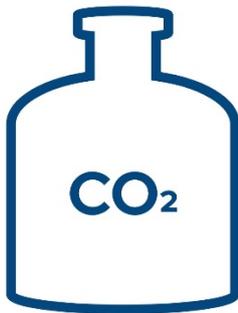


Carbon dioxide removal policy in the making: Assessing developments in Norway, EU and Sweden

Publisert: 15/03/21

By: Felix Schenuit, Rebecca Colvin, Mathias Fridahl, Barry McMullin, Andy Reisinger, Daniel Sanchez, Stephen M Smith, Asbjørn Torvanger, Anita Wreford & Oliver Geden¹



Net zero emission targets have emerged as a new organizing principle of climate policy since the adoption of the Paris Agreement and IPCC's Special Report on 1.5°C Global Warming. In this context, carbon dioxide removal (CDR) is rising on the political agenda of governments, policymakers and stakeholders – CDR policies are already in place or currently emerging.

The study² systematically assesses current developments in CDR policy-making by analysing 9 OECD empirical case studies: the European Union, Ireland, Germany, Sweden, Norway, the United Kingdom, Australia, New Zealand, and the United States.

Countries' approach towards CDR differ across 5 key dimensions:

- Accounting of CDR in mitigation targets
- View by actors of incumbent regime
- Methods addressed (ecosystem- / geochemical-based)
- Relation of CDR policy instruments to broader climate policy-mix
- Government support for CDR niches.

¹In: *Frontiers in Climate*, doi: 10.3389/fclim.2021.638805

²[Carbon Dioxide Removal Policy in the Making: Assessing Developments in 9 OECD Cases](#)

Varieties of CDR policy-making: The study identifies three different policy approaches:

1. Incremental modification
2. Early integration & fungibility
3. Proactive CDR entrepreneurship

Future comparative work is needed to assess developments in different sets of countries as well as ongoing dynamics in the countries examined in this study.

The case of Norway, EU and Sweden:

 <p>Norway</p>	<ul style="list-style-type: none"> • No specific net zero GHG target yet, but climate policy highly interwoven with EU climate policy; reluctant to account LULUCF towards mitigation targets. • CDR-related policies are CCS initiatives (e.g. ‘Northern Lights’ or ‘Langskip’) which increasingly highlight their relevance for potential CDR chains; receive increasing attention and are government funded. • The international dimension will be relevant in NOR’s CDR policies. So far, companies from Norway, the UK, the US, Ireland, Sweden, Belgium, France, and Germany, have expressed an interest in CDR/CCS cooperation. • Industry & agriculture see themselves as stakeholders in CDR, but expect significant public facilitation in terms of public funding and an improved policy framework. <p>Policy approach: incremental modification & proactive CDR policy entrepreneurship</p>
	<ul style="list-style-type: none"> • Net zero GHG target (2050) and revised 2030 legislation due in 2021-2022 already shifted attention towards CDR; in the existing Climate and Energy Framework 2030 adopted in 2018, no explicit CDR policy.

 <p>European Union</p>	<ul style="list-style-type: none"> • New 2030 target already changed to a “net” logic (COM/EUCO), and a certification and rewarding scheme for CO2 removals announced for 2023. • European Commission and some Member States act as CDR policy entrepreneurs, but socio-political prioritization of CDR and different methods varies across Member States. • R&D funding for geochemical-based CDR, e.g. through EU ETS Innovation Fund. <p>Policy approach: between proactive CDR policy entrepreneur & incremental modification</p>
 <p>Sweden</p>	<ul style="list-style-type: none"> • Net zero GHG target (2045) adopted in 2017; policymakers agreed on separate targets for emission reductions (min. 85%) and so-called supplementary measures (max. 15%), i.e. CDR (and international offsetting to a limited extend). • Much attention and funding for BECCS – long debate and high potential in Sweden; LULUCF sinks are not foreseen as the main CDR method, reported but unaccounted toward the climate targets (would enable net zero soon after the mid-2020s). • SWE Government tasked the Swedish Energy Agency to design a support scheme for BECCS to be implemented in 2022 (as reverse auction or flat subsidy). • Strong governmental support for research, development, and deployment, BECCS is developing quite fast. <p>Policy approach: aspects of all three types</p>