, but any ancillary impacts are likely to be local.

Box 5.1: State of international CDR governance and institutions

In other areas of energy and climate policy, international governance has helped to coordinate global actions, accelerate innovation and deployment, and set standards; however, international governance for CDR remains fragmented due in part to the relative nascency of CDR policy and technology. Greater near-term international coordination is urgently needed to scale up CDR because of the decades-long process of developing novel technologies and the diversity of actors involved in their adoption.[40] In the absence of more comprehensive governance, a patchwork of individual state and non-state actors risks sluggish deployment, misaligned incentives, uncoordinated national efforts and inconsistent and divergent standards.

A recent assessment of CDR initiatives (published in our first Discussion Paper) with clear plans or mandates related to governance activities reveals a dearth of international governance capacity for CDR, particularly around rules, standards and mechanisms for transparency. Across 12 assessed CDR initiatives, governance functions related to signaling, multilateral coordination and data/learning were most prevalent. By contrast, functions related to implementation, finance and capacity building, as well as policy analysis, were less common across the sample. Notably, few initiatives included focused on strengthening rules, standards and mechanisms for transparency. For instance, among more advanced initiatives, a category that includes the Group of Negative Emitters and Mission Innovation's CDR Mission, all were found to contribute meaningfully towards signaling and multilateral coordination; none, however, exhibited robust governance related to standards, rules and mechanisms for transparency and accountability – at least not yet. Given the need for convergence on MRV protocols, this role may be most effectively fulfilled by a small number of coordinated entities rather than a proliferation of institutions (i.e. the need is not necessarily for more institutions but for more coordinated, international efforts to harmonize methodologies and policies). These results not only identify gaps but underscore the importance of new and existing international efforts to address them. Moreover, overlapping efforts suggest a need for enhanced coordination to reduce duplication of effort and optimize resources.

Filling gaps will likely require expanded activities at existing organizations as well as the formation of new institutions. Historical evidence shows that nascent organizations with a limited set of functions can evolve into durable institutions that grow in scope to serve a broader set of activities over time. Evidence also demonstrates that trusted information can play an important role in building legitimacy, especially when coupled with early efforts to enhance awareness of the potential gains of cooperation. Hence, the challenge the field faces today is how to fill the governance gaps with adaptive, nimble and robust institutions that can evolve faster than analogous institutions in the past. Countries championing CDR policies and initiatives, such as those described in this chapter, can play a key role in filling gaps through domestic and international initiatives.

The Paris Agreement implicitly relies on CDR and provides legal and procedural context relevant to CDR. Article 4 establishes the balance of emissions and removals in the second half of the 21st century, tacitly acknowledging a role for CDR.[41] Article 5 encourages results-based financial support for carbon and GHG sinks, while Articles 9 and 10 address finance and technology transfer – both essential to scaling CDR capacity.

Article 6 of the Paris Agreement offers the clearest international cooperation channel[27]: Article 6.2 enables bilateral transfers of Internationally Transferred Mitigation Outcomes, first used for a durable-CDR transfer between Norway and Switzerland in 2025; Article 6.4 creates a UN-supervised crediting mechanism under a Supervisory Body that could cover both conventional and novel CDR. Progress has been made on methodologies, removals and reversal-risk management. At the same time, comprehensive, operational MRV for CDR under Article 6.4 remains incomplete, posing challenges for integrity and investment decisions. REDD+ has been aligned with Article 6.4, but inconsistencies remain.[42] The overall share of removals in the pipeline remains modest (see Chapter 4).

Outside of the Paris Agreement, other international frameworks, such as the Convention on Biological Diversity, are relevant to certain types of CDR. Particularly for marine CDR in waters outside of national jurisdictions, international regimes – including the London Convention and Protocol and the High Seas Treaty– are relevant but do not provide a comprehensive governance regime.[43] Across both conventional and novel CDR, foundational principles in customary international environmental law apply, such as the precautionary principle, prevention of transboundary harm and due diligence. These principles underpin environmental assessment and risk management and can act as limiting conditions for developing and deploying CDR approaches with uncertain ecological or social impacts.

Government-led multilateral initiatives are beginning to coordinate research, early deployment and longer-term planning for CDR, but they focus less on binding, comprehensive governance. The Mission Innovation CDR Initiative – co-led by the United States, Saudi Arabia and Canada with participation from Australia, China, Japan, the Netherlands, Norway and others – structures R&D across three CDR methods. The initiative supports early deployment via the CDR Launchpad and focuses on novel CDR. In parallel, the Group of Negative Emitters – led by Denmark and including Ethiopia, Finland, Kenya, the Netherlands, Panama, Suriname and Sweden – encourages national planning for net-negative trajectories that include both conventional and novel CDR.

For conventional CDR, ecosystem restoration efforts – such as the Bonn Challenge and regional pledges like Initiative 20x20, AFR100 and ECCA30 – aim to restore hundreds of millions of hectares of degraded land, though reporting often emphasizes pledges rather than verified outcomes. The Glasgow Leaders' Declaration on Forests and Land Use similarly commits to halting and reversing forest loss by 2030 but lacks enforceable sub-targets and transparent monitoring.

5.2 Targets inform policy

Target setting is an important tool for policymakers to signal priorities and allows civil society and the public to track progress and hold governments accountable. Setting targets for CDR, both novel and conventional, can act as a strong demand signal and allow the tracking of progress and the identification of policy gaps. However, countries' climate plans often lack transparency on the extent to which they will use CDR.

Under the UNFCCC, parties can communicate their intended use of CDR in official documents. Parties are required to submit NDCs with mitigation targets in five-year cycles. Previous NDC submissions included targets for 2030. The most recent submissions were due in 2025 and include targets for 2035. Parties are also encouraged to submit long-term strategies that outline their climate goals and plans for 2050 or later. Further, parties were required to submit Biennial Transparency Reports (BTRs) for the first time in 2024, describing in more detail how they plan to meet these targets. While these documents are intended to signal governments' ambitions and plans, they are not always aligned with national policies and actions.

In these submissions, parties rarely provide explicit information on the contribution of removals; however, many indicate the expected contribution of the LULUCF sector to their overall mitigation targets. This is important because most current conventional CDR takes place in this sector in the form of afforestation, reforestation and forest management. Separating out LULUCF removals would help to demarcate them from intentions to reduce emissions resulting from deforestation.

For novel CDR, less information tends to be available on near-term deployment than long-term. NDCs tend not to mention novel CDR methods, which are largely at an early stage of development, while long-term strategies will more often consider these methods. Out of 79 parties that submitted long-term strategies, 20 indicated that they intend to use novel CDR and seven indicated they are considering such use.[5]

In our assessment of NDC and BTR submissions by members of the G20, we found that few provide enough information to judge the contribution of CDR in meeting their targets (see Table 5.3). As of March 2026, 15 members of the G20 have submitted new NDCs with 2035 mitigation targets. Only ten members have provided enough information on the expected contribution of the LULUCF sector to allow an estimation of intended conventional CDR for 2030, 2035 or both. Only the United Kingdom and Australia have provided information on how novel CDR may be used to meet their NDC targets.

Current and proposed CDR for the G20 and other key CDR countries ($MtCO_2$ per year)

Party	Submitted 2035 NDC?	Current LULUCF CO_2 **emissions** (e.g. from deforestation)	Current LULUCF CO_2 **removals** (e.g. from afforestation)	Pledged **change in LULUCF CO_2 removals** by 2030 [and 2035]	Pledged **change in novel CDR** by 2030 [and 2035]
Argentina	N	54	-13	-	-
Australia	Y	29	-103	-19 to -20 [-24 to -27]	-2 to -26 [-3 to -10]
Brazil	Y	886	-383	-125 [-148]	-
Canada	Y	55	-28	-	-
China	Y	5	-1263	-	-
European Union	Y	125	-390	-53	-
India	N*	14	-423	+16 to -4 [-1 to -18]	-
Indonesia	Y	1,157	-483	-12 to -74 [-52 to -100]	-
Japan	Y	9	-69	+29	-
Mexico	Y	18	-216	+16	-
Republic of Korea	Y	4	-47	+15 [+3 to +4]	-
Russian Federation	Y	38	-1,133	-	-
Saudi Arabia	Y	0	-9	-	-
South Africa	Y	35	-69	-	-
Türkiye	Y	3	-70	+12	-
United Kingdom	Y	15	-21	0 [0]	-3 to -5 [-13 to -23]
United States	Y**	176	-1,131	-	-
Democratic Republic of the Congo	N	573	-518	-	-
Ethiopia	Y	196	-79	-44 to -93 [-51 to -106]	-
Thailand	Y	9	-100	- [-25]	-
Switzerland	Y	1	-3	-	-
Nigeria	Y	319	-4	+1 to -10 [+1 to -10]	-

Table 5.3 *Notes: Documents submitted to the UNFCCC by March 2026 were assessed. Current LULUCF emissions and removals refer to the 2014–2023 decadal average, noting national reporting is not always complete and some reported net emissions or net removals are not possible to disaggregate. Pledged changes by 2030 and 2035 are measured against this baseline. France, Germany and Italy are members of the G20 but are represented by the European Union's NDC submission and are, therefore, excluded. We also excluded the African Union, which does not submit a pledge for its members, and included several non-G20 countries that are key in terms of CDR. Green cells indicate an increase in removals, while orange flags a decrease in removals.*
** We assess India's announced 2035 NDC target; however, the country has not officially submitted a new NDC to the UNFCCC as of March 2026.*
***The United States has fulfilled criteria related to its BTR released in 2024 but officially exited the Paris Agreement in January 2026.*
Sources: Dabbs, B., Marshall, C. & Hiar C., 2025[44]; US House of Representatives, 2024[45]

While many countries lack short-term pledges on removals, many more have committed to reaching net zero, implying a role for CDR in meeting their long-term climate goals. As of March 2026, 108 countries have set net-zero targets.[5] In addition to improving the transparency of these pledges, policymakers can take additional actions to make these pledges more credible, including:

- Establishing net-zero targets in law;
- Implementing CDR policies and measures; and
- Comprehensively planning for scaling CDR.

The assessment in Table 5.4 expands on our Insight Report,[46] published in November 2025, in which we assessed the credibility of the G20's CDR pledges against these criteria.

By signing net-zero targets into law, members indicate CDR will be needed to meet climate goals. Further, legally binding targets are more difficult to ignore or reverse and expose future administrations to legal challenges. As of March 2026, 15 members of the G20 have net-zero targets, seven of which have been signed into law.

The adoption of CDR policies is an important indicator that governments are working to achieve their pledges by creating enabling conditions to scale removals (see Section 5.1). While every member describes conventional CDR policies in their BTR (with the exception of India, which has not yet submitted one as of March 2026), far fewer describe policies targeting novel CDR. The United States has a BTR that includes policies for both novel and conventional CDR; however, the document was submitted under the Biden administration, which ended in January 2025, and does not account for the policy shifts undertaken by the current Trump administration (see Section 5.3).

Finally, by integrating CDR and net zero into their national planning efforts, governments show they are working to deliver on their pledges. Parties are required to provide projections both for total net emissions and those at the sector level, with flexibility given to developing countries to meet this obligation. Projections for the LULUCF sector should reflect "existing" or "additional" measures and can indicate whether parties are currently on track to meet their pledges. Similarly, governments can publish analyses on emissions pathways and sector-specific actions to achieve their net-zero targets.

Credibility assessment of the G20 countries

G20 member	Transparency	Legal status	Current implementation		Comprehensive planning	
	NDC provides sufficient information on CDR?	**Net-zero target** in law?	**BTR** describes conventional CDR measures?	**BTR** describes novel CDR measures?	**BTR** has LULUCF projections?	Published plan to reach **net-zero target**?
European Union	✔	✔	✔	✔	✔	✔
Republic of Korea	✔	✔	✔	✔	✔	❍
United Kingdom	✔	✔	✔	✔	✔	✔
Japan	✔	✔	✔	✘	❍	❍
Türkiye	✔	✔	✔	✘	❍	❍
Indonesia	✔	❍	✔	✘	❍	✘
China	✘	❍	✔	✘	✘	❍
India	✔	❍	✘	✘	✘	✘
Australia	✔	✔	✔	✔	✔	✔
Canada	✘	✔	✔	✔	❍	❍
Russian Federation	✘	✔	✔	✘	❍	❍
Saudi Arabia	✘	❍	✔	✔	✘	✘
South Africa	✘	❍	✔	✘	✔	✘
Argentina	✘	❍	✔	✘	✘	✘
Brazil	✔	❍	✔	✘	✘	✘
Mexico	✔	❍	✔	✘	✘	-
United States*		✘	✔	✔	✔	-

Table 5.4 *Notes: A check indicates that the criteria is fulfilled, a circle indicates that the criteria is partially fulfilled, and a cross indicates that the criteria is not fulfilled (see the Technical Annex for more detail). The transparency criteria refers to whether an estimate can be made in Table 5.3.*

**The United States has fulfilled criteria related to its BTR released in 2024 but exited the Paris Agreement in 2026.*

Sources: UNFCCC, 2026[45]; Climate Analytics & NewClimate Institute, 2026 [47]

5.3 Policy deep dives by country

Countries are pursuing different approaches to CDR policy in terms of focus and sequencing as well as the level of policy and governance sophistication. The last two editions of this report included deep dives on Brazil, Canada, China, the European Union, Japan, Saudi Arabia, the United Kingdom and the United States. Here, we consider policy direction and evolution in the United States, Switzerland and Germany, each of which provide compelling examples of different policy directions and approaches. The United States presents a striking example of a country that held a leadership position on CDR policy but is currently backpedalling. Switzerland, which is in neither the European Union nor the G20 and so is not discussed elsewhere in this report, has taken innovative and experimental policy steps on CDR and is home to several leading CDR companies. Germany, the largest EU Member State, is currently shifting from reluctant acceptance of CDR to a more proactive approach.

United States

The United States has been a leader on CDR policy,[48] enacting a range of supportive policies, mainly between 2020 and 2024, under the Biden administration. More than US$8.5 billion was provided in the 2021 Bipartisan Infrastructure Law for demonstration projects and enabling infrastructure, while the 2022 Inflation Reduction Act increased deployment support for each US ton of CO_2 removed with DACCS and BECCS. In addition to these supply-side measures, initial steps to increase demand came with the CDR Purchase Pilot Prize, which was also designed to help set the bar for robust MRV protocols.

However, the current U.S. administration under Donald Trump, who came into office in January 2025, has disrupted funding and support for CDR and cut personnel at relevant agencies, while also dismantling the country's broader climate policy framework – all of which creates uncertainty about the future of CDR development and deployment in the United States. This includes the headline US$3.5 billion DAC Hubs Program, which had awarded only US$1.2 billion of the total to 21 projects by the beginning of 2025. In October 2025, the Department of Energy cancelled 10 of the 21 projects; all were at early stages and represent US$47 million in revoked funds.[49] As of April 2026, initial funding for the two headline projects in the construction phase – the South Texas DAC Hub and Project Cypress in Louisiana – had been restored, but uncertainty remains around the rest of the program's funding. Furthermore, cancellation of funding for earlier-stage projects may undercut the future of the industry.

Annual budget appropriations for government agencies also support CDR research and development, and these funding levels have increased steadily for the past several years. At the Department of Energy, which leads research on novel CDR, funding increased from almost nothing before fiscal year 2020 to US$118 million in fiscal year 2024.[50] While the President's Budget request for fiscal year 2026 aimed to nearly eliminate support for

CDR, Congressional appropriations kept funding for CDR almost unchanged from 2025, demonstrating bipartisan support for the field and maintaining funding for government purchase of CDR, a key demand support mechanism.[51,52] Whether this funding is spent by agencies as directed remains to be seen.

In July 2025, H.R. 1 (the "One Big Beautiful Bill") was enacted, weakening many clean energy tax credits but expanding the 45Q production tax credit for CO_2 storage– which supports DACCS and BECCS along with capture on fossil emission sources. The credit level for utilization of CO_2 was raised to match the credit level for geologic storage of CO_2. Using CO_2 captured by DACCS or BECCS – including use in enhanced oil recovery – now receives the same credit level as dedicated storage: US$180/t$CO_2$ for DACCS and US$85/t$CO_2$ for BECCS.

Despite the 45Q tax credit remaining intact, some companies have already shifted operations elsewhere due to the diminished policy support and continuing uncertainty. At the same time, because CDR policy in the United States has disproportionately supported DAC, these policy reversals have had less impact on other CDR approaches.

Switzerland

Switzerland demonstrates a high level of strategic coherence and innovative leadership in CDR, supported by its strong research institutions and dynamic carbon start-up ecosystem.[53] At the same time, it shows a high level of international engagement in CDR, reflecting the recognition that, as a small country with relatively limited domestic CO_2 storage capacity, meeting its climate targets will require international cooperation. It was among the first countries to explicitly integrate CDR into its long-term climate strategy[54] and to adopt a legally binding greenhouse gas neutrality target by 2050[55] and net-negative emissions after 2050. A national CDR roadmap[56] sets the aspirational goal to capture and store 500,000 tonnes of CO_2 annually from domestic point sources by 2030, with waste-to-energy facilities – where the capture of the biogenic CO_2 component leads to removals – expected to deliver a significant share of this volume. By 2050 Switzerland anticipates deploying 7 million to 9 million tonnes of CDR to counterbalance residual emissions, equivalent to roughly 12%–16% of its 1990 emissions. According to the roadmap, around 2 MtCO_2 would be achieved domestically, primarily through BECCS, while about 5 MtCO_2 would be sourced internationally, largely from DACCS. An additional 1–2 MtCO_2 is earmarked to counterbalance international aviation emissions associated with Switzerland,[57] though it remains unclear whether these removals will come from domestic or international supply.

Switzerland's roadmap prioritizes novel CDR methods, consistent with the country's commitment to position itself as a global hub for novel CDR companies and startups, with Climeworks and Neustark as prominent examples. While the roadmap notes that a broader suite of CDR methods may play a role – and Swiss climate legislation does not impose a

binding definition of durability – conventional CDR approaches are treated with caution due to concerns about permanence and potential competition for land and sustainable biomass. Switzerland's LULUCF sector has historically been a net sink,[58] but its sink capacity has declined markedly over the past three decades. Average annual removals were around 4 $MtCO_2$ between 1990 and 1995 and fell to just 0.6 $MtCO_2$ between 2018 and 2023, mirroring a broader downward trend observed throughout Europe.

Beyond target setting, Switzerland's climate-policy framework includes several instruments to incentivize CDR uptake. Financial support for CCS and CDR can be accessed both under the Climate and Innovation Act,[55] for companies submitting net-zero roadmaps, and under the CO_2 Act,[59] for operators covered by the Swiss ETS. Moreover, beginning in 2025, captured and permanently stored CO_2 may be credited towards ETS compliance, strengthening the business case for deployment. Additional circular economy[60] and forestry policies[61] encourage CO_2 storage in long-lived materials such as wood and mineralized concrete by, for example, mandating the deployment of Swiss-grown wood in public buildings. Despite this range of incentives, Switzerland lacks a long-term financing strategy for CDR deployment and targeted incentives to secure market uptake of different CDR methods.

The expansion of CO_2 capture and storage infrastructure represents both a technical and regulatory challenge. CO_2 captured for disposal is legally classified as waste, which does not allow for underground storage and makes cross-border export subject to waste legislation.[62] Moreover, under the Swiss constitution, responsibility for designing CO_2 infrastructure lies primarily with the cantons rather than the federal government.[63] Following a parliamentary mandate[64] in 2025, a new federal framework law will be developed to set national guidelines and harmonized standards, while leaving implementation to the cantons. This situation may complicate implementation of a sectoral agreement,[65] which obliges all major waste-to-energy plant operators to install at least one CO_2 capture facility by 2030 with a minimum capacity of 100,000 tonnes per year. While domestic solutions to store CO_2 in mineralized concrete are being explored, innovative demonstration projects are investigating potential alternative pathways, such as transporting captured CO_2 from Switzerland to Iceland for in situ mineralization (DemoUpCARMA)[66] and storing CO_2 underground domestically (CiTru).[67]

Internationally, Switzerland has been a pioneer in advancing bilateral cooperation on CDR under Article 6.2 of the Paris Agreement.[68] In June 2025, Switzerland concluded the first CDR-specific agreement under Article 6.2, partnering with Norway to allow the transfer of verified carbon removals between the two countries. As well, in 2023 Switzerland ratified the amendment to Article 6 of the London Protocol, which enables offshore geological storage of CO_2.[69]

Germany

While Germany has long been reluctant to accept the need for CDR and geological CO_2 storage,[24,70] recent reforms to the country's legal framework have led to a significant shift in its climate policy approach. In November 2025, the federal parliament amended the 2010 Carbon Dioxide Storage Act, moving from banning commercial CO_2 transport and storage to allowing offshore storage in Germany's exclusive economic zone, with the exception of marine protected areas. The law also includes an opt-in clause for onshore storage for the federal states (*Bundesländer*). In addition, the federal government aims for the ratification of a resolution of an amendment of the London Protocol to pave the way for transnational CO_2 transport for offshore storage.

These reforms represent an effort to advance a strategic framework for CCS, CCU and CDR under the label "carbon management" to achieve the net emissions reductions targets set out in the Federal Climate Change Act, including the net-zero GHG emissions target for 2045.[71] The law includes a quantified target for net "natural sinks" in the LULUCF sector, historically a net carbon sink. However, since 2013 the sector has undergone a sustained reversal from net sink to net source, a trend that has intensified in recent years. The law also provides for the government to set a quantified target for "technical sinks", or novel CDR. This would make Germany the first country in the European Union with a such a target. Furthermore, Germany is one of the few countries in the world that has already set out in law its long-term intention to achieve net-negative GHG emissions.[72]

In recent years, R&D has played a key role in the country's CDR policy landscape. Two federally funded programmes were set up in 2021: CDRterra and CDRmare. These large-scale research initiatives have been exploring the potential and risks of deploying both land-based and marine CDR. The Olaf Scholz government issued two draft strategies but failed to adopt them before leaving office prematurely in early 2025: a Carbon Management Strategy focusing on CCS and CCU, and a Long-Term Strategy on Negative Emissions (*Langfriststrategie Negativemissionen*) with the aim of clarifying the role of CDR in the country's climate policy framework. The latter is now expected to be adopted during the legislative term that began in 2025, which would lay the groundwork for detailed CDR policies.[73]

Additionally, the government of Friedrich Merz created the first-ever dedicated CDR unit, established within the restructured Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety. Significant funding (€111 million) is allocated to CDR in the 2026 federal budget,[74] of which €98 million is slated for project subsidies and €11.5 million for direct public purchasing of CDR credits. Appropriations of €320 million have already been committed until 2033, and additional positions are expected to be filled for the new unit in the subsequent federal budgets after 2026.

The ongoing integration of CDR into the EU climate policy framework[75] directly influences Germany's CDR policymaking. Undertakings such as the CRCF Regulation, the revision of the LULUCF Regulation, and the planned reform of the EU ETS inform the relevant dimensions of domestic policymaking. The EU Common Agricultural Policy (CAP) enables funding for conventional CDR through Member States' National Strategic Plans.

At the national level, several policy instruments are in place to support conventional CDR. While not specifically targeting CDR, national strategies on forestry, peatland protection and soil protection acknowledge removals as a co-benefit. A continuation of the 2023 Federal Action Plan on Nature-based Solutions for Climate and Biodiversity (€821 million in 2026) focuses on decreasing the gap between current projections for emissions and removals in forests, peatlands and coastal ecosystems, and the net LULUCF targets established in the Federal Climate Law.[76] Policy instruments incentivizing novel CDR are less developed, as grant programmes such as the Federal Fund for Industry and Climate Action and the new industrial decarbonization programme only implicitly cover CDR through funding for the capture, storage and utilization of predominantly fossil CO_2 in industrial sectors.[77]

Box 5.2 Limitations and knowledge gaps

Both the policy typology applied and the policy analysis conducted in this chapter are new for *The State of CDR 3rd Edition*. As a FOAK aggregation and assessment of all CDR-relevant policies – both novel and conventional – across G20 countries and the European Union, it is possible that some policies may have been missed or improperly tagged. This analysis will be improved and refined in future editions.

Additionally, for net targets in the LULUCF sector, the proportion attributable to conventional removal may not always be clear. National GHG inventory categories sum up fluxes of different GHGs per land-use category. This leads to an aggregate number including CO_2 drawdowns both from natural uptake and from CDR, as well as emissions on the same land.

Beyond that, there are many areas where future research is needed. We have conducted a preliminary assessment of policy sequencing across different jurisdictions, but additional research is warranted to do this more systematically and determine the implications of different policy sequences under different types of national circumstances.

5.4 Outlook

Countries that have set net-zero targets have already implicitly included a role for CDR in their climate plans, but many have not communicated the details of how they plan to use CDR to reach those targets. Long-term strategies oriented towards 2050 and beyond, as well as current NDCs focused on 2035, present opportunities for countries to communicate the expected level of conventional and novel CDR needed by these target years based on expected levels of residual emissions at the net-zero target year. More broadly, keeping CDR on the national and international policy agenda depends in many cases on maintaining commitments to net-zero targets.

To enable CDR to scale up to the levels estimated in national targets, countries will need to either begin or continue to develop policies that enable the achievement of those targets. This includes policies to support innovation and scaling to develop the supply of CDR; policies to drive demand for CDR; and foundational policies to create a governance framework for CDR, including rules for quantification of removal, guidelines for community engagement and the minimization of negative environmental impacts.

The application of the policy typology to the novel CDR policy database reveals a focus on supply-side policies, comparatively underdeveloped foundational policymaking and a lack of action incentivizing demand for CDR. However, distinct country approaches can provide useful blueprints, for instance for policy sequencing, for other countries that are in the early stages of CDR policymaking. Countries need to ensure that their climate targets acknowledge the role of CDR alongside steep emissions reductions – and advance a suite of policies to enable progress.

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