



## CCOP CO<sub>2</sub> Storage Mapping Program (CCS-M)

### CCS-M Seminar 6 (S6): Seminar/Workshop on CO<sub>2</sub> Geological Storage and CO<sub>2</sub> for EOR 7-9 June 2016, Hanoi, Vietnam

#### A. Background and Objectives:

The recent COP21, also known as the 2015 Paris Climate Conference resulted in the first agreement requiring all nations (rich and poor) to pledge action on climate change, with the aim of restricting global warming to “well below 2 deg C above pre-industrial levels”, and to strive to limit it to 1.5 deg C. Carbon dioxide (CO<sub>2</sub>) capture, use and storage technologies (CCS) will have to play an important role to achieve the climate targets of COP21.

In order to fully understand the emission reduction potential, decision makers need to understand the amount of carbon dioxide that can be safely stored in the subsurface and the geographical distribution of storage resources that are available. Estimates of storage resources need to be made using reliable and consistent methods. The CCS-M Seminar/Workshop 6 (S6) aims to enhance the knowledge of the member countries on methodologies in assessing geological storage of CO<sub>2</sub> and its storage potential. The challenges and gaps in the implementation of CCS will again be looked into.

#### B. Participants and Resource persons:

1. Representatives from oil and gas regulatory and supervisory agencies, research organizations, national oil and gas companies, geological agencies, environmental agencies, and academic institutions with geoscience and environmental programs in Vietnam, CCOP member countries and ASCOPE members.
2. Resource persons from Norway, Australia and CCOP member & other cooperating countries.

**C. Date & venue:** Hanoi, Vietnam – 7-8 June 2016 and field trip on 9 June 2016.

#### D. Implementing / coordinating organizations

1. CCOP Technical Secretariat (CCOP TS)

2. Global CCS Institute
3. Norwegian Petroleum Directorate (NPD) and Ministry of Foreign Affairs, Norway
4. PetroVietnam (PVN), Vietnam Petroleum Institute (VPI) and Vietnam Institute of Geology and Mineral Resources (VIGMR)

**E. Draft Program:**

#	Time	Item	Person/Organization
	6 June	Arrival of participants/resource persons	CCOP TS/VIGMR
<b>Day 1: 7 June 2016</b>			
1	0900	Registration	CCOP TS/VIGMR
2	0930	Opening Ceremony <ol style="list-style-type: none"> <li>1. Welcoming Remarks               <ol style="list-style-type: none"> <li>a. CCOP Technical Secretariat</li> </ol> </li> <li>2. Opening Remarks               <ol style="list-style-type: none"> <li>a. VIGMR</li> <li>b. VPI</li> </ol> </li> </ol> Exchange of Tokens	CCOP TS  Dr Adichat Surinkum Director, CCOP TS  Prof. Dr. Tran Tan Van Director, VIGMR  VPI representative  CCOP TS/VIGMR/VPI
	1000	Group Photo / Coffee - Tea	CCOP TS/VIGMR
3	1030	Introduction and Update of The CCOP CO <sub>2</sub> Storage Mapping Program ( <b>CCS- M</b> )	Mr Simplicio Caluyong <i>Project Coordinator</i> CCOP TS
4	1110	<b><u>KEYNOTE ADDRESS</u></b> 1. The Potential for CCS in the Red River Delta Basin, Vietnam	Dr. Ho Huu Hieu <i>VIGMR</i>
5	1130	2. General Overview and update on CCS: CO <sub>2</sub> storage and EOR	Dr. Chris Consoli <i>Senior Adviser</i> <i>Global CCS Institute</i>
	1200	Lunch	VPI cafeteria

6	1330	CO <sub>2</sub> Distribution in Song Hong basin	VPI
7	1350	<b>CCOP Country Reports (~15 mins)</b> <ul style="list-style-type: none"> <li>• COP21 – Paris (also known as the 2015 Paris Climate Conference): share your countries commitment/pledge of action (if any)</li> <li>• Where does CCS fit into your countries pledge of action to COP21?</li> <li>• Update of CCS activity – focusing (policy development, research plans, roadmap, etc) of your country.</li> </ul>	Member Countries
	1500	<b>Coffee/Tea</b>	
	1520	..Continue with the Country Presentations	
	1630	<b>Summary of Day</b>	Chairperson
	1830	Welcome dinner <i>Attire: Smart Casual</i>	Host: VPI/VIGMR <i>(venue: TBC)</i>
<b>Day 2: 8 June 2016</b>			
8	0900	<b>Order of the Day</b>	Chairperson
		<b><u>CO<sub>2</sub> Geological Storage and EOR Technologies</u></b>	
9	0910	1. The Norwegian CCS Atlas <ol style="list-style-type: none"> <li>a. Methodologies for geological storage characterization</li> <li>b. Workflow and recommended best practices</li> <li>c. Relevance of the Atlas to the climate change initiatives of Norway</li> </ol>	Dr. Van TH Pham <i>Reservoir Engineer NPD</i>
10	0930	2. The CCS -CO <sub>2</sub> Storage Pilot Project at Gundih Field, Central Java, Indonesia	Dr. Mohd Rachmat Sule <i>Project Leader and Lecturer, Institut Teknologi Bandung (ITB) Indonesia</i>
11	0950	3. CSIRO research and initiatives on CO <sub>2</sub> Geological Storage and EOR (with case studies)	Dr Karsten Michael <i>Research Team Leader CSIRO, Australia</i>
	1010	<b><u>Coffee/Tea</u></b>	
12	1040	4. Geological sequestration of CO <sub>2</sub> in NW Taiwan: Potential and Perspectives	Prof Kenn-Ming Yang Associate Professor National Cheng Kung University, Taiwan

13	1100	5. Status of Carbon Capture and Storage in Tai-power	Dr. Ming-Wei Yang Tai-Power, Taiwan
14	1120	6. CO2 Storage and EOR – roles of the government and private sector	Dr Karsten Michael <i>Research Team Leader CSIRO, Australia</i>
	1200	Lunch break	
15	1330	7. Public Engagement – Best Practices from the Gundih CO <sub>2</sub> Storage Pilot Project (Indonesia)	Dr. Farah Mulyasari <i>Lecturer PERTAMINA University</i>
16	1350	8. United Nations Framework Classification (UNFC) 2009- Application to Injection Projects	Mr. Simplicio Caluyong CCOP TS
17	1410	Workshop: COP 21 Commitments 1. Uncertainties and Challenges in the Implementation of CO2 Geological Storage in the CCOP Region	All Participants
	1500	Coffee/Tea	
18	1520	CCS-M : The way forward Workshop Summaries	Mr. Simplicio Caluyong CCOP TS
19	1540	Briefing on the Field trip  Awarding of Certificates Closing Ceremony	VIGMR  CCOP TS
	1630	End of Seminar	
	1830	Farewell dinner Attire: Smart Casual	Host: CCOP TS (venue: TBC)
20	0800- 1600	Day 3: 9 June 2016 - Field Trip	CCOP TS/VIGMR/VPI