



WELCOME TO THE BALTIC CARBON FORUM BCF 2026

October 8-9

Venue: Radisson Collection Hotel, Warsaw
Grzybowska 24, 00-132, Warsaw, Poland



Organized by:



BALTIC CARBON FORUM

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The Baltic Carbon Forum (BCF) 2026 is an annual international conference dedicated to advancing Carbon Capture, Utilisation and Storage (CCUS) and supporting the transition towards a climate-neutral future. Held in Warsaw, Poland, the Forum brings together policymakers, researchers, industry leaders, financial institutions, technology providers, and civil society representatives to exchange knowledge, share practical experiences, and foster new opportunities for collaboration.

BCF 2026 provides a platform to explore the latest developments in CCUS technologies, policy and regulation, investment, infrastructure, and innovation. Through dialogue among key stakeholders, the Forum aims to support the deployment of sustainable carbon-management solutions across the Baltic Sea Region (BSR) while strengthening regional and international cooperation.

As part of its long-term vision, BASRECCS, through the Baltic Carbon Forum, promotes regional partnerships, knowledge exchange, and capacity building. The Forum also seeks to inspire the next generation of professionals and researchers to contribute to the energy transition and climate action. BCF recognises that meaningful progress in carbon management requires collaboration, innovation, knowledge sharing, and a common commitment to reducing emissions and building a sustainable, climate-neutral future.

The speakers are invited to :

- Provide information on the current situation regarding the development of CCUS and related technologies in the BSR;
- Present and discuss the regionalization of ongoing and finalized projects;
- Present the ongoing and potential future cooperation and networking on CC(U)S and related technologies.

BALTIC CARBON FORUM 2026

Day 1: Policy, Industrial Decarbonization and CCS Deployment

08:00–09:00

Registration and Welcome Coffee

09:00–09:30

Opening Ceremony

Welcome by Prof. Mayur Pal • Opening Address • **Conference Photograph**

09:30–10:00

Opening Keynote: Prof. Krzysztof Galos Ministry of Climate and Environment, Poland
Critical Minerals, Energy Security and Carbon Management in Poland

10:00–10:30

Industry Keynote: Radosław Gnutek Holcim Polska, Poland
An Industry Poland Cannot Afford to Lose

10:30–11:00

Coffee Break

11:00–12:00

Session 1 • Industrial Decarbonization in Practice

Session Chair: Alla Shogenova

- **Daiva Tusiene** Akmenės Cementas, Lithuania
- **Agnieszka Baran** ORLEN S.A., Poland
- **Ole Johan Østvedt** Nemo Maritime, Norway

12:00–13:00

Session 2A • Legal and Regulatory Challenges

Session Chair: Michal Wendolowski

- **Henrik von Zweigbergk** Lawyer, Geological Survey Sweden
- **Maren Sundve** Associate lawyer, IOM Law
- **Viktor Weber** University of Copenhagen, Denmark
- **Paweł Gładysz** The CCUS Poland Association

13:00–14:00

Lunch

14:00–14:40

Session 2B • Public Perception Challenges

Session Chair: Monika Konieczńska

- **Janis Volberts & Krzysztof Fal** Bellona Europa, Latvia & WiseEuropa, Poland
- **Friso Veenstra** TNO-Geological Survey of the Netherlands

14:40–16:00

Session 3 • Industrial Deployment of CCS in Nordics and Baltics

Session Chair: Bruno Gerrits

- **Carlo Maccherini** Global CCS Institute, Belgium
- **Sofie Lindström** Geological Survey of Sweden (SGU)
- **Renata Cicha-Szot** NiG-PIB, Poland
- **Carl Emil Meier** Bellona Europa, Belgium

16:00–16:30

Coffee Break

OCTOBER 8-9 • WARSAW, POLAND

BALTIC CARBON FORUM 2026

16:30–19:00	Session 4 • Engineering, Digital Innovation and CCS Technologies <i>Session Chair: Kartik Sharma</i> • Varun Pathak CMG, UK • Di Federico Gianluca Baker Hughes, Germany • Eugene Holubnyak University of Wyoming, USA Poster Session
19:00–21:00	Conference Networking Reception

Day 2: Geological Storage, Hydrogen and Future Energy Systems

09:00–09:30	Morning Keynote: Alla Shogenova Tallinn University of Technology, Estonia Synergy of CCUS with Hydrogen Production and Storage Technologies
09:30–10:10	Session 5 • Hydrogen and Future Carbon Management <i>Session Chair: Parsa Alimohammadiardakani</i> • Aliaksei Patonia Oxford Institute for Energy Studies, UK • Sakura Nishioka Deputy Chief Regional Officer for Europe, Japan Organization for Metals and Energy Security (JOGMEC)
10:10–10:40	Coffee Break
10:40–11:40	Session 6 • Geological Storage Characterization and Site Development <i>Session Chair: Monika Koniecznyńska</i> • Adam Wójcicki Polish Geological Institute, Poland • Mirosław Wojnicki Oil and Gas Institute, Poland • Gabriela von Goerne BGR, Germany
11:40–12:40	Closing Panel • Building the Baltic Carbon Management Ecosystem <i>Moderator: Bruno Gerrits</i> Panelists: • Carlo Maccherini • Gabriela von Goerne • Parsa Alimohammadiardakani • Kristis Mertens • Kartik Sharma
12:40–13:00	Closing Ceremony
13:00	Lunch and Departure

OCTOBER 8-9 · WARSAW, POLAND

Keynote Speaker



Krzysztof Galos

Ministry of Climate and Environment, Poland

Bio: Prof. Krzysztof Galos is a graduate of the Faculty of Geology, Geophysics and Environmental Protection at the Stanisław Staszic AGH University of Science and Technology in Kraków. He holds a PhD in earth sciences in geology and has been a science and natural sciences professor since 2020. Before taking up his post, he worked as a director of the Mineral and Energy Economy Institute at the Polish Academy of Sciences. He is Vice-Chairman of the Committee for Sustainable Mineral Resources Management of the Polish Academy of Sciences. He has over 30 years of experience in economic, deposit, and mining geology, mineral resources management, mining economics, raw materials and energy policy. He is the author and co-author of more than 270 scientific publications and more than 100 expert reports for the Ministry of the Environment, other ministries and economic entities in geology and mining. He speaks English and Russian.

Industry Keynote



Radosław Gnutek

Holcim Polska, Poland

Bio: Radosław Gnutek is a seasoned energy leader with 25 years of experience in CO₂ capture, hydrogen, and renewable energy technologies. Since March 2025, he has served as CO₂ Capture and Storage Project Director at Holcim Polska S.A., where he leads a key project in the area of industrial decarbonization.

Title: An Industry Poland Cannot Afford to Lose

Abstract: As Europe seeks to balance climate targets with economic resilience, maintaining the competitiveness of industries with high process emissions is a strategic priority. The cement industry underpins national infrastructure autonomy, supply chain security, and industrial independence, yet its unavoidable process emissions cannot be eliminated through conventional decarbonization. Carbon Capture and Storage (CCS) is therefore the most viable pathway currently available to guarantee the sector's long-term survival. Preserving this vital industrial base requires more than just capture technology. It demands a scalable CCS ecosystem driven by supportive regulations, transport infrastructure, and robust investment frameworks.

Keynote Speaker



Alla Shogenova

Tallinn University of Technology, Estonia

Bio: Dr. Alla Shogenova is a Senior Researcher at the Department of Geology, Tallinn University of Technology (TalTech), and Director for Research at SHOGenergy NGO. She has extensive experience in CO₂ geological storage and CCUS, having led and coordinated numerous EU and Horizon Europe projects, including GeoCapacity, CGS Europe, ENOS, CLEANKER, and CCUS ZEN. She supervises Master's and PhD students and has served as a visiting professor at the University of Warsaw and Sapienza University of Rome. Dr. Shogenova is a former President of the ENeRG network and currently serves on the BASRECCS Board, representing TalTech in ENeRG and CO₂GeoNet, and participates in several European research and policy initiatives on CCUS and geological storage.

Title: Synergy of CCUS with Hydrogen Production and Storage Technologies

Abstract: Hydrogen can play a significant role in achieving carbon neutrality, potentially contributing around 20% of the CO₂ reductions required by 2050. However, H₂ production can generate 1–12 kg CO₂ per kg H₂ depending on the production pathway, highlighting the need for integration with CCUS. Captured CO₂ can also serve as cushion gas for Underground Hydrogen Storage (UHS) and, together with H₂, enable the production of synthetic fuels and chemicals. This study proposes CCUS–H₂ synergy scenarios for prospective onshore and offshore CO₂ storage structures in Latvia. Key challenges include the development of appropriate regulatory frameworks for CO₂ and H₂ geological storage in the Baltic Sea region.

SPEAKERS



Daiva Tušienė

Akmenės Cementas, Lithuania

Bio: Sustainability and Project Coordinator, AB Akmenės Cementas
Daiva Tušienė is an experienced project management professional with more than 20 years of expertise in investment planning, strategic development, and the implementation of large-scale EU-funded projects. At AB Akmenės Cementas, she coordinates sustainability and development initiatives, supporting the company's transition towards low-carbon and innovative industrial solutions. Her professional background includes project coordination, preparation of feasibility studies and technical documentation, public procurement management, and stakeholder collaboration. Daiva holds a Master's degree in Management and Business Administration and a Bachelor's degree in Economics.

Title: Building a Sustainable Tomorrow: Decarbonization at Akmenės Cementas

Abstract: Akmenės Cementas, the only cement producer in Lithuania and one of the largest in the Baltic region, is undergoing a comprehensive transformation to significantly reduce its carbon footprint. As part of the SCHWENK Group since 2021, the company has committed to ambitious decarbonization targets, including reducing CO₂ emissions from clinker production and achieving carbon neutrality by 2037. The presentation outlines the company's structured roadmap, covering short-, medium- and long-term actions across operations, energy use, and process innovation.

SPEAKERS



Ole Johan Østvedt

Nemo Maritime, Norway

Bio: Ole is Managing Director of Nemo Maritime. He is a geologist of background and before joining Nemo in 2021 he worked for 35 years in the oil and gas industry, holding both technical and managerial positions. The first 20 years were spent within exploration, resource management, and field development activities, working for Exxon, Equinor (Statoil) and the NPD. He then moved into business development and portfolio management working for start-ups and new-entry companies before joining Edison Norge, where he became Managing Director.

Title: Ships with direct offshore injection - the most cost-effective and flexible solution for CO₂ transportation and storage.

Abstract: This presentation at the Baltic CCS Forum 2026 will explore cost-effective solutions for CO₂ transportation and injection using ship-based technology. The talk will introduce the Nemo Maritime concept, focusing on how specialized vessels can transport, condition, and directly inject CO₂ into offshore storage sites. Key topics include ship design, technical systems, reservoir modelling, cost optimization, and scalable business models for CCS development. The presentation will highlight how flexible ship solutions can reduce infrastructure costs, minimize risks, and support the creation of a dynamic and commercially viable CCS value chain across expanding markets.

SPEAKERS



Renata Cicha-Szot

INiG-PIB, Poland

Bio: Renata Cicha-Szot, PhD, is Head of the Department of Petroleum Engineering at the Oil and Gas Institute–National Research Institute (INiG–PIB). Her research focuses on applying subsurface engineering, reservoir characterization, and rock–fluid interaction expertise to energy-transition challenges, including CCS, geothermal energy, underground hydrogen storage, and mining decarbonization, with particular emphasis on CO₂ injection and subsurface energy applications.

Title: Turning Mining Challenges into Low-Carbon Opportunities: Lessons from the REM and METH2GEN Project

Abstract: Coal mine methane (CMM) is both a major climate challenge and a safety risk in underground mining. This study presents an integrated approach combining methane drainage and utilisation with low-emission hydrogen production. Instead of venting captured methane, it can be used for heat and power generation or as a feedstock for hydrogen production, including pathways integrated with CCUS. The approach simultaneously improves mine safety, reduces methane emissions, supports local low-carbon energy systems, and contributes to a just transition in coal-dependent regions by leveraging existing infrastructure and expertise. The proposed approach links mine safety improvement, methane-emission reduction and the development of local low-carbon energy systems. It also supports a just transition in mining regions by using existing infrastructure, technical competences and locally available energy resources.

SPEAKERS



Henrik von Zweigbergk

Lawyer, Geological Survey Sweden

Bio: Henrik Von Zweigbergk works as an environmental lawyer at the Geological Survey of Sweden (SGU) since 2021. Before that, he has worked for 14 years as an environmental lawyer at the County Administrative board in Jönköping, Sweden, mainly with issues regarding contaminated sites.

Title: Legal obstacles for carbon storage in the Baltic Sea with focus on the Helsinki Convention

Abstract: The Geological Survey of Sweden (SGU) is investigating ways to simplify regulations for carbon storage, with interim reports in 2025 and 2026 and a final report planned for 2027. Its initial analysis identifies legal barriers—including the Helsinki Convention's dumping prohibition, the EU CCS Directive's restrictions on storage outside the EU, and Sweden's ban on onshore storage—but concludes that the main challenge is not any single regulation, but the combination of regulatory uncertainty, knowledge gaps and institutional challenges. A key ongoing issue is how CO₂ storage in the Baltic Sea can be reconciled with the Helsinki Convention, which generally prohibits the deliberate disposal of waste or other matter at sea or into the seabed.

SPEAKERS



Maren Sundve

Associate lawyer, IOM Law

Bio: Maren is an associate lawyer at IOM Law and holds a Master of Laws from the University of Oslo. Maren works on projects related to CCUS, negative emissions technologies, and the energy transition, with a special interest in EU and EEA law.

Title: Legal and regulatory frameworks for CCS - an overview

Abstract: Carbon Capture and Storage is increasingly recognized as a critical technology for reaching net-zero emissions targets, particularly for hard-to-abate industrial sectors. As the CCS industry matures, the legal and regulatory landscape governing it is evolving in parallel to accommodate technical and commercial developments and to align with increasingly ambitious climate commitments. At the EU level, several key frameworks have been revised or introduced in recent years to accelerate CCS deployment.

This presentation provides an overview of the most significant recent developments, including the revised EU Emissions Trading System (ETS) Directive and its treatment of carbon capture, transport, and storage activities, as well as the Net-Zero Industry Act and its provisions for CO₂ injection capacity. Beyond commenting on the regulatory changes, the presentation will discuss the interaction between projects and regulatory developments.

SPEAKERS



Viktor Weber

University of Copenhagen, Denmark

Bio: Viktor Weber is Assistant Professor at the Faculty of Law, University of Copenhagen. He completed his doctorate in the 'ECO₂ - Sub-seabed CO₂ Storage' consortium at the University of Southampton (UK). He has also been a Postdoctoral Fellow in the Norwegian CCS (NCCS) consortium between 2018 and 2021 at the University of Oslo. Apart from CCS, Viktor holds a specialization in Maritime Law.

Title: Current Legal and Regulatory Issues in Offshore Carbon Dioxide Storage

Abstract: This presentation first introduces the international maritime law framework as relevant to offshore carbon dioxide storage: the United Nations Convention on the Law of the Sea, the London anti-dumping regime, and the regional treaties for the protection of the marine environment – the OSPAR Convention and the Helsinki Convention in particular. In its second part, the presentation elaborates on the current law and state practice related to cross-border carbon dioxide transport for the purposes of storage.

SPEAKERS



Paweł Gładysz

The CCUS Poland Association

Bio: Dr. Paweł Gładysz, President of the Board and co-founder of the CCUS Poland Association, an organization supporting the development of CO₂ capture, utilization, and storage technologies in Poland and building dialogue between science, industry, and administration. He is an Assistant professor at the Faculty of Energy and Fuels at AGH University of Krakow, specializing in thermal engineering, LCA and TEA analyses, and energy policy. He managed the CCUS.pl project and the Polish-Norwegian CCS Network.

The CCUS Poland Association is a non-profit organization established in 2024, bringing together representatives of science, industry, and non-governmental organizations who work together to develop CO₂ capture, utilization, and storage technologies in Poland. The association supports the creation of legal and market frameworks, provides expertise, and builds public dialogue around the role of CCUS in energy transition and decarbonization of the economy.

Title: Overview of key legal and environmental considerations for CCS projects in the Baltic Sea

SPEAKERS



Janis Volberts

Bellona Europa, Latvia

Bio: At Bellona, Janis drives industrial decarbonisation by highlighting the critical role of ports in facilitating CO₂ capture, transport, and storage. Additionally, he focuses on accelerating the green transition in the Baltic region, working with major industrial emitters such as cement producers to reduce their carbon footprint.

Title: Public Perception of Carbon Management: The Case of Poland and Latvia

Abstract: This talk examines public perceptions of carbon management technologies across Poland, Romania, Latvia and Bulgaria, finding generally low awareness but significant potential for acceptance, particularly for CCU compared with underground CO₂ storage. Public support depends strongly on trust, transparency, safety, fairness, early community engagement and visible local economic benefits, while concerns focus on long-term storage risks, monitoring, liability and institutional credibility. Overall, the report concludes that public acceptance of carbon management can be strengthened through better information, inclusive decision-making and clear demonstration of social and economic benefits.

SPEAKERS



Krzysztof Fal

WiseEuropa, Poland

Bio: Krzysztof Fal, PhD in Law, is a lawyer and an expert in economic regulations, climate policy, and the functioning of energy markets. He specializes in analyzing legislative processes and designing regulatory solutions related to the energy transition, climate policy, and energy security. Director of Development at Wise-Europa, a leading Polish economic and policy research center focused on energy- and climate policies. He gained his experience in public administration, the analytical sector, and expert organizations. Between 2021 and 2023, he served as the Head of the Gas Division and the National Power System Division at the Ministry of Climate and Environment. In this capacity, he directed a team responsible for matters related to the natural gas and electricity markets, as well as drafting legislation concerning the operation and development of energy infrastructure. He is the author of analyses, expert commentaries, and recommendations on energy and climate policy. He also actively participates in public debates and regulatory consultations in Poland and at the European level. His research interests focus specifically on the relationship between climate policy, energy market regulation, and economic competitiveness throughout the energy transition process.

Title: Public Perception of Carbon Management: The Case of Poland and Latvia

Abstract: Joint presentation with Janis Volberts

SPEAKERS



Eugene Holubnyak
University of Wyoming, USA

Bio: Eugene is Director of the Hydrogen Energy Research Centre at the University of Wyoming and Co-Founder and Board Member of Avalon International Corporation, with over 15 years of experience in CCUS, including more than a decade leading the CCUS program at the Kansas Geological Survey and five years with the PCOR Partnership at EERC. As a Principal Investigator, he has secured over \$100 million in funding from the U.S. Department of Energy and other sponsors for research in CCUS, hydrogen and critical minerals, and has led major state and regional initiatives, including the Kansas CCUS Task Force, while providing training and seminars to the climate-tech and CCS industry.

Title: Lessons from the Field: A Case-Study Roadmap for CCS Investment, Monitoring, and Industry Sustainability

Abstract: Underground pore space is a finite and increasingly valuable resource, creating financial, legal, and regulatory risks as CCS and other subsurface projects expand. Drawing on U.S. case studies from North Dakota, Texas, Kansas, Oklahoma, and Louisiana—including legal disputes and regulatory responses to induced seismicity and wastewater injection—the presentation develops a risk-management roadmap focused on early site screening, advanced monitoring, and proactive risk management. These lessons can help developers and policymakers avoid costly disputes, protect investments and public safety, and support the long-term economic viability of the emerging Baltic CCS industry.

SPEAKERS



Friso Veenstra

TNO-Geological Survey of the Netherlands

Bio: Friso Veenstra is business lead for CO₂ storage at TNO-Geological Survey of the Netherlands. In this role he is focused on developing multi-stakeholder applied research projects, working with national, European, and worldwide partners. He has been at TNO for 13 years. Prior to that he worked as director of market development and publisher at the global publishing house Elsevier. Friso is a geologist by training.

Title: Public Perception and Societal Embeddedness of CCS

Abstract: Societal embeddedness considers the total of non-technical aspects that influence the societal uptake and success of development and deployment in a societal context, and how these interact with each other. Aspects to consider are (1) Impact on the environment, (2) Policy & regulatory framework, (3) Market & (financial) resources, and (4) Public and stakeholder involvement. The presentation will focus on the latter, with emphasis on factors that shape public perception in relation to CCS in general and how a specific project is organized.

SPEAKERS



Carlo Maccherini

Global CCS Institute, Belgium

Bio: Carlo Maccherini is Senior BD Lead Europe for Global CCS Institute. He has over 15 years of experience working in Business Development and Account Management roles for Financial Institutions, Private companies, European Institutions and Startups operating both in solar and energy storage.

Title: State of CCUS in Poland

Abstract: This presentation will provide an up-to-date overview of the current state of carbon capture and storage (CCS) in Poland, examining the country's policy landscape, funding mechanisms, geological storage opportunities, and public perception. It will explore the key drivers, challenges, and recent developments shaping CCS deployment, while placing Poland's progress within the broader European context. A comparative analysis with other European countries at similar or more advanced stages of CCS development will highlight lessons learned, best practices, and opportunities for accelerating the implementation of CCS in Poland.

SPEAKERS



Carl Emil Meier

Bellona Europa, Belgium

Bio: Carl Emil Meier is a Policy Advisor at Bellona, where he focuses on climate and energy policy across the Nordic region. His work covers Carbon Capture and Storage (CCS), CO₂ Removal (CDR), sustainable energy systems, carbon accounting, and industrial decarbonization. Prior to joining Bellona, Carl gained experience in European climate and energy policy through roles at the European Commission, the Permanent Representation of Denmark to the European Union, and the Danish Energy Agency. He holds both a Bachelor's and a Master's degree in Political Science from the University of Copenhagen, specializing in European energy policy.

Title: CCS: Public Funding Mechanisms in the Nordic EU Member States

Abstract: The presentation will summarize mechanisms for public funding of CCS throughout the Nordic EU member states, such as the tenders in Denmark and Sweden. The presentation builds on in-depth analysis done by Bellona Europa as part of a larger Horizon Europe project.

SPEAKERS



Varun Pathak

CMG, UK

Bio: Varun is a Senior Implementation Manager and CCS Champion at CMG, based in the UK. He has over 20 years of experience spanning petroleum engineering, reservoir simulation, and product and project management. He has worked globally on a range of energy projects across both oil & gas and the energy transition, with a particular focus on CCS.

At CMG, he supports operators in implementing modelling solutions for CCS projects and contributes to the development of software that addresses emerging industry challenges. Varun also serves on the SPE and EAGE CCUS technical sections. He holds an MBA from Quantic School of Business and Technology, an MSc in Petroleum Engineering from the University of Alberta, and a bachelor's degree in petroleum engineering from IIT (ISM) Dhanbad, India.

Title: Balancing Scale, Physics, and Integration: High-Efficiency CO₂ Reservoir Modeling for Reliable Plume Forecasting

Abstract: As carbon capture and storage (CCS) scales globally, reliable long-term forecasting of CO₂ plume and pressure footprints is critical for regulatory compliance, risk mitigation, and capital confidence. However, high-fidelity modeling often collides with massive computational runtimes, making probabilistic uncertainty and optimization workflows impractical. This talk explores a comprehensive framework to overcome these computational and physical bottlenecks through the following core pillars:

- Grid Sizing and Computational Optimization
- Striking the Right Balance in Physics
- Subsurface-Surface Integration

The presentation aims to provide engineers and operators with a roadmap to achieve high-accuracy, regulator-ready predictions while effectively managing geological and operational uncertainties.

SPEAKERS



Di Federico Gianluca

Baker Hughes, Germany

Bio: Gianluca brings over 20 years of international experience in the oil & gas and energy sectors, with the last 15 years dedicated to advancing CCUS technologies. Over the course of his career, he has worked across the full CCUS value chain—from CO₂ capture to compression, conditioning, and liquefaction—supporting integration into industrial applications including waste-to-energy, biomass power generation, and cement production.

He currently leads a multidisciplinary team, combining deep technical expertise with diverse perspectives to deliver innovative solutions, with a strong focus on accelerating the deployment of CO₂ management technologies that contribute to sustainability and long-term impact.

Title: Integrating CCUS Technologies Across the Value Chain: From Capture to Storage

Abstract: The presentation will cover CO₂ capture, transportation, and storage, providing a concise overview of technologies across the full CCUS value chain. It will place particular emphasis on HPC solutions for implementing CO₂ capture at industrial sites. At Baker Hughes, we are highly engaged in the CCUS sector and will share insights into the challenges of integrating these technologies across industrial emitters, as well as transportation and storage networks. We will also highlight how digital solutions can enhance the integration of the various CCUS components and support broader system optimization.

SPEAKERS



Sofie Lindström

Geological Survey of Sweden, Sweden

Bio: Sofie Lindström is senior state geologist at the Geological Survey of Sweden. She has been the project manager of the government assignment on Geological Storage of CO₂ in Sweden which ended in 2025, and is currently the project manager for the government assignment on the NZIA, and functional manager for CCS and Geo-energy.

Title: Geological storage of CO₂ in Sweden: possibilities and challenges from a geological perspective

Abstract: In a recent government commission, the Geological Survey of Sweden (SGU) has evaluated the potential for geological storage of CO₂ in two offshore sites in the Baltic Sea: 1) the southwestern Baltic Sea, offshore Scania and 2) the southeastern Baltic Sea, southeast of the island Gotland. The study combined new drilling campaigns (on land), borehole analyses, new deep seismics and reprocessed seismic legacy data to evaluate the potential for safe and long-term storage of captured CO₂ beneath the Baltic Sea seafloor. The main results were presented in a report to the Swedish government in March 2026. This talk will present the main findings of the report, discuss challenges and possibilities for geological storage of CO₂ in the Swedish part (EEZ) of the Baltic Sea, as well as outlining the need for further studies and next steps toward developing CCS capacity in Sweden.

SPEAKERS



Adam Wójcicki

Polish Geological Institute, Poland

Bio: Adam Wójcicki is a geologist and researcher at the Polish Geological Institute – National Research Institute (PGI-NRI), Poland. His research focuses on geological CO₂ storage, CCS, and the assessment of subsurface formations for safe and effective CO₂ storage. He has extensive experience in evaluating CO₂ storage potential in Poland and supporting the development of CCS strategies.

Title: The CO₂ storage potential in Poland and how it could be utilized

Abstract: Poland has 10–15 Gt of CO₂ storage potential, mainly in saline aquifers (90–93%) and depleted hydrocarbon fields. This capacity is more than sufficient to accommodate the country's approximately 150 Mt/year of CO₂ emissions from large stationary sources.

However, storage sites are not always close to emission sources, creating a need for long-distance CO₂ transport. Poland's existing gas pipeline and railway networks could support the development of this infrastructure.

The legal framework for onshore CO₂ storage is currently expanding, while offshore storage in the Baltic Sea faces environmental and legal challenges. Future projects must also consider protected areas, drinking-water resources, and geothermal use of saline aquifers.

SPEAKERS



Mirosław Wojnicki

Oil and Gas Institute, Poland

Bio: Mirosław Wojnicki, PhD Eng., is a Geologist and Petroleum Engineer, currently working as an Assistant Professor at the Petroleum Engineering Department of the Oil and Gas Institute - National Research Institute (INiG-PIB), Poland.

Title: COREu: The Baltic CCS Route – Connecting Polish Industry to Offshore CO₂ Storage

Abstract: The Polish scenario developed within the COREu project presents an integrated Baltic CCS route linking industrial CO₂ sources to a planned hub in Gdańsk and potential storage sites beneath the seabed within Poland's exclusive economic zone in the Baltic Sea. The concept combines emission-source selection, onshore transport corridors, offshore infrastructure and geological storage assessment. A potential early-deployment cluster includes emitters from the cement, refining and fertiliser sectors. Dense-phase pipelines are considered the preferred long-term transport option, while rail could provide an interim solution. The reference offshore concept comprises a fully subsea transport and injection system connected to the Gdańsk hub. Storage potential was assessed for the mature B3 oil field. Laboratory studies and reservoir simulations indicate generally stable reservoir and caprock behaviour and suggest that the field could store approximately 5–10.3 Mt of CO₂ over 15–30 years. The results support further consideration of B3 as a candidate for Poland's first pilot-scale offshore CO₂ storage project, potentially paving the way for wider development of the Middle Cambrian aquifer system and domestic CCS infrastructure.

SPEAKERS



Agnieszka Baran
ORLEN S.A., Poland

Bio: Agnieszka Baran is a seasoned energy sector professional with extensive experience in project management, financial analysis, and strategic development. She joined ORLEN Capital Group in 2016 and has since played a key role in delivering and advancing major strategic initiatives. Currently, she serves as Director of the CCS Development Office at ORLEN S.A., where she is implementing the CCS Program, covering all stages from CCS project initiation to investment closing decisions

Title: Baltic's Potential: Offshore CO₂ Sequestration as the Foundations for a Regional CO₂ Storage

Abstract: To date, CCS development in Europe has largely focused on the North Sea, supported by substantial investment, established regulatory frameworks, and significant storage capacity. However, achieving Europe's climate ambitions will require expanding CCS beyond a single region and developing additional regional hubs to provide cost-effective solutions for industries across the continent. The Baltic Sea region presents a compelling opportunity due to its strategic location, industrial base, emerging storage potential, and strong potential for cross-border cooperation. Initiatives such as the Baltic Aurelia offshore CO₂ storage project developed by the ORLEN Group can help foster regional partnerships, facilitate knowledge exchange, and identify practical solutions, supporting the Baltic Sea's emergence as a key hub for carbon management while strengthening industrial competitiveness and the transition to net zero.

SPEAKERS



Gabriela von Goerne

BGR, Germany

Bio: Gabriela von Goerne is head of the sub-department „subsurface use“ at the Federal Institute for Geosciences and Natural Resources (BGR), Germany. She holds a PhD in geology. Her main research topic covered fluid-rock interactions, first focus on the mineral tourmaline and ore-bearing fluids at CSIRO Australia, later focus on geological storage of CO₂ at the GFZ Potsdam, Germany. Gabriela also contributed as lead author to the IPCC Special Report on Carbon dioxide capture and storage.

Title: CCS developments in Germany

Abstract: While greenhouse-gas reduction, energy efficiency, and renewable-energy efforts contribute to Germany's 2045 climate targets, they are unlikely to be sufficient to achieve climate neutrality and the required negative emissions, making CCS an important complementary solution. Until recently, Germany's Carbon Storage Act (KSpG) effectively prevented new CO₂-storage projects, but the revised KSpTG, which came into force in November 2025, now provides a framework for CO₂ transport, including pipelines and cross-border transport, and permits offshore CO₂ storage in Germany's North and Baltic Sea EEZ. The key challenge for the coming years is to characterise suitable storage sites alongside the development of CO₂ capture and transport infrastructure to support Germany's climate targets.

SPEAKERS



Aliaksei (Alex) Patonia

Oxford Institute for Energy Studies, UK

Bio: Aliaksei (Alex) Patonia is a Research Fellow at the Oxford Institute for Energy Studies, focusing on commercial hydrogen development within the Hydrogen Research Programme. He explores challenges and opportunities in the hydrogen value chain, drawing on prior energy sector experience in Europe and Southeast Asia. Alex holds graduate degrees from the Universities of Liverpool, St Andrews, and Oxford.

Title: Beyond the Hydrogen Hype: Where Hydrogen Works – and Where CCS Matters

Abstract: Hydrogen is an important energy-transition technology, but its practical role should be considered alongside CCS rather than as a competing solution. Drawing on Clean Hydrogen for Decarbonisation: Beyond the “Next Oil” Narrative (Palgrave Macmillan, 2026), the presentation examines the technical, economic and environmental roles of hydrogen and CCS in hard-to-abate sectors, particularly cement and fertiliser. It highlights that hydrogen can effectively replace fossil fuels in some applications, while CCS remains essential for unavoidable process emissions such as those from cement production, with clean hydrogen also playing an important role in ammonia production. Ultimately, effective industrial decarbonisation requires using hydrogen and CCS complementarily, where each delivers the greatest climate and economic benefits.

SPEAKERS



Sakura Nishioka, PhD

Deputy Chief Regional Officer for Europe
Japan Organization for Metals and Energy Security
(JOGMEC)

Bio: Sakura joined JOGMEC in 2013 and has held roles in resource diplomacy, metals strategy, corporate planning and CCS project development. Since 2020, she has worked in JOGMEC's Hydrogen and CCS Department, developing strategies for CCS deployment, analysing international CCS projects, climate policy and carbon markets, and contributing to the JOGMEC CCS Guidelines (2022) and Handbook for CCS Carbon Credits (2023). Since 2023, she has served as Deputy Chief Regional Officer for Europe at JOGMEC's London Office, focusing on energy policy, regulatory developments and project development. She holds a PhD in Sustainable Development from Ochanomizu University.

Title: Japan's Perspective on CCS and Hydrogen Deployment

Abstract: Japan views CCS and low-carbon hydrogen as key tools for achieving carbon neutrality while maintaining energy security. The presentation will outline Japan's policies and initiatives supporting domestic and cross-border CCS value chains, including the Advanced CCS Projects, as well as low-carbon hydrogen and ammonia supply chains. It will address challenges such as limited domestic storage capacity, CO₂ transport, risk allocation, shared infrastructure, long-term liability and cost reduction, alongside Japan's hydrogen support mechanisms and challenges related to production costs, demand, certification and international supply chains.

Panel discussion



Krists Mertens

SCHWENK Latvija, Latvia

Bio: Krists Mertens is Director of Decarbonisation and Energy Projects at SCHWENK Latvija SIA. Mertens gained his experience in management and the energy sector in Latvia, having worked for Enefit for the last eight years. He has served on the company's Board of Directors since 2018 and as Chief Executive Officer and Chairman of the Board since 2020. His previous work experience includes financial consulting and the banking sector.. Mertens holds a Bachelor's degree in Engineering Economics from Riga Technical University and a Master's degree in International Business Administration (MBA) from Riga Business School.

Panel discussion



Parsa Alimohammadiardakani

Kaunas University of Technology, Lithuania

Bio: Parsa Alimohammadiardakani is a researcher and engineering student at Kaunas University of Technology, with academic interests centered on energy, geoscience, subsurface systems, and emerging technologies. His work brings together scientific and engineering approaches to understand complex subsurface processes, with particular interest in geothermal energy, geological formations, and the behavior of fluids and gases within underground reservoirs. He has contributed to research examining CO₂ interactions in saline aquifers and Lithuanian geological reservoirs, as well as the potential use of CO₂ in enhancing geothermal performance.

Parsa is also actively involved in the field of Carbon Capture, Utilization and Storage (CCUS) and the broader energy-transition community. His activities span subjects including geological CO₂ storage, geochemical processes, geothermal energy, and subsurface modelling, reflecting his interest in the role of geoscience and engineering in developing sustainable energy and carbon-management solutions.

Panel discussion



Kartik Sharma

Copenhagen Business School

Bio: Kartik Sharma is a geophysicist and energy-transition finance professional working at the intersection of subsurface geoscience and project bankability. Over nine years at Oil India Limited, he rose to Deputy Chief Geophysicist, where he led India's first deep-sea seismic survey (about 22,500 km) and contributed to India's first national CO₂ storage evaluation. His technical expertise covers seismic acquisition, anisotropic depth imaging, quantitative interpretation, and reservoir characterisation, both onshore and in deep-water offshore settings.

In 2026, he completed an MBA in Finance at Copenhagen Business School. His thesis, written on a Copenhagen based geothermal company Green Therma, examined how early-stage subsurface technologies can close the gap between technical credibility and financial bankability to reach final investment decision. He was a finalist in Imperial College London's Climate Investment Challenge 2026. He has authored an Elsevier book chapter and five conference papers.

POSTER PRESENTATIONS

POSTER PRESENTERS



Arsenij Fiodorov

CCS Consultant & Advisor

Bio: Arsenij Fiodorov is an independent CCS and flow assurance consultant with a strong technical background in CO₂ transport systems and petroleum production. Since graduating from Imperial College London, he has worked across the full project lifecycle, from concept selection through detailed design to operations support, alongside in-house research on CO₂ phase behaviour and equation of state tuning. The last five years have focused on CO₂ transport, covering onshore and offshore pipelines and injection wells, with responsibility for study ownership and delivery. He is a member of IOM3.

Poster Title: Second life for pressure-constrained CO₂ pipelines

Poster Summary: Impurities in captured CO₂ widen the two-phase envelope and raise the pressure assumed necessary for single-phase transport. Where an existing pipeline has limited MAOP, conventional margins can rule the pipeline out at screening. This poster re-examines the criterion, showing that operation below the critical point remains viable where sufficient margin above the bubble point is applied, and considers when pipeline repurposing for CO₂ services deserves a second look.

POSTER PRESENTERS



Eduardo Luna-Ortiz

Chair of the Energy Institute CCUS Flow Assurance Working Group

Bio: Dr. Eduardo Luna-Ortiz is a chemical engineer with more than 20 years of experience across energy infrastructure projects, with particular depth in carbon capture and storage, CO₂ transport, flow assurance, technical assurance and project development. His experience spans major CCS developments including HyNet, Porthos, Aramis and Moomba, alongside work across hydrogen, oil & gas and broader energy infrastructure. Over the course of his career, he has contributed to full-chain CCS projects across project development, flow assurance, technical assurance and advisory roles.

Eduardo is Chair of the Energy Institute CCUS Flow Assurance Working Group and Co-Vice-Chair of the Energy Institute CCUS Committee. He has also worked across technical evaluation, project development, due diligence and investment-facing engineering, as well as publications and conference contributions. He also serves as Head of Upstream at JEDA Energy, where his work combines upstream technical evaluation and investment support with commercial considerations. Eduardo holds a BSc from Universidad Nacional Autónoma de México (UNAM) in chemical engineering where he studied phase behaviour of oil mixtures and has a PhD from the University of Manchester (UMIST) in chemical engineering (process integration) where he developed optimization methods for complex industrial processes.

Poster Title: Second life for pressure-constrained CO₂ pipelines

POSTER PRESENTERS



Yuvraj Singh Panwar

Managing Director, Urja GeoEnergy Pvt. Ltd

Bio: Yuvraj Singh Panwar is a Mechanical Engineer. He worked as a researcher at the GeoEnergy Research Group at KTU, Lithuania, where he ran experiments and simulations on subsurface hydrogen-brine displacement for underground hydrogen storage. He has also worked on hydrogen markets at IOCL R&D, India; tested automotive emissions at HORIBA India in Pune; and worked on plasma gasification as a research intern at IIT Roorkee. He is MD of Urja Geo Energy Pvt. Ltd, a start-up incubated at TIDES, IIT Roorkee. He is drawn towards understanding net-zero technologies, mainly CCUS and hydrogen, and hopes to spend his career finding cleaner ways to meet the world's energy demand.

Poster Title: Experimental and Numerical Investigation of Hydrogen-Brine Displacement in Microfluidic Porous Media for Underground Hydrogen Storage

Poster Summary: Hydrogen is a promising clean energy carrier, but its low volumetric energy density makes large-scale storage challenging, highlighting the potential of underground hydrogen storage (UHS). This study investigates pore-scale hydrogen-brine interactions using microfluidic experiments and numerical simulations in homogeneous and heterogeneous pore networks. The experiments showed that hydrogen displaced most of the brine, but pore-scale heterogeneity strongly influenced flow behaviour, causing preferential channelling and leaving some regions unswept, while also increasing hydrogen trapping during brine reinjection. Image analysis in MATLAB and a two-phase MRST model were used to quantify and validate these processes, demonstrating that pore-scale heterogeneity is a key factor controlling hydrogen sweep and trapping efficiency in underground storage formations.

POSTER PRESENTERS



Shruti Malik

Kaunas University of Technology, Lithuania

Bio: Ms. Shruti Malik earned her Ph.D. degree from Indian Institute of Technology, Roorkee, India. She is working as a post-doctoral researcher in the Department of Mathematical Modelling, Kaunas University of Technology (KTU), Lithuania.

Poster Title: Experimental and Numerical Investigation of Hydrogen–Brine Displacement in Microfluidic Porous Media for Underground Hydrogen Storage

Poster Summary: Hydrogen is a promising clean energy carrier, but its low volumetric energy density makes large-scale storage challenging, highlighting the potential of underground hydrogen storage (UHS). This study investigates pore-scale hydrogen–brine interactions using microfluidic experiments and numerical simulations in homogeneous and heterogeneous pore networks. The experiments showed that hydrogen displaced most of the brine, but pore-scale heterogeneity strongly influenced flow behaviour, causing preferential channelling and leaving some regions unswept, while also increasing hydrogen trapping during brine reinjection. Image analysis in MATLAB and a two-phase MRST model were used to quantify and validate these processes, demonstrating that pore-scale heterogeneity is a key factor controlling hydrogen sweep and trapping efficiency in underground storage formations.

Acknowledgement: The authors would like to acknowledge the Geo-energy lab at Kaunas University of Technology for facilitating computational resources and the Lithuanian Research Council for the post-doctoral research fund, proposal registration No. P-PD-24-093.

POSTER PRESENTERS



Apoorv Verma

Researcher, Urja GeoEnergy Pvt. Ltd

Bio: Dr. Apoorv Verma is an environmental researcher specializing in groundwater hydrogeochemistry, hydrogeological characterization, contaminant transport, and subsurface fluid-rock interactions.

He holds a Ph.D. in Environmental Science and Engineering from Dr. A.P.J. Abdul Kalam Technical University in collaboration with IIT Roorkee, India. His research experience at IIT Roorkee and Kaunas University of Technology, Lithuania, includes underground hydrogen storage, with a focus on hydrogen-rock-fluid interactions, migration, reservoir behaviour, and storage integrity. He has authored/co-authored 18+ peer-reviewed journal articles and 13+ conference papers and abstracts, and has received research fellowships from the Lithuanian Research Council (LMT) and India's Department of Science and Technology (DST).

Poster Title: Investigation of underground hydrogen storage using a sandbox experiment at macro scale: flow behaviour and geochemical effects

Poster Summary: Underground hydrogen storage (UHS) in porous formations is promising for large-scale energy storage, but the coupled effects of heterogeneity, gas-brine interactions, and geochemical reactions remain poorly understood experimentally. This study used a transparent macro-scale sandbox model to investigate H₂ migration and geochemical processes in heterogeneous sandstone under homogeneous and fractured conditions. Results showed that gas migration was strongly controlled by permeability contrasts, capillary effects, and structural heterogeneity, with fractures acting as preferential high-permeability pathways for vertical migration. Significant changes in brine pH, conductivity, and dissolved ions further demonstrated gas-fluid-rock interactions and mineral reactions. Overall, the experiments provide direct visual and geochemical insights into flow behaviour, preferential pathways, and containment risks relevant to UHS.

BCF 2025 RECAP

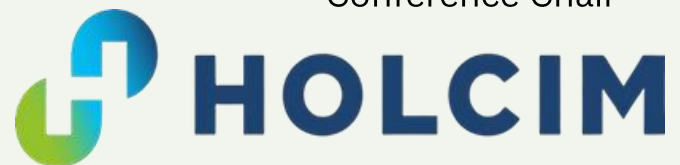


Baltic Carbon Forum 2025 (BCF 2025) was held on 9–10 October 2025 in Tallinn, Estonia. It brought together leading experts from the Baltic Sea Region and neighbouring countries to exchange knowledge, share experience, and identify pathways for accelerating the deployment of large-scale CC(U)S in the region. The Forum addressed key challenges and opportunities through sessions on the status of CCUS in the Nordic and Baltic regions, regulatory frameworks and public perception, industrial CCS, commercialisation models, and recent technological advances. The event brought together a diverse group of international experts from academia, industry, government, and policy organisations, strengthening regional cooperation and creating a platform for future CCUS collaboration. For more information about Baltic Carbon Forum 2025: <https://www.baltic-carbon-forum.com/2025/>

Acknowledgments

I would like to express my sincere gratitude to the Nordic Council of Ministers for its generous funding and support for the organization of BCF 2026 through Nordic Energy Research. I would also like to thank the BASRECCS Board members and advisers for their continued support and encouragement. My sincere thanks also go to our industry sponsors, Nordic Energy Research, Minijos Nafta, Akmenės Cementas, Holcim Poland, and Computer Modelling Group (CMG) Canada for their valuable contribution to the Forum. I am deeply grateful to the BCF 2026 Organizing Committee for generously volunteering their time, expertise, and effort to support the organization of the conference. Finally, I would like to extend my warmest appreciation to all our conference partners, speakers, and colleagues who have accepted our invitation to participate and contribute to the Forum. Their support, engagement, and commitment have been instrumental in making BCF 2026 possible.

Mayur Pal
Conference Chair



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