



Climeworks' blueprint for corporate carbon removal strategies

Companies need to act today and start purchasing high-quality carbon dioxide removal (CDR)

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**Why should companies
engage in high-quality
carbon dioxide
removal today?**



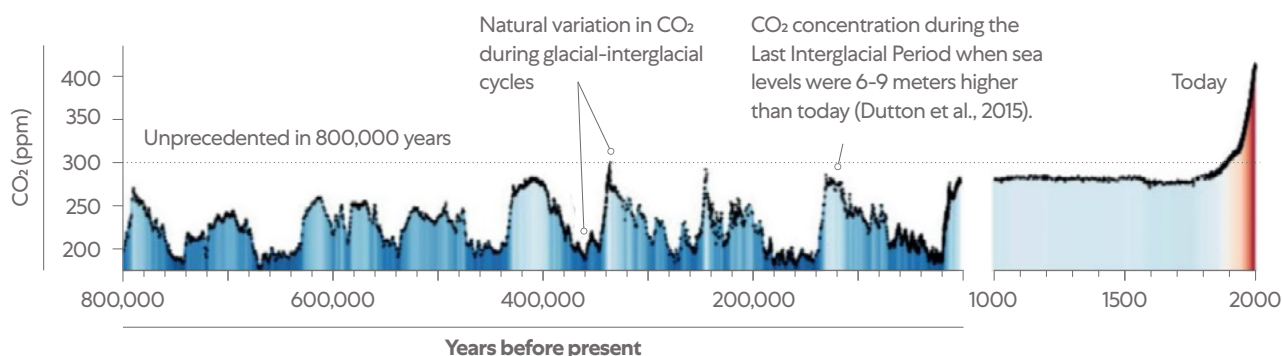
Climate action can't be delayed anymore

We are in a climate crisis that demands immediate and substantial action

[Dr Matthias Huss](#), Professor for Glaciology at ETH Zürich, presented results from his years of research on glaciers, a sensitive indicator of climate change. Over the past 12 months, temperature records were broken each month, with the average temperature rising by 1.63°C compared to pre-industrial levels. Carbon dioxide is accumulating in the atmosphere at an unprecedented rate, with current CO₂ concentrations reaching levels not seen in 800,000 years.

CO₂ variation over the last 800,000 years

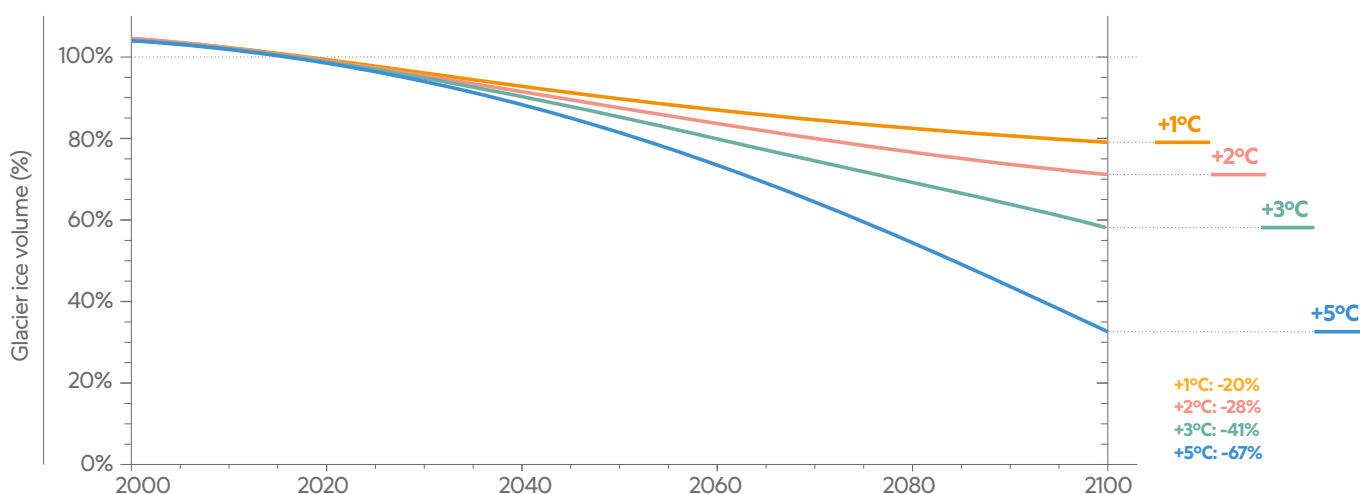
The speed at which CO₂ is rising has no comparison in the recorded past



Glaciers are also reacting to climate change. Regardless of altitude or latitude, they have been melting at a high rate since the mid-20th century. Global glacier mass loss has accelerated from 1 to 2% per year during the previous 20 years to 10% in 2022 and

2023. The environmental impacts of climate change are escalating rapidly, necessitating urgent intervention. The graph below shows projection of the global ice volume for different climate warming scenarios from 1°C to 5°C.

Glacier retreat and atmospheric warming



To limit the loss of glaciers, avoid hazardous rise of sea levels, and protect water reservoirs, we must keep temperature rise below +1.5°C compared to pre-industrial levels.

High-quality carbon dioxide removal must be scaled up by a factor of 1000 until 2050

Approximately 10 to 20% of global emissions are unavoidable, necessitating the removal of 6 to 16 gigatons of carbon annually until 2050 to achieve net-zero. To meet this target, high-quality carbon dioxide removal (CDR) supply must be scaled up by more than 1000 times.

To facilitate this scale-up and remain on track for the 2050 temperature goal, the CDR industry needs demand signals in the form of long-term offtake agreements for 150 million tonnes, valued at over \$50 billion, within the next 18 months.

The corporate action perspective

CDR is necessary for any net zero strategy

Any effective net-zero strategy requires both emissions reductions and high-quality removals. It's not about choosing one over the other but integrating both. There is a compelling business case for taking action today. The risks of inaction, including shareholder and policy pressures, make early engagement in CDR imperative.

“ Please do invest urgently in your marginal carbon abatement curves to reduce your value chain emissions. It is not a question of stopping emissions, or carbon removals to reverse emissions, both are necessary—they complement each other rather than being alternatives.

As businesses, we need to learn our way into the carbon removal market. We'll be glad we did when we need to enter it at scale. Any board director has a responsibility to invest now to prepare for the near future. This is a once-in-a-generation opportunity. ”

John MacArthur

Energy Director, World Business Council for Sustainable Development



Taking action today yields significant benefits beyond cost savings

- **Cost Savings:** Early movers can unlock substantial returns on investment, as the annual cost savings at net zero will significantly outweigh the investments required today. By acting now, companies can accelerate the cost reduction of carbon removal technologies and lock in prices in a future supply-constrained market.
- **Competitive advantage:** Early adopters can gain a competitive edge, by enhancing their brand and reputation, and attracting top talent.
- **Overall shareholder value:** Leadership in CDR allows companies to access high-growth markets for more sustainable products using credible environmental claims. Those efforts also attract ESG investments and enhance shareholder returns, with policies pushing for stricter regulations.

“ It is urgent for businesses to begin to reverse climate change by removing atmospheric carbon dioxide responsibly. Our shareholders will thank us for ambitious carbon removals investment strategies. ”

John MacArthur

Energy Director, World Business Council for Sustainable Development



Inaction can lead to supply constraints and compliance and reputational risks

The CDR market is projected to be heavily supply-constrained, posing a risk of being left with no, low-quality, or expensive volumes. Delays in action can lead to compliance issues, litigation risks, and reputational damage, potentially resulting in the loss of the license to operate.

“ Voluntary markets need to raise the bar to establish trust that carbon credits remove emissions. I expect that businesses will be short of high-integrity carbon removal solutions. Now is the time to get involved. ”

John MacArthur

Energy Director, World Business Council for Sustainable Development



Despite uncertainties like evolving policies and standards, the mandate for companies is clear: residual emissions must be addressed with high-quality Carbon Dioxide Removal (CDR). Taking action today to secure an initial batch of volumes and engage in the market is a no-regret move.

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How to make a successful first step in CDR



Companies should develop a strategy for a modest yet impactful start

“ We see great importance at Breitling in playing a pioneering role in sustainability. We have decided to be involved from the start of the movement and benefit from all the advantages of early movers, including making our work on climate action still more credible, while being a part of the rollout of an essential solution for climate change mitigation. ”

Aurelia Figueroa

Global Director of Sustainability, Breitling

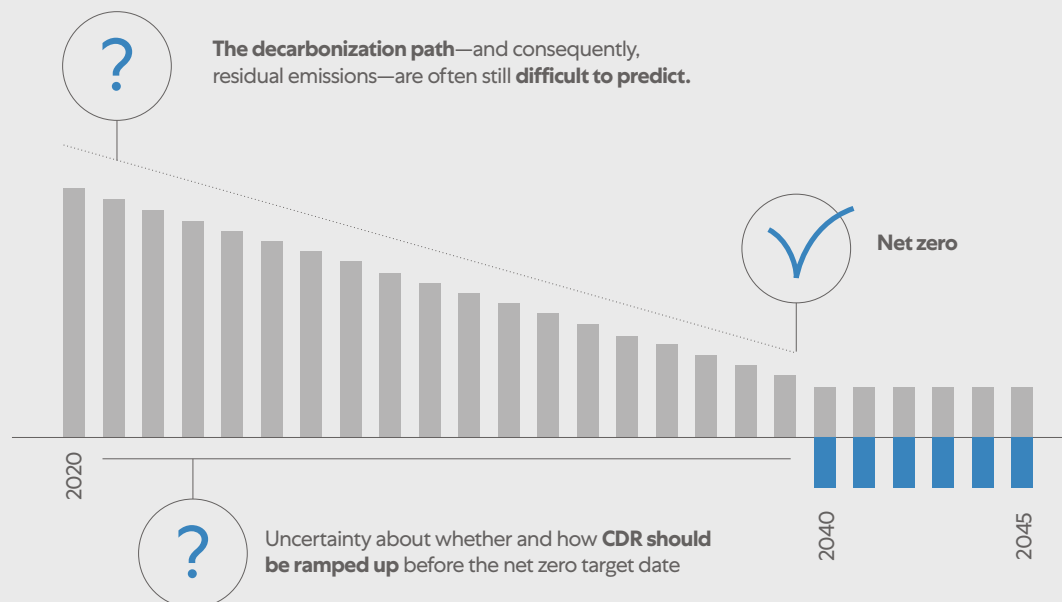


Businesses should integrate CDR into your overall sustainability strategy and take a phased approach

Develop a comprehensive narrative that integrates carbon removal into your company's overall sustainability strategy and values. Most companies are still off track to purchase significant amounts of CDR to cover their entire net-zero needs. Businesses can begin with a modest yet impactful approach to CDR and plan for incremental steps that gradually build capacity and impact.

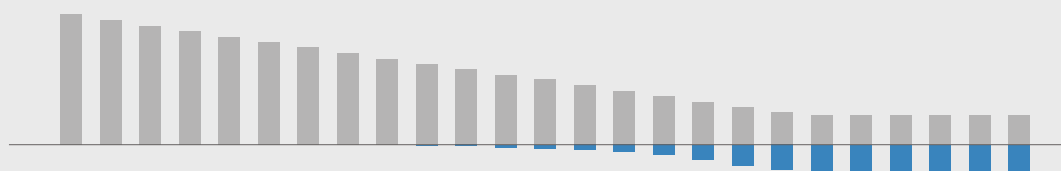
Best practices: take a phased approach to CDR to set up for success - **alongside** reduction efforts

Starting point: approach to CDR often not straightforward



Reco #1: Don't wait until it's too late!

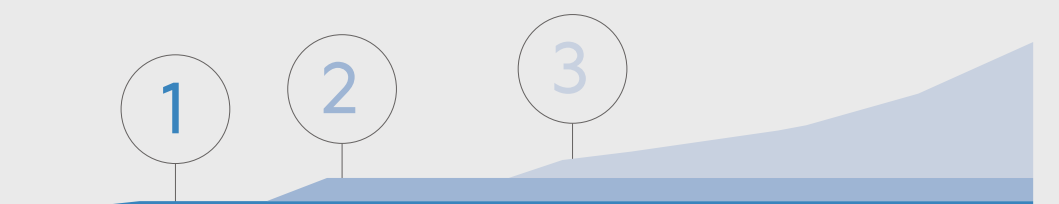
Implement a steady **ramp-up of CDR** towards net zero to **scale up capacity** and **secure access** to future supply.



Reco #2: Implement CDR ramp-up in sequential waves

Slicing the ramp-up into “**waves**” helps to **secure volumes** even when **residual emissions** at net zero are **not yet fully after clear**.

Figure below: wave 1 in 2025 to cover 5% of the estimated needs for 2040, wave 2 in 2028 to cover 10-20%, wave 3 in 2032 towards net zero



Companies should invest in diversified high quality CDR portfolios

Invest in a diversified portfolio of high-quality CDR solutions that aligns with climate science and policy standards to maximize impact and minimize risk.

Establishing a Carbon Dioxide Removal (CDR) portfolio is essential and offers significant benefits for both companies and the world. Here's why:

- **The world requires a broad and diverse array of carbon removal solutions working in unison to maximize climate impact.**
- **Diversification enhances access to various technologies and mitigates the risks associated with individual methods and projects.**
- **A tailored portfolio can align with companies' budgets and needs, enabling optimized overall pricing.**
- **Different technologies offer balanced co-benefits across social, environmental, and other dimensions.**

💡 Sustainability claims are fortunately under a lot of scrutiny now. As a buyer at Breitling, we have always done due diligence and checked the quality and durability criteria of carbon removal solutions we invested into. 💡

Aurelia Figueroa

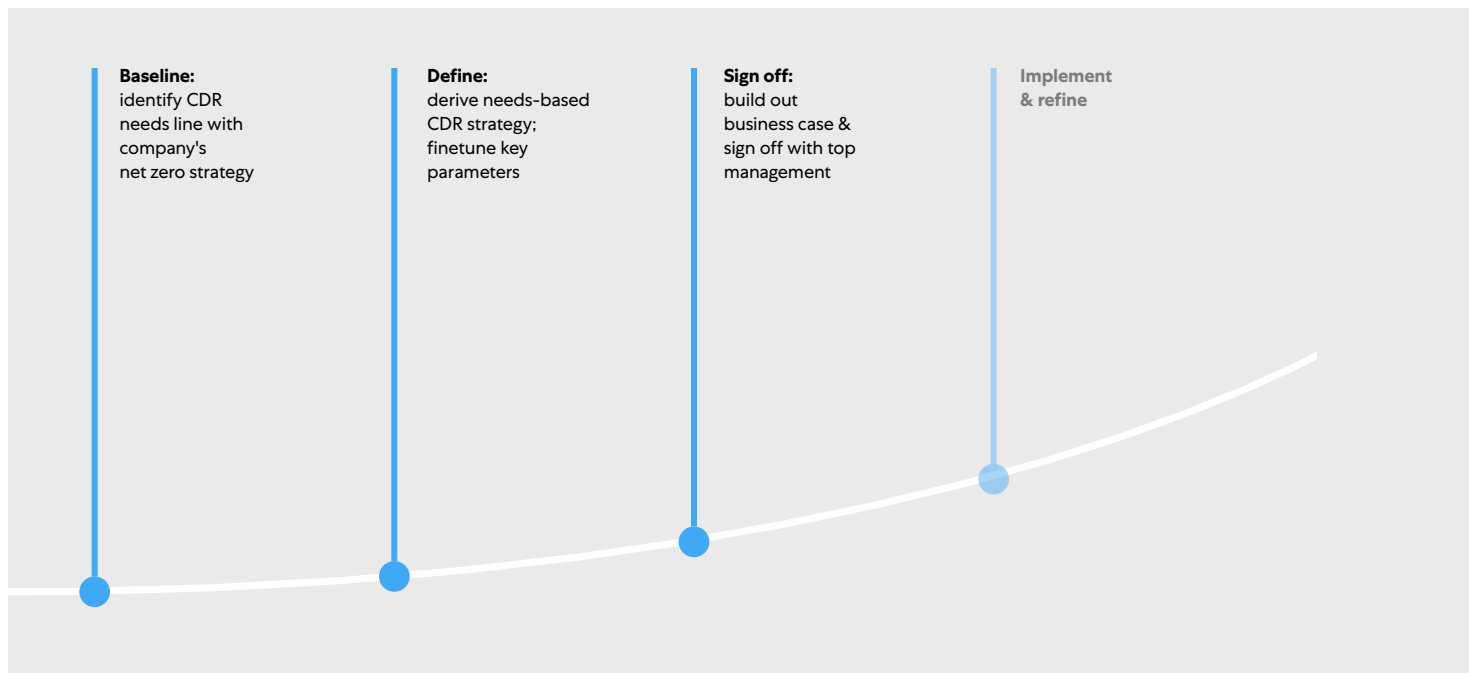
Global Director of Sustainability, Breitling



Internal set-up for success

The business case needs to be tailored to each company's situation

- **Develop a business case and an investor storyline tailored to the company's specific context.**
- **Create a clear financial plan, securing a budget through methods such as an internal carbon fee or a dedicated percentage of profits/revenues.**



Engage your internal stakeholders/decision makers from the start

Enterprises should:

- **Educate the executive team early in the process to build understanding and support.**
- **Foster internal advocates who can champion the strategy across different departments.**
- **Engage all relevant departments early on to secure broad-based buy-in and support for the strategy.**

By starting small, integrating CDR into the broader strategy, and setting up internal structures for success, companies can make a significant, positive impact on the climate while also positioning themselves advantageously for the future.

**To learn how we can
support us with your
climate goals**

contact us —→

