



GLOBAL
CCS
INSTITUTE



CCOP CO₂ Storage Mapping Program (CCS-M)

CCS-M Workshop (C2W1): Malaysia Case Study 2-4 June 2015, Kuala Lumpur, Malaysia

A. Background and Objectives:

The CCOP Technical Secretariat (CCOP TS) in cooperation with PETRONAS and Minerals and Geoscience Department – Malaysia, supported by the Norwegian Ministry of Foreign Affairs and Global CCS Institute (GCCSI), will be conducting the CCS-M Workshop (C2W1) in Kuala Lumpur on 2-4 June 2015. The objectives are to have a deeper understanding of the methodologies for the selection of technically accessible CO₂ geological storage reservoir and estimation of storage capacity. The agenda will include hands-on exercises to assess and test the CCOP Guideline on the Methodologies for selecting CO₂ storage sites and estimation of capacities using data from selected basins in Malaysia. Invited resource persons will be coming from Australia, Norway and CCOP member countries.

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 of CCOP member countries and ASEAN Council on Petroleum (ASCOPE) members.
2. Resource persons from Australia, Europe and CCOP member countries.

C. Venue and Date: Concorde Hotel, Kuala Lumpur, 2-3 June 2015 and field trip on 4 June 2015.

D. Implementing / coordinating organizations

1. CCOP Technical Secretariat
2. Global CCS Institute
3. Royal Norwegian Embassy- Kuala Lumpur and Norwegian Petroleum Directorate
4. PETRONAS and Geoscience and Minerals Department (Malaysia)

E. Program:

#	Time	Item	Person/Organization
1	1 June 2015	Arrival of participants/resource persons	CCOP TS/PETRONAS
Day 1: 2 June 2015			
2	0830	Registration	CCOP TS/PETRONAS
3	0900	<p>Opening Ceremony</p> <p>1. Welcoming Remarks</p> <ul style="list-style-type: none"> • CCOP Technical Secretariat • Permanent Representative of Malaysia to CCOP <p>2. Opening Remarks</p> <ul style="list-style-type: none"> • Norwegian Embassy <p>Exchange of Tokens Group Photo Session</p>	<p>CCOP TS/PETRONAS</p> <p>Dr. Adichat Surinkum <i>Director, CCOP Technical Secretariat</i></p> <p>Dato' Yunus Abdul Razak <i>Permanent Representative of Malaysia to CCOP Director –General, Geoscience and Minerals Department, Malaysia</i></p> <p>HE Hans Ola Urstad <i>Ambassador of Norway to Malaysia</i></p> <p>CCOP TS/PETRONAS</p>
4	0930	Keynote Address: CCS Development in Malaysia	Mr Azhar Bin Yusof <i>General Manager PETRONAS</i>
	1000	Coffee - Tea	
5	1030	Introduction, Background and Update of CCS-M	Mr. Simplicio P. Caluyong <i>CCS-M Coordinator CCOP Technical Secretariat</i>
6	1100	Global Status of Storage	Dr. Chris Consoli <i>Senior Adviser – Storage, Asia Pacific Global CCS Institute, Australia</i>
7	1130	The CCS Pilot Project at Gundih Field, Central Java, Indonesia – <i>the 1st in SE Asia</i>	Prof Dr Wawan Gunawan A. Kadir <i>Director, Gundhi CCS Project ITB, Bandung, Indonesia</i>
	1200	Lunch	
8	1330	Development of the Norwegian CCS Atlas	Dr Van TH Pham <i>Reservoir Engineer</i>

		<ul style="list-style-type: none"> • A look into the methodologies used for geological storage characterization • Workflow and best practices 	Norwegian Petroleum Directorate (NPD)
9	1400	The CCOP Guideline on the Methodologies for Selecting Geological CO ₂ Storage and Estimation of Capacities	Mr. Simplicio P. Caluyong CCS-M Coordinator CCOP Technical Secretariat
10	1420	Workshop (1): Selection of Geological Storage sites <ul style="list-style-type: none"> • <i>Presentation of data for the Workshop (PETRONAS)</i> • <i>Application of the CCOP Guideline using the data from Malaysia</i> • <i>Discussions, Q & A</i> <i>Group Presentation</i>	All participants
	1500	Coffee / tea break	
	1520	..Continue with Workshop 1	All participants
11	1700	Summary for Day 1	Chairperson
12	1830	Welcoming dinner <i>Attire: Smart Casual</i>	Host: PETRONAS <i>Venue: Saloma Restaurant, KL</i>
Day 2: 3 June 2015			
13	0830	Overview of Day 1 and Order of the Day	Chair: Sim Caluyong
14	0840	Case Study 1: Geological CO ₂ storage selection <ul style="list-style-type: none"> • <i>Methodologies, challenges and best practices</i> • <i>Q & A</i> 	Dr Steve Whittaker <i>Principal Geologist CSIRO, Australia</i>
15	0910	Case study 2: High level CO ₂ Geological storage capacity estimation <ul style="list-style-type: none"> • <i>Methodology and gaps</i> • <i>Q & A</i> 	Dr Van TH Pham NPD
16	0940	Workshop (2): Geological Storage capacity estimation <ul style="list-style-type: none"> • <i>Using output from Workshop 1</i> • <i>Application of CCOP Guideline – probabilistic calculation</i> • <i>Discussions/feedback on the CCOP Guideline</i> • <i>Q & A</i> • <i>Group Presentations</i> 	All participants
	1000	Coffee/ tea break	
	1020	..continue with Workshop 2 Group Presentation	All participants
	1200	Lunch	
17	1330	Update from the 6th Session of the United Nations Framework Classification for Fossil Energy and	Sim Caluyong CCOP TS

		Mineral Reserves and Resources 2009 (UNFC – 2009): <i>a tool for sustainable development</i> <ul style="list-style-type: none"> • <i>Development of draft specifications for the use of UNFC-2009 to Classify Injection Projects</i> • <i>Comparison of Classification systems</i> 	
18	1400	Opportunities and Challenges for CCS deployment (in SE Asia) <ul style="list-style-type: none"> • <i>Maturing pilots to demonstration projects</i> • <i>Roles and responsibilities of key players (including the Government)</i> 	Dr. Chris Consoli Global CCS Institute
19	1430	CO ₂ for Enhancing Oil and Gas Recovery (EOR) – <ul style="list-style-type: none"> • <i>Bringing added value to O & G operations</i> • <i>Proactive response to environmental concerns</i> • <i>Roles and responsibilities of key players</i> • <i>Government support</i> 	Dr Steve Whittaker CSIRO
	1500	Coffee/ tea break	
20	1530	The Way Forward in CCS-M <ul style="list-style-type: none"> • <i>Extended discussion on the CCOP Guideline with a view of publishing an updated (improved) version</i> • <i>The CCS-M case studies and application of the Guideline in other CCOP Countries</i> • <i>Data management and use of GIS in publishing CCS-M study results</i> • <i>Other matters</i> 	All Participants
21	1600	Briefing on the Field trip	Malaysia
22	1615	Evaluation Giving out of Tokens of appreciation Awarding of Certifications Closing Ceremony	All Participants CCOP TS Director of CCOP TS
	1700	End of Day 2	
23	1830	Dinner <i>Attire: Smart Casual</i>	Host: CCOP TS Venue- TBC

		Day 3: 4 June 2015	
24	0800 - 1600	Field Trip	All Participants