Green Horizon

Supported by:

Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety

on the basis of a decision by the German Bundestag

European Climate Initiative EUKI

National assessment of carbon management potential in Latvia's just transition regions

09/03/2026

This paper was written as part of the GreenHorizon CEE Project: Industrial Carbon Management for a Sustainable Future in CEE. The project is funded by the European Climate Initiative (EUKI) of the German Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN).

EPG

CSD CENTER FOR THE STUDY OF DEMOCRACY

BELLONA EUROPA

WiseEuropa

Expert Partner

Fraunhofer

Publication Title

National assessments of carbon management potential in Latvia's just transition regions

Please cite as

Bellona Europa (2026). National Assessments of Carbon Management Potential in Latvia's just transition regions. March 2026

A study by

Bellona Europa

Baltics Manager Janis Volberts

janis@bellona.org

Authors

Janis Volberts

Disclaimer

Cover image

bombermoon on Shutterstock

Contents

List of abbreviations

CM	Carbon Management
CCS	Carbon Capture and Storage
CCU	Carbon Capture and Usage
CEE	Central and Eastern Europe
NGO	Non-governmental Organisation
CO_2	Carbon Dioxide
EU ETS	The EU Emissions Trading System
CAPEX	Capital Expenditure
OPEX	Operating Expenditure
JT	Just Transition

1. Summary Overview

The emphasis on a just transition and the socially equitable deployment of CM **a**ligns with the broader EU cohesion and climate objectives of supporting regions and citizens affected by the transition, while ensuring that the benefits of clean energy are widely shared. A just transition refers to the shift towards a climate-neutral economy while safeguarding the long-term economic stability, employment, and social well-being of workers and communities historically dependent on carbon-intensive industries. Its objective is to ensure that decarbonisation efforts are accompanied by economic resilience, social protection, and the creation of new opportunities for regional development. Structural transformation should therefore avoid exacerbating existing vulnerabilities and instead strengthen long-term regional resilience and competitiveness.

In this context, CM can provide a viable pathway for sustaining industrial activity in regions such as Brocēni in Saldus Municipality, where Latvia's largest and only cement producer remains a cornerstone of the local economy. By enabling significant emissions reductions while maintaining industrial competitiveness and preserving employment, CM directly supports the core objectives of a just transition.

However, this potential is not yet sufficiently reflected in the National Energy and Climate Plan (NECP) or in other national and regional strategic planning documents. This gap highlights the need for clearer allocation of roles, responsibilities, and governance mechanisms to ensure the effective integration of CM into industrial decarbonisation strategies.

To address this need, the present document provides the analytical basis for assessing both the implementation progress and the socio-economic impacts of CM projects in Just Transition regions and other vulnerable areas.

2. Policy Context

Latvia's NECP[i] recognise a role for CCS in contributing to reducing greenhouse gas emissions (GHG) emissions in large industrial production as well as within its electricity and heat generation sector. A decarbonisation obligation applies to heat and electricity generation installations with a total capacity of more than 100 MW and largest industrial production operators which, due to the nature of their production, cannot reduce industrial process.

While important legislative steps have been taken in 2025 to align with the Directive 2009/31 (EU CO_2 Storage Directive), Latvia still lacks a designated lead institution for CCS and clear inter-ministerial coordination. Key responsibilities at regional and local levels remain undefined, making integrated planning difficult.

A major milestone was reached when Latvian Parliament amended the Law on Subterranean Depth[ii], which entered into force from 1st July 2025. These amendments, for the first time, define key elements of geological CO_2 storage in Latvian law—including provisions for site exploration, licensing, operation, closure, and long-term stewardship. They also mandate the Cabinet of Ministers to develop detailed regulations on operator responsibilities, third-party access to storage sites, and dispute resolution procedures, although by the time this report is finalized, there are no updates on the progress of this.

Originally, Article 8.2 of the Law on Pollution [iii]prohibited CO_2 storage in Latvia's territory, exclusive economic zone (EEZ), and continental shelf. Draft amendments lifting this ban were submitted to the responsible parliamentary committee on and the revised law was adopted in October 2025 providing a clear legal basis for CO_2 storage in full compliance with the EU CO_2 storage Directive.

2.1. Government Bottlenecks

The Latvian government is currently taking steps to develop a regulatory framework for CCS deployment, signalling openness to support industrial decarbonisation through CM. Although the key laws have been amended lifting ban for CO_2 storage in Latvia, the regulatory process is still ongoing to develop and adopt Cabinet regulations for CO_2 transportation and storage in line with the EU CO_2 Storage Directive.

Ministries and agencies in Latvia face capacity constraints, with limited staff and technical expertise to manage permitting, oversight, and long-term monitoring of CCS projects. Latvia lacks strong geological expertise, academic and technical initiatives remain fragmented. More recent and nuanced geological research expertise in CM development comes from Estonia and Lithuania. There is no national strategy to develop the skills base required for sub-surface resource management, including large-scale CCS deployment.

According to the Latvian NECP, no national government funding mechanisms or economic incentives are specifically allocated to CCS deployment in Latvia. The Innovation Fund is mentioned as a potential funding source, along with other public or private funding, though no further details are provided. The Investment and Development Agency of Latvia offer financial support for preparing applications to European Commission programmes, including the Innovation Fund.

2.2. Enabling Factors

Latvia's geological formations offer a number of promising porous underground structures suitable for CO_2 storage that are located close to major industrial emitter – cement producer Schwenk Latvia. Nevertheless, further exploration and CO2 storage site assessment are required to advance licensing processes and enable infrastructure planning.

Based on current public facing activities, general public perception sentiment toward CM appears cautiously positive. No significant opposition - such as protests or strong public resistance - has been observed so far.

In November 2024, cement producer Schwenk Latvia announced a 500-million-euro investment to decarbonise their operations through the deployment of CO_2 capture by 2030[iv]. This marks the first instance of an industrial company in Latvia applying CCS technology. During the announcement, the Minister for Climate and Energy Kaspars Melnis revealed that the ministry is preparing to initiate exploration of CO_2 storage potential in Latvia and is considering regulatory changes to lift the current prohibition on CO_2 storage in the territory of Latvia. In August 2025 Schwenk Latvia has launched the implementation of a CO_2 capture pilot project at its cement plant. This marks a significant step toward establishing a fully operational value chain by 2030, with the ambition to capture 800,000 tons of CO_2 annually at this site alone.

The Latvian government has supported the PCI application of CCS Baltic Consortium in which Schwenk Latvia participates, aiming to develop a full CO_2 sequestration chain. In this case, the captured CO2 is planned to be shipped for permanent storage elsewhere instead of storage locally.

3. Potential for Development

3.1. Carbon Emission Sources - Sectoral Analysis

In Latvia, the two main carbon-intensive industrial sectors are energy production and cement manufacturing. The largest CO_2 emitter in the energy sector is the TEC-2 combined heat and power plant, operated by the state-owned company Latvenergo, which emitted 546.3 kt of CO_2-equivalent in 2023. In the cement sector, all emissions originate from a single private company, Schwenk Latvija, which released 744.1 kt of CO_2-equivalent in 2023.

In August 2025 Schwenk Latvia has launched the implementation of a CO_2 capture pilot project at its cement plant. This marks a significant step toward establishing a fully operational value chain by 2030, with the ambition to capture 800,000 tons of CO_2 annually.

Accordingly, carbon capture potential for Schwenk Latvija when implementing carbon capture project at their cement plant can reduce emissions by 720,000 $MtCO_2e$ annually, assuming that 90% of CO2 emission will be captured.

The potential emission reductions from CM technologies were calculated using the formula:

$$Emission\ Reductions_{CM} = E_{baseline} \times P_{CM} \times E_{efficiency}$$

where:

- $E_{baseline}$ represents current annual emissions of the facility (MtCO2/year);
- P_{CM} reflects the fraction of emissions that can be technically captured;
- $E_{efficiency}$ accounts for constraints affecting implementation.

In the current context, from the economic perspective, there is no evident business case for CCS in Latvia. The EU ETS price alone, representing the cost of emitting a tonne of CO_2, is lower than the cost of CCS deployment (cost per tonne of CO_2 captured, transported and stored) for Schwenk Latvia and other potential industrial players in Latvia, and therefore in the short-term EU ETS is not a sufficient economic driver for CCS yet.

4. CM Deployment in Transition Regions: Economic & Social Impacts

Appropriate public intervention and support are essential for a successful for thegreen transition, that would otherwise generate regressive socioeconomic impacts. Certain regions that rely heavily on harder-to-abate industries (such as cement, steel, and chemicals) face particular risks. It is therefore essential to highlight these challenges and advocate for targeted funding, enabling regulatory frameworks, reskilling and upskilling opportunities, and other measures that ensure social equity during the transition to a net-zero economy.

The Schwenk Latvia cement plant in Brocēni is already among the most modern and environmentally advanced cement facilities in Europe[1]. Over the past 14 years, CO_2 emissions from cement production in Latvia have been reduced by 37%, and investments aimed at further reducing environmental impacts and improving efficiency have reached €71 million in the last five years alone.

Considering, that Schwnk Latvia is a major regional employer, decarbonisation investments (e.g. carbon capture) are critical to maintain current industrial activity, avoid carbon leakage risks (production moving abroad), preserving hundreds of direct and indirect jobs.

The company provides significant socio-economic benefits to the surrounding region. Schwenk Latvia is one of the largest industrial employers in the region, with more than 350 direct employees and more than 500 subcontractor jobs[v]. Approximately 70% of production is exported to Estonia, Sweden, and Finland. In Nordic markets, demand for low-carbon cement is already well established, particularly in Sweden and Norway, where public procurement criteria and climate requirements in construction projects increasingly favour low-emission materials. This demonstrates that market dynamics are already actively driving industrial decarbonisation[vi].

[1] Investment and Development Agency of Latvia, 2025 https://liaa.business.gov.lv/en/news/schwenk-latvija-prepares-large-scale-investment-cycle-decarbonize-cement-production-broceni

In this context, CM can play a key role in modernising energy-intensive industries. By enabling substantial emissions reductions, CM can lower compliance costs under the EU ETS, preserve industrial competitiveness, and industrial decarbonisation targets. The deployment of CM infrastructure would also create new employment opportunities across engineering, drilling, geological monitoring, logistics, and related supply chains. These economic benefits can contribute to broader social stabilisation.

With well-designed retraining programmes financed through instruments such as the Just Transition Fund, workers could transition into emerging CM-related activities, thereby mitigating potential labour market disruptions while supporting the development of a new low-carbon industrial ecosystem.

5. Public Perception and Stakeholder Engagement

Public engagement is a crucial component of a just transition, particularly in regions where harder-to-abate industries operate. As decarbonisation policies reshape industrial activity, early and meaningful engagement with workers, local communities, and regional stakeholders helps ensure that transition pathways reflect local needs and concerns. Transparent dialogue can build trust, improve understanding of new technologies and infrastructure, and support the development of solutions that protect jobs, create new economic opportunities, and maintain regional competitiveness. By addressing public concerns and raising awareness, we can facilitate the responsible deployment of CM technologies while ensuring that social and environmental justice remain central.

The Public Perception Study[vii] conducted as part of this project further highlights that understanding the views of citizens and stakeholders is a key prerequisite for advancing CM deployment in just transition regions. The findings indicate that awareness of CM technologies currently varies significantly across stakeholder groups. However, levels of curiosity and openness toward the concept are relatively high, providing a favourable basis for early engagement and dialogue.

Survey responses and focus group discussions—particularly in Saldus Municipality—reveal a pattern of cautious optimism. Citizens tend to view CM as a potential opportunity, provided that transparent, accessible, and timely information is made available. This underscores the importance of proactive communication and inclusive stakeholder engagement throughout the planning and deployment process.

Industry stakeholders demonstrate a strong understanding of CM's potential role in preserving industrial competitiveness. At the same time, they emphasise persistent challenges related to regulatory clarity, infrastructure development, and financing mechanisms. Local municipalities similarly recognise the strategic potential of CM for regional development and industrial decarbonisation.

Media coverage of CM in just transition regions remains limited and largely neutral. While this suggests a certain degree of public visibility, it also points to a broader information gap

that will need to be addressed through more systematic communication and outreach efforts.

6. Deployment Pathway & Timeline

Given the economic vulnerability of Just Transition regions, CM could provide a viable pathway for decarbonisation while supporting the transformation of local industrial bases. To ensure effective and socially equitable implementation, the deployment pathway should be guided by the following principles:

- **Governance and Strategic Alignment**

Integrating clearly defined roles for local and regional authorities into the forthcoming national CM strategy will be essential to ensure coherence with Just Transition objectives. Strong coordination between national, regional, and local governance levels can help align industrial decarbonisation efforts with regional development priorities.

- **Planning, Financing, and Phased Rollout**

CM deployment should be supported by coordinated planning between central and local administrations, industry stakeholders, and relevant institutions. Particular attention should be given to the development of regional CM clusters, allowing for phased infrastructure rollout and more efficient use of financial resources.

- **Workforce Transition and Local Capacity**

Targeted reskilling and technical training programmes delivered through regional universities and vocational institutions can facilitate labour market transitions. At the same time, sustained capacity-building for local authorities—through cooperation with NGOs, research centres, and academic institutions—will be necessary to support effective governance and project implementation.

- **Community Engagement and Equitable Benefits**

Early and continuous community engagement is critical for building public trust and addressing concerns transparently. Clear and consistent communication should explain the purpose of CM, the safeguards in place, and the potential local economic and environmental benefits.

7. Conclusions

Overall, the assessment indicates that CM should be integrated into decarbonisation strategies for just transition regions, with a strong emphasis on ensuring that its deployment

supports a socially equitable transition. CM has the potential to contribute significantly to emissions reductions while safeguarding regional economic stability and employment. However, its full climate, social, and economic potential remains largely untapped.

This situation is partly driven by limited awareness and technical understanding of CM at the local level, combined with weak coordination between local and central authorities. Furthermore, as highlighted in the Capacity Gaps Assessment[viii], insufficient political commitment at both national and local levels continues to constrain the integration of CM into regional transition planning.

These findings underscore the need for clearer strategic direction and more coordinated action across governance levels to ensure that CM can effectively contribute to the objectives of a just transition.

National assessment of carbon management potential in CEE regions in transition

Written as part of the GreenHorizon CEE Project:
Industrial Carbon Management for a Sustainable Future in CEE

Supported by:

Federal Ministry
for the Environment, Climate Action,
Nature Conservation and Nuclear Safety

European
Climate Initiative
EUKI

on the basis of a decision
by the German Bundestag

Implemented by:

EPG

CSD
CENTER FOR
THE STUDY OF
DEMOCRACY

BELLONA
EUROPA

WiseEuropa

Expert Partner
Fraunhofer

8. Bibliography

[i] European Commission, 2026 https://commission.europa.eu/publications/latvia-final-updated-necp-2021-2030-submitted-2024_en

[ii] Likumi.lv 2026 https://likumi.lv/ta/id/40249-par-zemes-dzilem

[iii] Likumi.lv 2026 https://likumi.lv/ta/id/6075-par-piesarnojumu

[iv] Schwenk.lv, 2026 https://schwenk.lv/en/pressrelease/schwenk-northern-europe-announces-commitment-to-decarbonize-cement-production-in-latvia/

[v] Schwenk Latvia, 2026 https://schwenk.lv/en/about-schwenk/schwenk-latvija/?utm_source=chatgpt.com

[vi] Svanen.se, 2026 https://www.svanen.se/en/news/2025/april/less-climate-emissions-from-cement-in-nordic-swan-ecolabelled-building-products/?utm_source=chatgpt.com

[vii] GreenHorizon CEE, 2026 https://greenhorizon-cee.eu/national-study-on-public-perception-on-carbon-management-in-latvia/

[viii] GreenHorizon CEE, 2026 https://greenhorizon-cee.eu/national-study-on-capacity-gaps-in-carbon-management-emphasising-carbon-capture-and-storage-deployment-in-latvia/