



Task Force to Review and Identify Standards for CO₂ Storage Capacity Estimation

Report at the
CSLF Plenary Meeting
Cape Town, April 14, 2008

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Task Force Members

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Background



- **Task Force established** at the CSLF Melbourne meeting in September 2004
- **Phase I completed** at the CSLF Berlin meeting in September 2005
- **Phase II completed** at the CSLF Paris meeting in March 2007
- **Phase III initiated** at the CSLF Paris meeting in March 2007, likely completed

Phase III - Tasks



- Harmonization of various methodologies for storage capacity estimation
 - US DOE Regional Carbon Sequestration Regional Partnerships Program (work in progress, unpublished)
- Compilation of case studies for storage
 - Build up reference set to help establish storage capacity coefficients
- Support CSLF Capacity Building Task Force on knowledge transfer
 - Providing technical expertise at CSLF Capacity Building workshops

Phase III - Status



1. Coordination of methodology for CO₂ storage capacity estimation with other national and international working on this subject, including the Geologic Working Group of the USDOE Regional Carbon Sequestration Partnerships Program.

Status

- The USDOE Regional Carbon Sequestration Partnerships Program has established in June 2007 a Capacity and Fairways Subgroup of the Geologic Working Group, tasked with developing methodology for the uniform and consistent assessment of CO₂ storage capacity in the United States, towards the production of a National Atlas of CO₂ Storage Capacity in the U.S.
 - Stefan Bachu, representing CSLF, has been invited to be a member
 - A draft report by the Subgroup has been completed in December 2007 and is currently in external review by the American Society of Mechanical Engineers
 - The comparative analysis has been completed and has been submitted to the Technical Group for review and approval at its meeting in Cape Town
- Very similar, almost identical



Phase III

1.
2. Compilation of representative case-studies of CO₂ storage capacity estimation at various scales and in different geological settings, including compilation of data on various coefficients that are used in CO₂ storage capacity estimations

Status

- Insufficient case studies to date, work in progress
- US DOE Regional Carbon Sequestration Regional Partnerships Program has established a process based on Monte Carlo numerical simulations to derive values for these coefficients with various degrees of confidence for various storage media
- Work for a Ph.D. degree in Germany has derived similar coefficients

Phase III



1. ...
2. ...
3. Provision of support to the Task Force on Capacity Building in training and applying the methodologies for estimating CO₂ storage capacity along the full chain from country-scale to site-scale, and from theoretical to matched capacity, to one or more developing economies in CSLF.

Status

- Members of the Task Force have presented lectures at the CSLF Capacity Building workshops in Pittsburgh, USA (May 2007), Porto Alegre, Brazil (October 2007) and Dhahran, Saudi Arabia (January 2008)
- Task Force members have contributed to the development of a 2-year plan for the next workshops in 2008 and 2009

Phase III



1. ...

2. ...

3. ...

4. Other achievements: Dissemination

- Papers derived from the Phase I and II reports were published in the International Journal of Greenhouse Gas Control, thus achieving wide methodology dissemination
- Task Force members have contributed to the G8-IEA-CSLF workshops in San Francisco, Oslo and Calgary

Impact



- Clarity has been provided regarding various concepts related to CO₂ storage capacity
- The consistent methodology developed by the task force has been adopted and applied in various countries on different continents, such as Europe, Brazil and the Indian sub-continent



Plans

The Task Force has accomplished its mandate
and run its course

It will apply for closure at the Technical Group
Meeting on April 16