



**CO<sub>2</sub> Capture and Storage – Response to Climate Change**  
 Regional workshop for the Baltic Sea Region and C&E European Countries  
 13-14 April 2011,  
 Institute of Botany of the Nature Research Centre (Verkiai palace)  
 Zaliuju Ezeru str. 49, Vilnius, Lithuania

### AGENDA

**Wednesday 13 April 2011**

8:15-9:00	<b>REGISTRATION</b>
9:00-9:30	<b>WELCOMING ADDRESSES</b> <b>Arūnas Remigijus Zabulėnas</b> (Vice-Minister, Ministry of Environment of Lithuanian Republic) <b>Mecislovas Zalakevicius</b> , Director of Nature Research Centre
<b>Session 1</b>	<b>CLIMATE CHANGE AND CCS CONCEPT</b> Chair: Vít Hladík (Czech Geological Survey)
9:30 – 10:00	Climate change, CO <sub>2</sub> emission trends and mitigation portfolio <b>Jüri Ivask</b> (Institute of Geology at Tallinn University of Technology, Estonia)
10:00 – 10:20	Why capture and store CO <sub>2</sub> ? <b>Tsukasa Yoshimura</b> (Carbon Capture & Storage Unit, International Energy Agency)
<b>Coffee break</b>	
10:45 – 11:30	Principles of CO <sub>2</sub> capture <b>Stanley Santos</b> (IEA Greenhouse Gas R&D Programme)
11:30 – 12:00	Principles of CO <sub>2</sub> geological storage <b>Marie Gastine</b> (CO <sub>2</sub> GeoNet / BRGM, France)

**Refreshment & poster tour**

<b>Session 2</b>	<b>EUROPEAN POLICY, NATIONAL REGULATIONS &amp; INTERNATIONAL INITIATIVES</b> Chairs: Tore Torp (Statoil) & Saulius Sliampa (GTC)
13:00 – 13:30	Moving CCS forward in the EU <b>Eric Drosin</b> (ETP ZEP - European Technology Platform for Zero Emission Fossil Fuel Power Plants)
13:30 – 13:50	CCS legislation development in Europe and in the Baltic Sea region countries: progress and problems. <b>Alla Shogenova</b> (Institute of Geology at Tallinn University of Technology, Estonia)
13:50 – 14:10	CCS legislation framework in Lithuania <b>Juozas Mockevicius</b> (Geological Survey of Lithuania)
14:10 – 14:30	Carbon Capture and Storage – a Norwegian perspective <b>Kristoffer Stabrún</b> (Ministry of Petroleum and Energy, Norway)
14:30 – 14:50	Global progress towards CCS deployment – getting storage right is essential <b>Angeline Kneppers</b> (Global CCS Institute)
14:50 – 15:00	CGS Europe project <b>Vít Hladík</b> (Czech Geological Survey)

#### Coffee break

<b>Session 3</b>	<b>CO<sub>2</sub> CAPTURE &amp; CCS PROJECTS</b> Chair: Stanley Santos (IEA GHG)
15:30 – 15:50	The Porto Tolle CCS demonstration project <b>Pietro Barbucci</b> (ENEL, Italy)
15:50 – 16:10	CIUDEN Carbon Capture Technologies Development Centre <b>Tomás Coca Stefaniak</b> (CIUDEN, Spain)
16:10 - 16:30	Techno-economic evaluation of biomass fired / co-fired power plant with post combustion CO <sub>2</sub> capture <b>Stanley Santos</b> (IEA Greenhouse Gas R&D Programme)
16:30 – 17:00	<b>Round Table discussion</b> Implementation of CCS and regional cooperation Moderator: <b>Alla Shogenova</b> (IG TUT)

<b>Workshop dinner</b>	19:30 – 22:30
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**Thursday 14 April 2011**

<b>Session 4</b>	<b>CO<sub>2</sub> GEOLOGICAL STORAGE – METHODOLOGY, NATIONAL PROGRAMS, STORAGE POTENTIAL</b> Chairs: Niels Poulsen and Thomas Vangkilde-Pedersen (GEUS)
9:00 – 9:20	Methodology for selection and qualification of sites and project development for geological storage of CO <sub>2</sub> <b>Niels Poulsen</b> (CO <sub>2</sub> GeoNet / Geological Survey of Denmark and Greenland)
9:20 – 9:40	Industrial scale CO <sub>2</sub> storage since 1996 – Experiences <b>Tore A. Torp</b> (Statoil, Norway)
10:00 – 10:20	Polish national programme on safe CO <sub>2</sub> geological storage <b>Adam Wojcicki</b> (Polish Geological Institute)
<b>Coffee break</b>	
10:40 – 11:00	EU GeoCapacity - assessment of CO <sub>2</sub> geological storage potential of Europe <b>Thomas Vangkilde-Pedersen</b> (Geological Survey of Denmark and Greenland)
11:00 – 11:20	CO <sub>2</sub> storage potential of deep saline aquifers of Baltic Sea region – onshore <b>Saulius Sliupa</b> (GTC, Lithuania)
11:20 – 11:40	BASTOR - Baltic CO <sub>2</sub> storage project <b>Matti Nieminen</b> (VTT Technical research centre of Finland), <b>Esa Suoninen</b> (Fortum Oyj, Finland)
11:40 – 12:00	Potential geological formations for CO <sub>2</sub> storage in Belarus <b>Andrei Kovkhuto</b> (BelNIGRI, Belarus)

**Refreshment & poster tour**

<b>Session 5</b>	<b>ALTERNATIVE STORAGE TECHNOLOGIES</b> Chair: Alla Shogenova (IG TUT)
13:00 – 13:20	Preliminary characterization of perspective CO <sub>2</sub> storage with enhanced coal bed methane recovery in the Upper Silesian Coal Basin (Poland) <b>Włodzimierz Krieger</b> , <b>Janusz Jureczka</b> (Polish Geological Institute), <b>Jarosław Chećko</b> (Central Mining Institute, Poland)
13:20 – 13:40	CO <sub>2</sub> mineral carbonation by oil shale wastes from Estonian power production <b>Mai Uibu</b> (LIMTUT, Estonia), <b>Rein Kuusik</b> (LIMTUT, Estonia), <b>Kazbulat Shogenov</b> (IGTUT, Estonia)
13:40 – 13:55	Long-term storage of CO <sub>2</sub> as magnesium carbonate in Finland <b>Nicklas Nordbäck</b> (GTK, Finland)

13:55 – 14:15	Experimental results of CO <sub>2</sub> carbonation in Western Carpathians ultramafic rocks <b>Martin Radvanec</b> , L. Tuček, K. Čechovská, J. Derco and Z. Németh (State Geological Institute of Dionýz Štúr, Slovakia)
<b>Coffee break</b>	
14:40 – 15:00	Acid gas storage in the natural gas structure of Borzecin-Poland <b>Jan Lubaś</b> (Oil and Gas Institute, Krakow, Poland)
15:00 – 15:20	The effect of pore compressibility on CO <sub>2</sub> storage capacity and EOR research in Croatia <b>Domagoj Vulin</b> (University of Zagreb, Croatia)

<b>Session 6</b>	<b>SAFETY &amp; PUBLIC ACCEPTANCE</b> Chair: Marjeta Car (Geoinženiring)
15:20 – 15:40	Monitoring of CO <sub>2</sub> storage – methods and challenges <b>Salvatore Lombardi</b> (CO <sub>2</sub> GeoNet / Università degli Studi di Roma "La Sapienza", Italy)
15:40 – 16:00	NGO viewpoints on CCS: A geoscientist's perspective <b>Niels Poulsen</b> (GEUS, Denmark)
16:00 – 16:20	Public perception of CCS near demonstration projects in Europe <b>Marjolein de Best-Waldhober</b> (ECN, the Netherlands)

16:20 – 16:50	<b>Round table discussion</b> CCS - prospects and limitations Moderator: <b>Vit Hladik</b> (Czech Geological Survey)
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## POSTERS

P1	Prospects of CO <sub>2</sub> sequestration in serpentinites of South Lithuania <b>Inga Stasiulaitiene</b> (KTU, Lithuania)
P2	Potential sites for CO <sub>2</sub> geological storage in Latvia <b>Uldis Nulle</b> , Inara Nulle (LEGMC, Latvia)
P3	CO <sub>2</sub> geological storage potential in Lithuania <b>Rasa Sliapiene</b> (GTC, Lithuania)
P4	Economic modelling of the capture–transport–sink scenario of industrial CO <sub>2</sub> emissions: the Estonian–Latvian cross-border case study <b>Alla Shogenova</b> , Kazbulat Shogenov (IGTUT, Estonia), Raisa Pomeranceva (LEGMC, Latvia), Inara Nulle (LEGMC, Latvia), Filip Neele (TNO, The Netherlands) and Chris Hendriks (ECOFYS, The Netherlands)

P5	<p>CO<sub>2</sub> geological storage capacity analysis in Estonia and neighbouring regions</p> <p><b>Alla Shogenova</b>, Kazbulat Shogenov, Rein Vaher, Jüri Ivask (IGTUT, Estonia), Saulius Sliupa (GTC, Lithuania), Thomas Vangkilde-Pedersen (GEUS, Denmark), Mai Uibu and Rein Kuusik (LIMTUT, Estonia)</p>
P6	<p>Petrophysical, geochemical and mineralogical study of oil-bearing reservoir rocks from the Chaunoy formation (Trias, Upper Keuper, Paris basin): prospects for CO<sub>2</sub> storage and Enhanced Oil Recovery</p> <p><b>Kazbulat Shogenov</b> (IGTUT, Estonia), Jean-Pierre Prian, Severine Caritg, Hubert Fabriol, Antonin Fabbri, and Roger Jack (BRGM, France).</p>
P7	<p>The CO<sub>2</sub>-binding by Ca-Mg-silicates in direct aqueous carbonation of oil shale ash and steel slag</p> <p><b>Mai Uibu</b>, Rein Kuusik (LIMTUT, Estonia), Lale Andreas (LUT, Sweden), Kalle Kirsimäe (IEGTU, Estonia)</p>
P8	<p>Effect of ageing pre-treatment on performance of PF oil shale ash for CO<sub>2</sub> sequestration in aqueous suspensions</p> <p><b>Mai Uibu</b>, Rein Kuusik (LIMTUT, Estonia)</p>
P9	<p>CO<sub>2</sub> trapping mineral phases in sandstone aquifers - experimental results</p> <p><b>Krzysztof Labus</b> (Silesian University of Technology, Gliwice, Poland)</p>
P10	<p>Introduction of CCS - effects on Latvian energy sector.</p> <p><b>Julija Gusca</b>, Dagnija Blumberga (Riga Technical University, Latvia)</p>
P11	<p>CO<sub>2</sub> storage research in the Czech Republic: Fundamentals for understanding of CO<sub>2</sub> migration and interaction processes</p> <p><b>Václava Havlová</b>, P. Brůha, D. Dobrev (NRI Řež plc, Czech Republic), V. Kolečka, V. Hladík (Czech Geological Survey)</p>
P12	<p>Sorption and flow of CO<sub>2</sub> in Polish gas shales - project CO<sub>2</sub>SHALESTORE.</p> <p><b>Marcin Lutyński</b> (Silesian University of Technology, Gliwice, Poland)</p>
P13	<p>Preparation for carbon capture and storage in Finland</p> <p><b>Tuija Vähäkuopus</b>, Soile Aatos, Jarmo Kallio, Nicklas Nordbäck (GTK, Finland)</p>
P14	<p>Mafic rocks - inadequate feedstock for CO<sub>2</sub> sequestration in Poland</p> <p><b>Malgorzata Labus</b> (Silesian University of Technology, Gliwice, Poland)</p>