NEGEM

Quantifying and Deploying Responsible Negative Emissions in Climate Resilient Pathways

Final NEGEM event

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Partners

VTT – VTT Technical Research Center of Finland, Finland
PIK - Potsdam Institute for Climate Impact Research, Germany
ICL - Imperial College of Science Technology and Medicine, United Kingdom
UCAM - University of Cambridge, United Kingdom
ETH - Eidgenössische Technische Hochschule Zürich, Switzerland
BELLONA - Bellona Europa, Belgium
ETA - ETA Energia, Trasporti, Agricoltura, Italy
NIVA - Norwegian Institute for Water Research, Norway
RUG - University of Groningen, Netherlands
INSA - Institut National des Sciences Appliquées de Toulouse, France
CMW - Carbon Market Watch, Belgium
UOXF - University of Oxford, United Kingdom
SE - Stockholm Exergi, Sweden
St1 - St1 Oy, Finland
DRAX - Drax Power Limited, United Kingdom
SAPPI - Sappi Netherlands Services, The Netherlands

Executive Summary

The final event of NEGEM project **Visions and Pathways for Carbon Dioxide Removal in the EU** took place at the Square Brussels Convention Centre on 18 April 2024. The overarching aim of this event was to present the results of the NEGEM project and to examine the realistic potential and responsible deployment of Carbon Dioxide Removal (CDR) technologies and practices. Overall, the event gathered 90 participants, from a wide range of industries, research organizations, academia, NGOs, and European institutions.

Main takeaways

- CDR is not a silver bullet, but rather an increasingly vital tool in our climate action toolbox, to supplement drastic, immediate, and sustained reductions in greenhouse gas emissions. The lower our emissions, the less we rely on CDR technologies.
- Durable, sustainable and effective solutions to take GHGs out of the atmosphere, are scarce, expensive, but also unavoidable if we want to meet our climate goals.
- Responsible CDR deployment requires a diverse portfolio of solutions to balance the trade-offs of different methods (nature-based and technological) and to ensure cost-efficiency.
- Large-scale international cooperation is necessary for the transport and storage of CO_2, together with science-based monitoring practices and regulations.
- A clear regulatory framework is essential. It must guarantee the permanence of CO_2 storage, as well as create the conditions necessary to attract investments and enable successful deployment at scale.
- Building public trust in CDR solutions, through clear communication and inclusive engagement processes, is vital for widespread adoption.
- Scaling up CDR to the gigaton scale will incur costs. However, it also holds substantial potential to drive economic growth in the EU through new industries, infrastructure development, and technology export opportunities.

This document provides a summary description of each session and the main points of each presentation.

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1 Introduction

The final event of NEGEM project **Visions and Pathways for Carbon Dioxide Removal in the EU** took place at the Square Brussels Convention Centre on 18 April 2024. The overarching aim of this event was to **present the results of NEGEM** and to examine the **realistic potential and responsible deployment of Carbon Dioxide Removal** (CDR) technologies and practices. The morning session featured keynote speeches from science and policy experts who discussed CDR's integration into EU climate targets and strategies. Scientists from both NEGEM consortium and the sister projects OCEANNETs and LANDMARC, presented key findings on challenges to scaling CDR, environmental assessments, case studies, social acceptance, deployment scenarios, and Member States CDR portfolios. Following a networking lunch, the policy session delved into the commercialization of CDR and the formulation of policies and governance structures to support its responsible deployment in alignment with EU 2040 climate targets.

Overall, the event gathered 90 participants, who represented a diverse range of industries, research organizations, academia, NGOs, and European institutions. A list of organizations that registered for the event is available in Annex I.

Although the event was in-person only, slides and recordings of the speakers' presentations are available on the project website and on YouTube.

Figure 1 – Event room during the opening session.

The final version of the agenda is shown in the figure below.

Visions and Pathways for Carbon Dioxide Removal in the European Union

18 April 2024, 9.30-17.00
SQUARE Brussels | Mont des Arts, 1000 Brussels, Belgium
Entrance Coudenberg 3, Room The Arc

Agenda

09.00 Welcoming of participants and registration

09.30 Realistic CDR potential and implementation

Welcome message and opening of the event
Kati Koponen, VTT Technical Research Center of Finland

Policy keynote: EU 2040 targets and the role of CDR
Fabien Ramos, EC DG CLIMA

Science keynote: Why we need CDR
Steve Smith, State of CDR report, Oxford Net Zero

Challenges for scaling up CDR methods – environmental and social aspects

- NEGEM results on environmental impacts of CDR methods
  Constanze Werner, Potsdam Institute for Climate Impact Research
- OCEANNETS results on ocean-based CDR
  David Keller, GEOMAR Helmholtz-Zentrum für Ozeanforschung
- LANDMARC results from earth observations, carbon farming case studies
  Eise Spijker, JIN Climate and Sustainability
- Social license to operate for CDR
  David Reiner, Cambridge University
  Goda Perlaviciute, University of Groningen

Discussion

11.30 Coffee break

11.50 Scenario modelling for carbon neutrality, role of CDR

Keynote speech: The role of negative emissions in clean energy transitions
Ilkka Hannula, IEA

NEGEM 1.5 °C mitigation scenario results for Europe
Tiina Koljonen, VTT Technical Research Centre of Finland

Multi-dimensional analysis of negative emission technologies and practices
Mai Bui, Imperial College London

Discussion

12.40 Networking lunch

13.30 Policies and governance structures to support a responsible deployment of CDR

Key policy messages from the three Horizon 2020 projects

- NEGEM: Climate policy frameworks for CDR
  Allanah Paul, Bellona Europa
  Fabiola de Simone, Carbon Market Watch
- LANDMARC: Observations on carbon farming, MRV and finance
  Eise Spijker, JIN Climate & Sustainability
- OCEANNETS: Policy issues of ocean-based CDR methods
  Wilfried Rickels, Kiel Institute for the World Economy,
  Barbara Neumann, Research Institute for Sustainability Helmholtz Centre Potsdam

14.30 How to commercialize CDR

moderated by *Wijnand Stoefs, Carbon Market Watch*

Results from NEGEM studies on market mechanism
Myles Allen, Oxford University

Comments and facilitated discussions with NEGEM industrial partners
Fabien Levihn, Stockholm Exergi
Kirsi Tiusanen, ST1
Matthew Borghi, Drax

Discussion

15.30 Coffee break

15.50 Panel discussion: How to formulate policies and governance structures to support responsible deployment of CDR for the EU 2040 climate targets?

moderated by *Mark Preston Aragonès, Bellona Europa*

Panelists:

- *Ulriikka Aarnio, CAN-Europe*
- *Duncan McLaren, UCLA*
- *Valeria Forlin, EC DG Clima*
- To be announced

16.50 Wrap up and conclusions

Kati Koponen, VTT Technical Research Center of Finland

17.00 End of day and networking time

This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No. 869192.

Figure 2 – Agenda of the final event

2 Realistic CDR potential and implementation

In his presentation on the necessity of Carbon Dioxide Removal, Steve Smith, Oxford Net Zero, highlighted the importance of CDR for achieving net-zero emissions. He drew on IPCC assessments and integrated modelling scenarios to emphasize that **CDR is not only an option but a vital tool for offsetting residual emissions** that could not be addressed through mitigation solely. He explained how CDR provided crucial **option value** by **creating flexibility** and potentially reducing the overall cost of combating climate change. Furthermore, he noted that certain CDR methodologies, such as biochar production, offer **benefits beyond atmospheric carbon reduction**, addressing environmental issues like waste management and soil health. Overall, this presentation emphasized the multifaceted value proposition of CDR beyond their role in achieving net-zero, and including broader environmental benefits.

In his presentation titled **Future Steps for CDR in Europe**, Fabien Ramos, Policy Officer at the European Commission DG Clima, emphasized the crucial role of carbon dioxide removal in achieving the EU's climate neutrality targets. He stressed the need for widespread recognition of CDR's importance, the establishment of

clear objectives (potentially differentiating between types of CDR), the implementation of supportive policies to guide investment, and the creation of a framework to enable large-scale CDR deployment across Europe. He also emphasized the need to both significantly reduce emissions and deploy carbon dioxide removal (CDR) solutions to achieve climate targets. The EU has set specific targets for emission reductions (at least 850 million tons of CO_2 equivalent) alongside substantial carbon removals, particularly in the industrial sector. Ramos highlighted the importance of a diverse CDR portfolio, including land-based solutions, technological advancements, and exploring the potential of ocean-based carbon removal solutions while acknowledging the complexities of international governance.

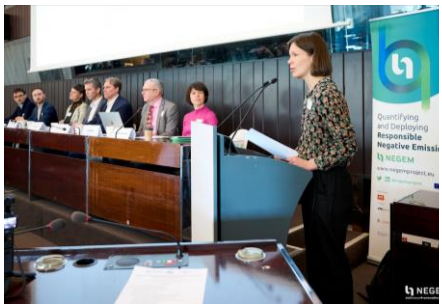

Figure 3 (left) Opening Session, Kati Koponen; Figure 4 (center) Steve Smith; Figure 5 (right) Fabien Ramos.

3 Challenges for scaling up CDR methods, environmental and social aspects

Constanze Werner, Potsdam Institute for Climate Impact Research, presented the NEGEM result on the Life Cycle Assessment of environmental impacts of different CDR methods, including land-based and marine NEPTs, different Bio-CCS methods and chemical NEPTS. A crucial finding of this LCA analysis is that no single CDR method performs better than the others across all environmental impact categories and **all have some environmental trade-offs**. This underscores the **importance of developing a diverse portfolio of CDR solutions** to carefully manage the trade-offs and benefits associated with different approaches. In the context of this LCA assessment, enhanced weathering and DACCS stand out for their potential to generate positive health and ecosystem effects, along with minimal damage to resource availability. On the other hand, CDR methods that rely heavily on terrestrial biomass can have significant negative impacts on ecosystems, primarily due to the extensive land use requirements. To mitigate this, the use of sustainable biomass from forest and agricultural residues presents a promising alternative to dedicated biomass plantations. Based on biosphere modelling made in NEGEM by LPJmL model, there is basically no potential of BECCS expansion outside of current global agricultural areas without further transgressions of planetary boundaries and considering full forest protection. This emphasizes the need for changes within current land use. Dietary shifts to reduce meat consumption could free up pastureland but using them for BECCS plantations puts further strain on planetary boundaries, while reforestation can reduce pressure. **Forest restoration** offers numerous **co-benefits**, such as **protecting biodiversity** and contributing to international targets for **nature restoration**. Its role in restoring, fostering and protecting the natural carbon sink as well as the multiple co-benefits remain **indispensable for Earth system stability**, however **CDR from reforestation and natural climate solutions is saturable and reversible** and thus not reliable for compensation of residual fossil emissions. On the other hand, **Bio-CCS** have the potential to become a crucial approach for effectively counterbalancing residual emissions, primarily due to their **permanent and reliable carbon storage**.

David Keller, GEOMAR Helmholtz-Zentrum für Ozeanforschung, presented the **results of OceanNETS on ocean-based CDR.** Ocean alkalinity enhancement methods show promising results in carbon removal. Specifically, a life

cycle assessment confirms that **ocean liming has significant carbon negativity**. Electrochemical brine splitting, however, is only carbon negative when powered entirely by renewable energy. He showed a case study for Spain that identified a CDR potential 23 $MtCO_2$/yr for ocean liming, brine splitting at 2 $MtCO_2$/yr and coastal enhanced weathering could offer an additional 2 $MtCO_2$/yr. He also highlighted policy-related uncertainties surrounding Ocean Alkalinity Enhancement deployment. The scale of intended use (company-level vs. national climate goals) will significantly impact these considerations. While the availability of low-emission lime and fuel substitution in the maritime industry are promising, the **overall share of low-emission lime in the market remains unclear**. Questions persist about the deployment infrastructure itself, such as reliance on commercial fleets vs. state-funded operations. Finally, obtaining expanded mining licenses, especially in Europe, poses a significant **potential constraint on large-scale OAE deployment**, a factor not typically included in current models and assessments. Finally, he addressed challenges and considerations for **electrochemical brine splitting**. Integration with existing or new plants, as well as compatibility with the electricity grid and low-emission energy sources, were highlighted. Existing regulations and infrastructure for brine discharge and depth of installation may necessitate additional instrumentation. Market changes for byproducts and increased demand from sectors like the lithium industry could influence costs.

Eise Spijker, JIN Climate and Sustainability, presented the **LANDMARC activities in earth observations and carbon farming case studies.** LANDMARC focuses on assessing land-based mitigation technologies (LMT) for climate change, including nature-based solutions and CDR methods like carbon farming, biochar, afforestation, and BECCS. The project's approach is based on three key pillars: stakeholder engagement, earth observations, and simulation modelling. Stakeholders from diverse regions globally contribute through co-design, a bottom-up approach, and context-specific case studies. Earth observations concentrate on developing carbon and biodiversity mapping tools, experimenting with various techniques and spatial scales across LMTs in different countries. Simulation modelling aims to quantify the impact of scaling up these LMTs, using a portfolio approach that studies peatland rewetting, agroforestry/afforestation, and manure based BECCS.



Figure 6 (left) Constanze Werner; Figure 7 (centre) Eise Spijker; Figure 8 (right) David Keller.

David Reiner, University of Cambridge and Goda Perlaviciute, University of Groningen, presented the NEGEM and OCEANNETS results of their research on **social license to operate for CDR.** In both projects an integrated qualitative and quantitative assessment was conducted about the attitudes among the public and other stakeholders towards different NETPs. The OCEANNETS study revealed that while participants **acknowledge the need for CDR,** they **prioritize emissions reductions** and **lifestyle changes** over technological solutions. Generally, ocean-based methods were perceived less favorably than land-based alternatives. Despite increased information and discussion, overall perceptions of ocean-based CDR remained largely unchanged. Interestingly, preferences were consistent across countries (alkalinity enhancement > sinking seaweed > marine BECCS), with China and Taiwan showing more positive perceptions compared to France, Germany, and Canada.

The NEGEM public perception study, conducted across six European countries (Germany, Spain, Finland, Lithuania, the Netherlands, and Poland), focused on public perception of two specific NETPs:

Afforestation/Reforestation (AR) and DACCS. The results indicated a clear preference for **AR, which was perceived as significantly more acceptable than DACCS**. Participants were more supportive of their own countries implementing AR compared to DACCS. Importantly, the study highlighted a **strong public belief that** reducing CO2 emissions should **prioritize renewable energy solutions and changes in behavior**.

Figure 9: Session 2: Goda Perlaviciute (centre), David Reiner (right).

4 Scenario modelling for carbon neutrality, role of CDR

Ilkka Hannula, International Energy Agency, opened this session with a keynote speech about the **role of negative emissions in clean energy transitions**. In IEA's scenarios, today's strong policy settings are leading to a peak in fossil fuel demand this decade. However, to keep the door open for Net Zero in 2050, energy-related greenhouse gas emissions should peak by 2025 and decline by nearly 40% from today to 2030**. 80% of the emissions reductions needed in this decade can be covered by proven technologies and solutions that are already available**. In this scenario, CO_2 emissions from the energy sector must be reduced 65% by 2035, and the residual emissions (1.7 Gt) should be counterbalanced by atmospheric removals. To reach NZE by 2030, we need rapid action: announcements must be matched by project execution, timelines need to be shortened, and key sectors like industry and carbon removal must scale up quickly. **CDR plays a crucial role in this scenario**, with 2.2 Gt CO_2 captured from the air and biogenic sources by 2050, contributing to both removal (75%) and low-emission fuels. He stressed that **delaying mitigation action** in the deployment of the net zero scenario until after 2060, could substantially increase required carbon removal efforts, creating significant **impacts on energy use, costs, and resources**.

Tiina Koljonen, VTT Technical Research Centre of Finland, presented the **NEGEM 2050 carbon neutrality scenario results for Europe**, obtained from the **Pan-European TIMES-VTT** model based on open access JRC-EU-TIMES. The key conclusions are that existing climate policies aren't enough to achieve the necessary deep emission cuts for Europe and **further measures, including incentives for CDR deployment, are crucial**. Modelling confirms that a diverse **portfolio of NETPs could be deployed and investments in all types of CDR options appear in all**

alternative scenarios. BECCS is likely to dominate deployment in the short term, but demand for DACCS will increase significantly beyond 2040-2050. For successful BECCS implementation, **the use of sustainable biomass resources is essential**, and **integration of BECCS within biorefineries, power and CHP plants, and industrial processes is recommended**.

Mai Bui, Imperial College London, presented a **multi-dimensional analysis of negative emissions technologies and practices**. Results of running the MONET model for a UK case study on CDR deployment's impact on the electricity grid, showed that in a scenario with **limited biomass availability**, **BECCS could deliver up to 46 Mt CO_2 removal annually by 2050**. Increasing biomass availability would favour BECCS, reducing the need for DACCS, while afforestation is limited by anticipated plantation rates, and enhanced weathering by rock availability. DACCS is deployed after other CDR options reach their potential. Socio-economic evaluations conducted with MONET-JEDI model indicate that prioritizing **biomass-based CDR** would increase the **value added in agriculture and forestry**, with average removal costs of \$240/tCO_2 by 2100. A **DACCS**-heavy scenario results in higher removal costs (\$529/tCO_2) but also in a significant **boost in gross added value and jobs**, primarily in DACCS manufacturing and construction.

Figure 10 (left) Ilkka Hannula; figure 11 (centre) Tiina Koljonen; Figure 12 (right) Mai Bui.

5 Policies and governance structures to support a responsible deployment of CDR

NEGEM's recommendations were summarized by Allanah Paul, Bellona Europa and Fabiola de Simone, Carbon Market Watch. They advocated for a **robust definition of CDR** based on four principles as explained in the Carbon Negative Handbook for policymakers (D 6.4). **Separate targets and governance frameworks should be set for emission reductions, permanent CDR and land-based sequestration. CDR must be supplementary to fast and deep emissions reduction**. Dependence on CDR should be limited, based on a supply-driven approach and to match residual emissions. Policies should accurately and comprehensively account for real removals and consider variable timescales of carbon removals. They should also adopt a holistic perspective on Earth system stability, respecting planetary boundaries. Finally, policies should integrate climate stabilisation and biosphere stewardship to account for their equally fundamental role in supporting Earth system resilience.

Barbara Neumann, Research Institute for Sustainability Helmholtz Centre Potsdam, presented a series of recommendations for **good governance of ocean-based NETs**, as result of the work of the OCEANNETS project. She highlighted the need for a **holistic approach to governing ocean-based NETs**. She emphasized moving beyond case-by-case assessments to **consider the cumulative environmental, economic, and social impacts of these technologies to ensure benefits outweigh potential trade-offs**. A comprehensive framework should **draw from existing ocean governance principles**, codes of conduct for marine geoengineering, and the principles of "good" governance (effective, equitable, inclusive, responsive). Neumann also highlighted the need for an **integrated and foresight-oriented governance structure**, either building on existing frameworks or creating a

new, overarching one. These efforts are crucial for establishing a transparent and widely accepted approach to the potential deployment of ocean-based NETs.

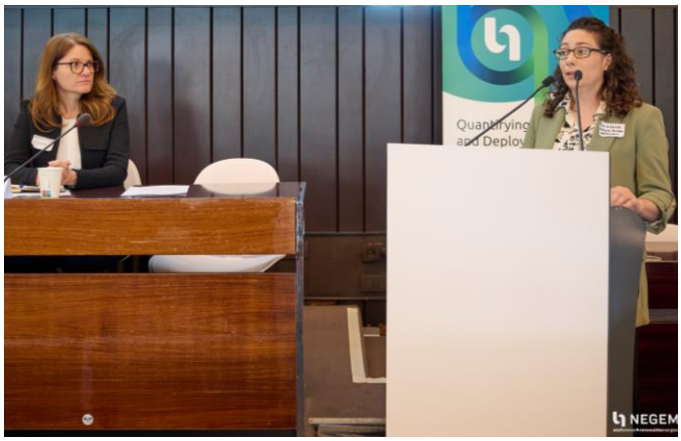

Figure 13 (left): Barbara Neumann, Allanah Paul; Figure 14 (right) Fabiola de Simone .

6 How to commercialise CDR

In this session, Myles Allen, Oxford University, presented the results of the NEGEM studies on market mechanisms. He discussed the fundamental principles surrounding financing models for negative emissions, who benefits from negative emissions (future generations, vulnerable communities, fossil fuel users and consumers), who bears responsibility (fossil fuel users, producers), and who can afford it (fossil fuel producers and investors). He remarked that **Article 18 of the EU Net Zero Industry Act (NZIA), can be a significant development**. Article 18 requires, for the first time, oil and gas producers in the European Union to contribute towards 50 million tonnes per year CO_2 storage injection capacity, with contributions calculated pro rata on the basis of their oil and gas extraction within Europe. This is justified on the basis that recognising the need for storage injection capacity for both CCS and engineered NETPs (BECCS and DACCS), allocates **responsibility on the basis of ability to pay and capacity to deliver**.

He remarked that Article 18 of the EU Net Zero Industry Act focuses on a specific challenge: limited CO_2 storage capacity within the EU. It assumes captured CO_2 will be available from other sources incentivized by the Emissions Trading System (ETS). While not directly encouraging Negative Emissions Technologies (NETPs), Article 18 makes oil and gas producers contribute to storage infrastructure. This approach raises the idea of **upstream responsibility**. Traditionally, climate mitigation costs fall on emitters through systems like the Emission Trading Scheme. However, the fossil fuel industry generates significant revenue at the extraction stage (upstream). Applying the **Extended Producer Responsibility** (EPR) principle to this sector could significantly change the game. With EPR, the responsibility for mitigation costs, particularly for NETPs, could be shifted upstream to the point of extraction in the fossil fuel industry, potentially leading to a more efficient cost allocation.

Figure 15 (left) Myles Allen. Figure 16 (right) from left to right Matthew Borghi , Kirsi Tiusanen, Fabien Levihn.

In the same session speakers from a series of NEGEM industrial partners presented their views. Matthew Borghi (Drax UK) outlined the challenges and opportunities facing the commercialization of carbon removal, emphasizing the need for both demand incentives and enforcement mechanisms to scale up the market. While fears of mitigation deterrence are valid, he stressed that **addressing residual emissions requires scaling today's carbon removal market, delaying action will significantly increase long-term costs**. Borghi also highlighted policy tailwinds such as the US IRA (45Q) and the European Net Zero Industry Act, the EU Carbon Removal Certification Framework, and the Oxford Offsetting Principles. He also highlighted the importance of the Drax and Stockholm Exergi's BECCS Methodology as important elements in providing high-quality carbon removal.

Fabien Levihn, Stockholm Exergi emphasized that while the technologies for carbon capture exists and is well-established, **the true challenge lies in developing sustainable business models**. He remarked that a key element is enabling organizations to set goals for taking accountability for their environmental impact. This includes having the possibility to counterbalance residual emissions even after significant emission reductions efforts.

Kirsi Tiusanen, ST1, emphasized that successful business cases and large-scale investments in CDR depend on several factors: mature, cost-effective technologies, **clear understanding and recognition of broader environmental benefits of Nature-based CDR beyond carbon sequestration**, a well-defined regulatory framework and clear accounting methodologies, long-term predictability (at least 20 years), and customers who are willing to pay for all end products within the value chain.

7 Panel discussion: How to formulate policies and governance structures to support responsible deployment of CDR for the EU 2040 climate targets?

Valeria Forlin, EC DG CLIMA, provided some **policy setting about the critical role of agriculture in the EU's 2040 climate targets**. While there is potential for decreasing agricultural emissions and increasing carbon removals from the land sector, as the decarbonization of other sectors will progress in late 2020 and 2030, the **agriculture sector is expected to become the largest emissions source in the EU by 2040,** according to EC's impact assessments accompanying the 2040 climate policy file. Agricultural emissions together with land-based sinks could become carbon neutral between 2035 and 2040 in this scenario but still there will be a significant number of agricultural emissions which will be difficult to abate. The policy question is thus what is the right governance for this sector in the next decade, to enable the reductions and the removals that are possible to achieve. The responsibility shouldn't rest solely on farmers, as many technological solutions may be unavailable to them, and their choices are often influenced by consumer demand and decisions made by operators upstream the food value chain. At present, the discussion is ongoing on a governance system that should look at the entire food

value chains and put obligations where there is more capacity to respond to these obligations, so that the farmers themselves get rewarded for removals.

Ulriikka Aarnio highlighted two key points for CAN-Europe. Firstly, **emission reductions**, **nature-based sequestration**, and **permanent removals** must have **separate target**s and be incentivized through **dedicated policy tools**. This separation is crucial to avoid mitigation deterrence. Secondly, removals and sequestration must be **additional to emission reductions**. She argued that offsetting schemes are an inappropriate mechanism for incentivizing removals.

Duncan McLaren, UCLA identified three primary reasons why creating effective CDR policies is complex. First, r**elying too heavily on promised removals may deter crucial, immediate emissions reductions**. Second, even with successful carbon capture, **fossil fuel pollution poses a severe health risk, making cutting emissions paramount**. Importantly, **permanent removals are not equivalent to reducing emissions** directly, and similarly, **bio-based removals differ from permanent methods**. Finally, as NEGEM research highlights, it's challenging to scale either permanent or bio-based removals in a manner that is easy, equitable, and sustainable. Thus, policy efforts must balance the need for increased removals with the critical goal of preventing further harm and injustice.

Figure 17 Panel discussion. From left to right David Reiner, Duncan McLaren, Valeria Forlin, Ulriikka Aarnio, Mark Preston Aragonés

ANNEX I – List of organizations registered for the NEGEM Final Event

AB & David Africa	**EISMEA**	**Nature And Biodiversity Conservation Union**
Acumen Public Affairs	Energy and Climate Agency of Flanders	Negative Emission Platform
Ademe	Engie	NIVA
AFRY	ETA Florence	NRW Energy4Climate
Art21	ETH Zürich	Öko-Institut
Bellona Europa	European Climate Foundation	Oxford Net Zero
Bioenergy Europe	European Commission	P+I Performance + Innovation
Bioref	European Environment Agency	Perspectives Climate Group
CAN Europe	European Environmental Bureau	Potsdam Institute for Climate Impact Research
Carbon Balance	European Landowners' Organization	Prothya Biosolutions
Carbon Gap	European Roundtable on Climate Change and Sustainable Transition	Repsol
Carbon Market Watch	First Abu Dhabi Bank	Research Institute for Sustainability"
Carbon Neutral Initiative	Frontier	RHI Magnesita
Carbongap	FTI Consulting	RIFS Potsdam
Carbonx	Fuels Europe	RIFS Potsdam
Carmeuse	GEOMAR	RMK
Ceezer	Imperial College of London	RVO Netherlands
Centro Euro-Mediterraneo sui Cambiamenti Climatici	Industrial Minenarls Europe	SCA
Cibola Partners	INSA Toulouse	Schneider Electric
CINEA	International Association Oil and Gas Producers	SeaO_2
CIRCE	International Energy Agency	ST1
Clean Air Task Force	Jimma University	Stockholm Exergi
Climate Strategies	JIN Climate and Sustainability	Stora Enso
Climeworks	KIEL INSTITUTE FOR THE WORLD ECONOMY	The Shift Project
CONCITO	Luxemburgish Environment Agency	University of Cambridge
Conservation International	Malta Resources Authority	University of Groningen
Drax	Middle East Technical University	University of KwaZulu-Natal
DSS Sustainable Solutions	Mine Environment Management	University of Oxford
DT Master Carbon	Ministry of Economic Affairs Netherlands	VTT Finland
E.ON	National Oceanography Centre UK	Wetlands International
Ecobase	Natural Resources Canada	Zero Emissions Platform