

CO2NET Annual Seminar, Lisbon 2007

short report prepared by Josef Šimek (GIS-GEOINDUSTRY, s.r.o., Czech Republic, Jiří Sedlák (Miligal, s.r.o., Czech Republic), Krzysztof Warmuzinski (ICE PAS, Poland) and Vit Hladik (CGS, Czech Republic)

Generally

CO2NET Annual Seminar was held from 6 to 7 November 2007 in Lisbon. All seminar activities took place at the LISPOLIS Technological Forum, Paço do Lumiar Street. Altogether, 122 delegates from more than 20 European countries attended this event.

The seminar was opened by CO2NET General Assembly where the participants were informed on news in the EU CCS Strategy (ETP ZEP, FP7 and FENCO-ERA) and on results of particular projects (CO2NET EAST, CO2GeoNet etc.).

The program of the 1st day continued in 2 plenary sessions with 6 presentations, focused on the demonstration of achieved results, pluses and minuses, and challenges for the future in the EU projects (EU GeoCapacity) and pilot projects (In Salah, Schwarze Pumpe). The afternoon program of the 1st day was closed by a concluding summarizing presentation of Tore Torp (Statoil).

The forenoon program of the 2nd day, divided into 2 parallel technical sessions, was directed to traditional and novel methods of CO₂ capture from flue gases, storage security, monitoring and risk management. The afternoon program started with 3 presentations dedicated to the research of public acceptance of CCS. Next plenary session included 4 presentations summarizing the most important lessons learned resulting from the whole event. Finally, Pierre Dechamps, the representative of the European Commission (DG Research), explained current EC CCS strategy.

CO₂ storage

The results of inventory of suitable geological structures and their storage capacities in individual European countries and their comparison with current CO₂ emissions were presented. The resulting task for the near future is to unify previous outputs – to arrange general overview of suitable geological structures for CO₂ storage in Europe, focusing on individual geological formations and regardless of current administrative boundaries.

It was stated that the selection of suitable structures on commercial basis is in progress worldwide – driven by both the electric power producers utilizing fossil fuels and oil companies. Within the framework of this process, surveys of individual structures (seismic, gravity, electromagnetic methods, remote sensing etc.) improving their delineation and monitoring are increasingly utilized. Likewise, new software tools for structure modeling, geotechnics and geochemistry as well as other laboratory measurements are more and more employed to give precision to parameters needful for modeling. In near future, commercial actions are supposed to be stimulated by increasing energy consumption, development of needful infrastructure, governmental support and global regulations introduced for CO₂ storage.

CCS technology is estimated to help decreasing world CO₂ emissions by about 30 % till 2050. It seems necessary to leave the approach putting CCS and other CO₂ reduction strategies, i.e. development of renewable resources and other low-CO₂-emission energy producing technologies (nuclear power, steam-gas plants etc.) in contradiction. It is presumed that electricity demand doubles till 2030. This requires parallel development of all approaches, which enable to freeze and gradually decrease global CO₂ emissions.

CO₂ capture

Main lessons learned from the Seminar can be summarized in the following three points:

(1) The three CO₂ capture options (pre-combustion, post-combustion, oxy-fuel) now seem to be treated with equal attention. Until a couple of years ago, it was the post-combustion decarbonization technique that was vigorously explored and regarded as the most promising one.

(2) Concerning the post-combustion removal of CO₂, the absorption in chilled ammonia solutions is gaining importance. Preliminary studies reveal that it may indeed become a competitive technique compared with amine scrubbing (not to mention adsorption or membrane separation).

(3) The industry will be reluctant to adopt CCS unless a suitable framework of incentives is created. Therefore, for the EU member states, it is of great importance to have some EU directives that might form a basis for the relevant national legislation.

Seminar presentations are available at <http://www.co2net.com/community/seminar2007.asp> (CO₂NET members only)

Photo Documentation

(by Jiri Sedlak, Vit Hladik, György Falus & Amuliu Proca)



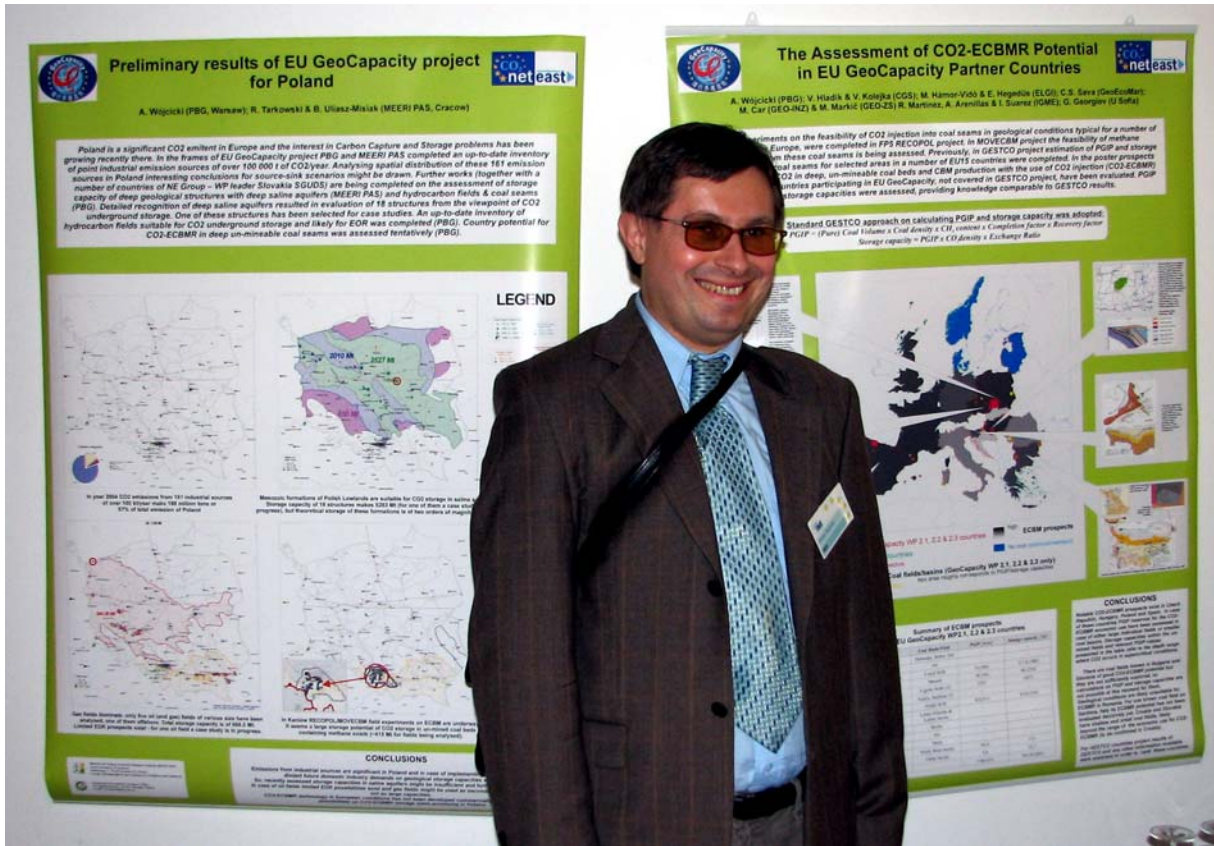
Prof Halina Kruczek (Wroclaw University of Technology, Poland) and Saulius Sliampa (IGG Vilnius, Lithuania) presenting their posters



CO2NET Annual Seminar participants from Central & Eastern Europe in front of LISPOLIS



Vit Hladik (CGS, Czech Republic) presenting the achievements of the 1st project year of CO2NET EAST



Adam Wojcicki (PBG, Poland) and his two posters



CO2NET EAST group discussing outside