CCS-M Training Course (T2): CO_2 Storage Capacity Estimation
20-23 August 2013, Bangkok

Summary

CCS-M T2 is the second training course conducted by the CCOP Technical Secretariat (TS) in cooperation with the Global CCS Institute (GCCSI) and Thailand through the Department of Mineral Resources (DMR) and Department of Mineral Fuels (DMF). The objectives are to enhance the knowledge of the participants on methodologies for calculating CO_2 storage capacities of subsurface reservoirs, the various types of geological storage systems and CCS applied technologies. The resource persons were from Australia, GCCSI, International Energy Agency (IEA) and Norwegian Petroleum Directorate (NPD). In addition, resource persons from the United States Geological Survey (USGS) and Statoil (Norway) delivered call-in presentations (via the Internet) on case studies related to the topic.

A total of 42 participants from the CCOP Member Countries, Cambodia, China, Indonesia, Japan, Korea, Lao PDR, Malaysia, Papua New Guinea, Philippines, Thailand, Timor – Leste and Vietnam attended T2.

The event was opened with the welcoming address of Dr. Adichat Surinkum and Mr. Lertsin who both expressed their deep appreciation to the Global CCS Institute and partner organizations for supporting the capacity building program of CCOP in CCS and also the resource persons for providing their time and expertise to help achieve the goals of CCS-M. Mr. Holger Bietz of the Global CCS Institute delivered the keynote address highlighting the importance of CCS communication and public engagement given its vital role to play in addressing climate change. His key message is that public engagement and communication activities are keys to the success of individual CCS projects.

The agenda basically focused on the complex CO_2 storage and its attributes, the classification for resource storage estimates and the technically accessible resources. The presentations were supported with case studies on evaluation of storage prospects in the Sleipner, In Salah and Snohvit Fields (Statoil- Norway) and Gorgon Field (Australia) and National Storage Assessments by USGS and NPD. The key learning from these presentations were as follows:

1. CO_2 can be stored in the depleted oil and gas fields and deep saline formations.
2. The technology for the geological storage of CO_2 is mature.
3. A comprehensive policy commitment to CCS is necessary – including a clear vision for the future for CCS.
4. There are existing methodologies for the characterization of geological storage and estimation of storage capacities that CCOP can use. However, there is a need for a deeper understanding on the criteria and methodologies.

Feedback to some of the key questions:

1. What questions would you like a CCOP regional assessment to answer?
    a. Building capacities for CCS, particularly on site characterization and storage estimation.
    b. Alignment of CCOP methodologies to UN and other regional organizations.
    c. Understanding the methodologies- putting into practice and addressing the integrity of the methodologies.
2. What level of assessment (e.g., basin scale, site specific) would be useful to answer these questions?
    a. High level assessment- basin scale
    b. Then later prospect to level, with risking.
3. What can your country contribute for development of a CCOP regional assessment?
    a. Data and field man power support (for field study)
4. Can you think of any show-stopper for a regional assessment?
    a. Data confidentiality nature of critical data
    b. Lack of resources (experts) and support of management

c. No specific policy framework for CCS
d. Strong public concerns and possible opposition
e. Conflict of interest (e.g., existing oil and gas operations) and politics
f. Investor's confidence.

Going forward and based on the feedback from the participants, the next Training Course (T3) will have to include agenda items on workshops/exercises for the deeper understanding of the characterization of storage reservoir and estimation of capacities. This can be done with more hands-on exercises and assessment of the criteria parameters using real data from the case study countries.

A 1-day field trip was organized by Thailand's Department of Mineral Resources to Saraburi (NE of Bangkok) to visit sandstone outcrops (late Cretaceous- Early Tertiary?), as a visual representation of a possible geological CO2 storage.