

CCOP E-News

Coordinating Committee for Geoscience Programmes in East and Southeast Asia

VOL. 4 NO. 2

JULY 2013

Welcome to the CCOP E-News. This e-news is brought to you by CCOP and is meant to give you the latest news and information on its activities around the region and worldwide.

CCOP e-news replaces the former printed CCOP Newsletter and will be issued several times each year. Each can be downloaded at CCOP website, <http://www.ccop.or.th> in PDF format.

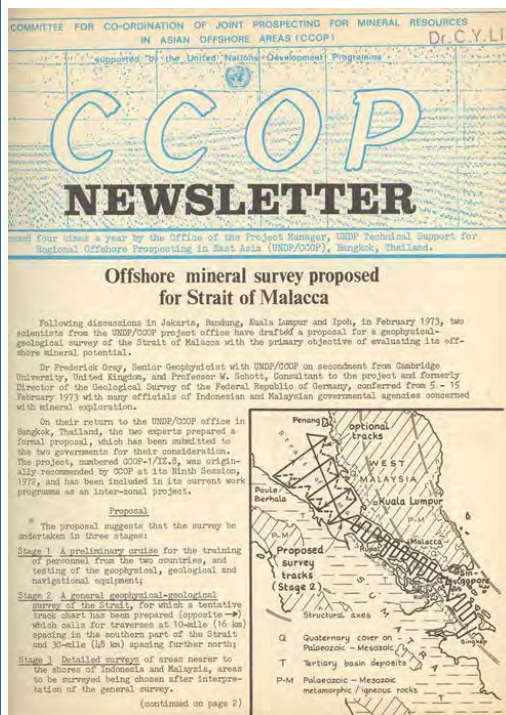


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A Message from the Director

It is now 40 years since the first CCOP Newsletter was published in 1973. Four editions per year were printed and widely distributed until the increasingly wide access to e-mail made it possible to launch the CCOP Georesources E-News in October 2008. In 2010 the CCOP Georesources E-News became the CCOP E-Newsletter with the first, second and third volumes issued in 2010, 2011 and 2012 respectively.



The first CCOP Newsletter published in 1973.

In this current issue we have taken note of the fact that the CCOP website is now updated more frequently and provides much fuller descriptions of recent activities so that the main purpose of the E-Newsletter is to act as a reminder of recent activities and direct the interested reader to the relevant and, more detailed, accounts available on the website. This policy should save valuable TS time allow quarterly editions of the Newsletter to be issued with the regularity originally envisaged in Volume 1, No 1. We hope that Member Countries will submit brief accounts of any items of new developments within their programmes, particularly collaboration and joint projects with, and assistance to, other Member Countries.

In this edition, the Geological Survey of Japan (GSJ-AIST) draws attention to two important meetings to be held in Sendai in October 2013. These meetings highlight the increasing importance of 'geohazards' in the CCOP agenda.

Recent Project Activities (May and June 2013)

Geoinformation/Georesources

CCOP-CGS Project 'Enhancing Integrated Geophysical and Geochemical Processing'

A training session and workshop for the above project was organised by the **China Geological Survey** and **CCOP** in Kunming, China, on **18-20 June, 2013**. Twelve geophysicists and Geochemists representing twelve CCOP Member Countries and a further fifteen Chinese participants attended the event hosted by the IGDP Project Leader, Prof. Dr. Zhang Minghua.

The IGDP Project is funded by the China Geological Survey with the aim of enabling CCOP and ASEAN member countries to continuously benefit from modern information technology around the world. In this context, the China Geological Survey is supporting the project on software training for regional geophysical and geochemical data processing and mapping for mineral resource assessment and exploration.

During the first day of the training session, participants from 10 member countries (**Cambodia, China, Indonesia, Japan, Korea, Lao PDR, Malaysia, Papua New Guinea, Thailand, Timor-Leste, and Vietnam**) and 1 from **Myanmar** delivered country reports summarising their national geophysical and geochemical data processing activities and shared information on the status of their national geophysical and geochemical survey programmes. The summaries of these statements are particularly valuable and can be seen in the minutes of the meeting at the CCOP website, <http://www.ccop.or.th/page/igdp>. All participants were guided by CGS colleagues in installation of IGDP software in compatibility with Mapinfo.

During the second day, an introduction to ICIS-IGDP software and usage training session was conducted including operational guidance, data management, GM data processing/transformation, 3D modeling and inversion and GM data preprocessing.

Future plans for the project were discussed.



RGIS-IGDP Software (Beta English Version) distributed to each Member Country participating the training.

Georesources

CCOP-DMR-DPIM Seminar on Best Practices for Mining: Safety and Public Engagement

The CCOP Technical Secretariat, together with Department of Mineral Resources of Thailand (DMR) and Department of Primary Industries and Mines (DPIM), successfully co-organized the above CCOP-DMR-DPIM Seminar on 28-30 May 2013 in Thailand, with 9 participants from CCOP Member Countries, and 26 participants from Thailand.

During the 1-day seminar (photos 2,3), participants discussed the UNITED NATIONS Framework Classification for Fossil Energy and Mineral Reserves and Resources (UNFC) 2009, listened to presentation of countries' reports and shared experience with reference to mineral resources, mining safety and public engagement in mineral development, environmental impact issues including mitigation measures, and mine rehabilitation.



Meeting room in DMR – Participants from CCOP member countries are presenting country's report and sharing expertise on mineral resources, mineral classification, safety, public engagement and mine rehabilitation.

The one-day seminar was followed by a short visit to the Geological Museum of Thailand under guidance by DMR and a 2-day excursion which included visits to a Cement Factory and Limestone Open Pit under operation by Siam City Cement Group (SCG CEMENT Co. Ltd.), a Perlite mine, Chatree Gold Mine operated by Akara Gold Mining Co. Ltd. with ore sample storage in Phichit province and a Construction Sand Quarry operated by the Concrete Product and Aggregate Co. Ltd.

More photos of this seminar and excursion are available at [CCOP Facebook Page](#).

Georesources/Geoenvironment

CCOP CO₂ Storage Mapping Programme (CCS-M)

A flagship program of CCOP recently held a Launching Seminar (S1) followed by the first training course (T1). A brief summary of these events is presented below but all details can be seen on the CCOP website www.ccop.or.th.

The Launching Seminar (S1) of CCS-M was held in Bali, Indonesia on 29 April 2013. This event was conducted by the CCOP Technical Secretariat (TS) in cooperation with the Global CCS Institute (GCCSI), Norway's Ministry of Foreign Affairs through the Royal Norwegian Embassy – Jakarta & PETRAD, and Indonesia's Ministry of Energy and Mineral Resources. Dr. Adichat Surinkum of the CCOP TS and Dr. Yunus Kusumahbrata of Geological Agency Indonesia delivered the welcoming addresses while Ms. Marianne Damhaug, Minister Counsellor of the Royal Norwegian Embassy – Jakarta (RNE-Jakarta) delivered the opening address and lead the official launching of CCS-M. The keynote addresses were delivered by Ms. Tone Skogen of Norway's Ministry of Petroleum and Energy and Dr. Steve Whittaker of the GCCSI and these set the tone of CCS-M activities, S1 & T1.

A total of 42 (Forty two) participants representing the Member Countries of CCOP – Cambodia, China, Indonesia, Japan, Korea, Lao-PDR, Malaysia, Philippines, Thailand, Timor-Leste and Vietnam, and staff from CCOP Technical Secretariat attended the CCS-M events.



Ms. Marianne Damhaug officially opened the Seminar and Training Course the Indonesian way.

S1 Technical Presentations

| Topic | Presented by |
|---|--|
| 1. CCS Overview: The Global Perspective | Dr. Per Christer Lund (Innovation Norway) |
| 2. CO ₂ Injectivity and Pressure Control | Dr. Harald Johansen (IFE CO ₂ Centre, Norway) |
| 3. CO ₂ Containment and Monitoring | Dr. Harald Johansen |
| 4. CO ₂ Storage Long-term Safety | Dr. Harald Johansen |

CCOP Member Countries Presentation

The CCOP member country presentations were based on the following:

- Status of CCS and its related activities
 - a) Legal framework
 - b) Specific research works
 - c) Government initiatives
- Potential geological storage of CO₂
- Future plans in CCS (if any)



Indonesian Member Country presentation.

Each Member Country presentation appears as a country specific table that summarizes progress for the above topics within the relevant Member Country. These valuable and informative tables can all be seen in the full report of the Launching Seminar on the CCOP website (www.ccop.or.th/ccsm.)

T1: Training Course on Geological Storage Selection and Characterization

Right after (S1) Launching Seminar, a 4-day (T1) training course was conducted in the same venue in Bali. Dr. John Kaldi and Dr. Peter Neal of CO₂CRC (Australia) led the lectures and exercises based on the theme and also covered the broad CCS spectrum and the carbon value chain. Also present during the course were the CCS experts from Norway and GCCSI who delivered the technical presentations during S1.

| Topic | Presented by |
|--|--|
| 1. Why CCS | Prof. John Kaldi (Chief Geoscientist, CO ₂ CRC) |
| 2. Storage | Prof. John Kaldi |
| 3. Capture and Transportation Fundamentals | Dr. Peter Neal (UNSW and CO ₂ CRC) |
| 4. Economics | Dr. Peter Neal |
| 5. Economic Opportunities (EOR) | Prof. John Kaldi |
| 6. CCS Projects around the World | Prof. John Kaldi and Dr. Steve Whittaker |
| 7. Conclusions | Prof. John Kaldi together with rest of the speakers |

The course also introduced the various criteria for assessing sedimentary basis for CO₂ storage and characterization of potential storage reservoir.

Certificates of Participation were given to all who completed the 4-day course (T1). Everyone also received a 4 GB thumb drive containing copies of the presentations, list of participants, program and some photos taken during S1 & T1.

All materials from CCS-M S1 and T1 are available as free downloads from the CCS-M website www.ccop.or.th/ccsm.



Lectures and exercises during the 4-days CCS-M first training course.

New Project Initiatives

Best Practices on Mine Decommissioning and Rehabilitation Plan in CCOP Region

The Project: “Best practices on Mine Decommissioning and Rehabilitation Plan in CCOP region” was proposed by the Philippines at the 48th Annual Session and 59th Steering Committee last November with updates at the 60th Steering Committee. The first circular and initial project proposal have been sent to CCOP member countries to call for nomination of national coordinators for the project. CCOP TS and the Philippines are in communication with CCOP member countries on availability of document and possibility of co-support.

Solution for Groundwater Problems in CCOP Region

The 4-year (2013-2017) CCOP Sub-project “Solution for groundwater problems in CCOP region” was proposed by KIGAM, Korea at the 60th Steering Committee in Ubon Ratchathani, Thailand on March, 2013. KIGAM has indicated to support the Step I – Understanding groundwater problems among each country with 02 activities planned for 2013: 1) Groundwater training course and workshop in KIGAM (June – July 2013) and 2) Workshop in Bangkok (October 2013). The first activity - CCOP/KIGAM training course on Groundwater Theory and Application was held in International School for Geoscience Resources, KIGAM in Daejeon, Korea from June 24 through July 9, 2013.

CCOP Book Project “Stone Heritages in East and Southeast Asia”

The CCOP Book Project “Stone Heritages in East and Southeast Asia” was proposed by Japan at the 60th Steering Committee in Ubon Ratchathani, Thailand on March, 2013. The first circular and tentative schedule of activities have been sent to CCOP member countries to call for nomination of candidates to Global Heritages Stone Resource (GHSR) and Heritages Stone Task Group (HSTG) with the aim for publication of this book in early 2014. CCOP TS is in communication with Japan on tentative activities and funding possibilities.

The Standard Petroleum Reserves Report Forms

The 2-year (2013-2014) Project “The Standard Petroleum Reserves Report Forms” was proposed by Thailand at the 60th Steering Committee with the purpose to create standard practice for those who work on petroleum resource/reserves classification. Participating countries cover all CCOP member countries. CCOP TS is in communication with Thailand on tentative activities and funding possibilities. A discussion with Thailand (Department of Mineral Fuels) for a possible Workshop on reporting Oil and Gas reserves using the UNFC2009 has been initiated. The said workshop is planned for the 1st Quarter of 2014 in Bangkok.

CCOP Project on Landslide Mitigation

CCOP Project on Landslide Mitigation was proposed within the cooperation framework between CCOP, the Department of Mineral Resources of Thailand (DMR) and Vietnam Institute of Geosciences and Mineral Resources (VIGMR). The project aims to establish the Landslide Watch Network in the project area (Vietnam as a case study during 2013 -2014), enhancing skills of counterparts in landslide hazard analysis, landslide risk mapping and Landslide Watch Network establishment. The first activity of this the project, a CCOP-DMR-VIGMR Training course on Community Based Landslide Mitigation, will be held in Bangkok - Phetchabun - Uttaradit - Chiang Dao, Thailand on 17-20 July 2013 with participants from some CCOP Member Countries with serious problems of landslide geohazards (Thailand, Vietnam, Philippines, Indonesia, Malaysia). Dissemination workshops are planned for 2014 – 2015 to promote transfer of know-how and the possibility of expansion projects into other CCOP Member Countries.

News from CCOP Member Countries

Two Geohazard Meetings in Sendai, Japan, In October 2013

Toshihiro Uchida, Geological Survey of Japan, AIST

The Thematic Session of the 49th CCOP Annual Session in Sendai, Japan, will be held at Sendai International Center on 22-23 October 2013, focusing on geological hazards, with a subtitle of “Geohazards: impacts and challenges for society development in Asian countries.” A second related meeting, the “2nd G-EVER International Symposium,” will be held at Sendai City Information & Industrial Plaza on 19-20 October 2013, hosted by Geological Survey of Japan (GSJ), AIST.

1. Thematic Session of the 49th CCOP Annual Session

The Asian region has experienced very severe geological hazards in the past decade: for example, devastating earthquakes in Sumatra, Indonesia (2004), Sichuan, China (2008) and Tohoku, Japan (2011). In the case of the Great Tohoku Earthquake in 2011, many seismologists thought that several M8-class earthquakes might be expected in the region but not an M9-class earthquake. We now understand that our knowledge concerning geohazards is still limited. Extreme geological phenomena are matters of the natural system of the globe; however, such disasters can devastate human society, partly due to our failure to prepare for the effects of potential hazards.

Understanding risks, developing mitigation strategies and sharing this information among people in Asian countries is now becoming very important. We hope the Thematic Session will provide a suitable forum for exchanging updated information on geohazards in Asia and for discussing our future tasks as geoscientists.



◆ Invitation

The Thematic Session at the 49th CCOP Annual Session in Sendai, Japan, will focus on geological hazards which include geological disasters caused by earthquakes, tsunami, volcanic eruptions, landslides, flooding, etc. The Asian region has experienced very severe geological hazards in the past decade: for example, devastating earthquakes in Sumatra, Indonesia (2004), Sichuan, China (2008) and Tohoku, Japan (2011) and huge floods in Bangkok, Thailand. In almost all Asian countries, landslides, both large and small, have caused extensive economic damage and social disruption. In the case of the Great Tohoku Earthquake in 2011, many seismologists thought that several M8-class earthquakes might be expected in the region but not an M9-class earthquake. We now understand that our knowledge concerning geohazards is still limited. Extreme geological phenomena are matters of the natural system of the globe, however, such disasters can devastate the human society, partly due to our failure to prepare for those hazards.

Understanding risks posed by such unexpected geohazards and sharing this information among people in Asian countries is now becoming very important. This is why the organizers of the CCOP 2013 Annual Session chose this subject for the Thematic Session. We hope the Session will serve as a venue for exchanging updated information on geohazards in Asia and for discussing our future tasks.

The Thematic Session may consist of the following sub-sessions:

- ✓ Earthquakes and Tsunami
- ✓ Volcanic Eruptions
- ✓ Landslides
- ✓ Flooding
- ✓ Other Geological Hazards
- ✓ Risk Assessment and Management
- ✓ Policy for Mitigating Geohazards

We invite all the CCOP member countries, cooperating countries and cooperating organizations to present their researches, case studies, or policies related to geological hazards at the Session. The Thematic Session will be run with oral and poster sessions.



The Thematic Session may consist of the following sub-sessions:

- Earthquakes and Tsunami
- Volcanic Eruptions
- Landslides
- Flooding
- Other Geological Hazards
- Risk Assessment and Management
- Policy for Mitigating Geohazards

We invite all CCOP colleagues to present their geohazards research, case studies, or mitigation policies at the Session. The deadline for short abstract submission is **August 20**. Please refer to the Call-for-Papers, which will be sent to you from CCOP TS.

2. Second G-EVER International Symposium

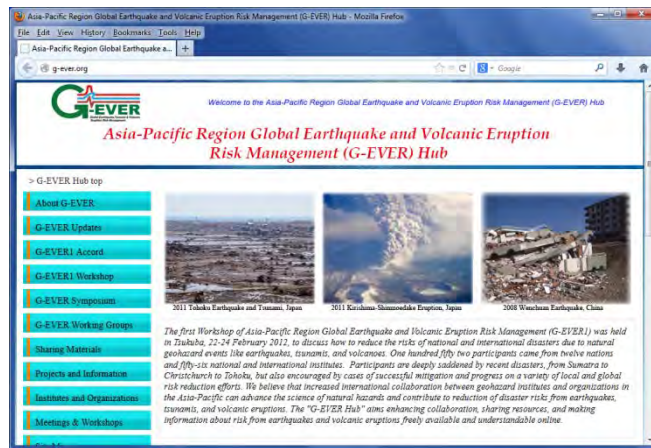
G-EVER, standing for Asia-Pacific Region Global Earthquake and Volcanic Eruption Risk Management, is an international initiative proposed by GSJ in February 2012, when GSJ organized the 1st G-EVER International Workshop in Tsukuba, Japan (see <http://g-ever.org/>).

The full title of this symposium is the “2nd G-EVER International Symposium and the 1st IUGS & SCJ International Workshop on Natural Hazards.” It will be co-organized by G-EVER Consortium, GSJ, the International Union of Geological Sciences (IUGS), and Science Council of Japan (SCJ). The theme of the symposium is “Hazard and risk management in the Asia-Pacific region: earthquakes, tsunami, volcanic eruptions and landslides in subduction zones.”

After the 2011 Tohoku earthquake, Japan, more efforts for the prevention and reduction of the risks of natural disasters have been made all over the world. The G-EVER Consortium promotes activities in collaboration with international institutes and organizations as follows;

- Establishment of a framework for cooperation of research institutes and related organizations in the Asia-Pacific region working on seismic and volcanic disaster prevention
- Enhancement of exchange and sharing of information on seismic and volcanic disaster prevention.
- Building an international standard for databases, data exchange and disaster risk assessment.

The symposium aims to encourage extensive discussions on the present situation of natural disaster mitigation from earthquakes, tsunami, volcanic eruptions and landslides in the Asia and Pacific regions, including (1) important research work and priorities to increase the resilience of our society, (2) ideal hazard maps which are essential for informing society, and (3) importance of contributions to solid earth science. Intensive discussions on next-decade mitigation processes needed to reduce the risk of geohazards becoming natural disasters are encouraged.



G-EVER Website, <http://g-ever.org/>

All CCOP delegates, who are attending the Annual Session, are welcome to participate in and submit a paper to this symposium. Deadline of full abstract submission is **August 1**. For more information, please visit www.g-ever.org/en/symposium/symposium2.html.

Finally, we believe that these two meetings will be a very good opportunity for CCOP members to share up-to-date information on geological hazards and discuss about our future tasks for mitigating geohazards, both within CCOP community and with specialists in Asia and Pacific countries. See you in Sendai in October!

Mission Trips & Meetings

- CCOPTS Director **Prof. Dr. He Qingcheng** attended the second meeting of the **Project on Comparative research of groundwater management in the coastal areas in Southeast Asia** at the Division for water resources planning and investigation for the south of Vietnam in **Ho Chi Minh city, Vietnam** on **25 March - 4 April 2013**. Also present were representatives of Center of Geological Survey of CGS, Department of Environment and Natural Resources of the Philippines, Geological Agency of Energy and Mineral Resources Ministry of Indonesia, Division for water resources planning and investigation for the south of Vietnam and the project leader – Dr. Yangxiao Zhou from UNESCO-IHE.
- CCS-M Coordinator **Mr. Simplicio Caluyong** attended “**UNECE Expert Group on Resource Classification Fourth Session**”, **Geneva, Switzerland** held on **23-25 April 2013**. CCOP TS is a member of the Bureau on the Expert Group on Resource Classification and during the 4th Session the following were agreed/ established:
 - a) Specifications for the UNFC-2009 – a milestone for the Expert Group. The specifications will now be submitted to the Committee on Sustainable Energy (the Expert Group’s parent body) and UNECE Executive Committee for approval.
 - b) Technical Advisory Group (TAG) to be established – the draft TOR for the TAG will be established.
 - c) UNFC-2009 to be applied to renewable energy – The Expert Group concluded that UNFC-2009 can be applied to renewable energy resources subject to the development of the bridging documents.
 - d) Application of UNFC-2009 to nuclear fuel resources – significant progress has been made on development of a draft bridging document between the NEA/IAEA Uranium Classification and UNFC-2009.
 - e) UNFC-2009 Task Force for injection into the subsurface – the Meeting agreed for this Task Force to be created to look into the possibility of applying UNFC-2009 to CCS storage and other subsurface injection projects. Simplicio Caluyong is a member of this new Task Force.



Report of the Session can be downloaded from this link - <http://www.unece.org/index.php?id=31719>

- CCOPTS Director **Dr. Adichat Surinkum** and Regional Expert **Dr. Nguyen Thi Minh Ngoc** attended the **69th session of the Economic and Social Commission for Asia and the Pacific (ESCAP) in Bangkok, Thailand on 25 April-1 May 2013**, and the side event on “Towards resilient coastal communities: Results and opportunities for regional cooperation (ESCAP Trust Fund for Tsunami, Disasters and Climate Preparedness)”. Priority will be given to strategic initiatives at the regional level, including resource sharing arrangements and South-South cooperation. Those interested in the ESCAP Trust Fund for Tsunami, Disaster and Climate Preparedness may contact the Information and Communications Technology and Disaster Risk Reduction Division (ESCAP) by Email: escap-idd@un.org and website: <http://www.unescap.org/disaster-preparedness-fund/>.
- On 8 May 2013, CCOPTS Director **Dr. Adichat Surinkum** had a meeting with **Dr. Yasukuni Okubo** of the Geological Survey of Japan (GSJ), AIST at CCOP office with discussions on future cooperation between CCOP and GSJ/AIST, including the ASEAN seamless geology project, Bangkok, Thailand.
- On 8-10 May 2013, CCOPTS Director **Dr. Adichat Surinkum** attended the “Seminar on Marine Coastal Area Management Approach for the Department of Mineral Resources (DMR), Thailand” in Rayong, Thailand.
- On 14-16 May 2013, Regional Expert **Dr. Nguyen Thi Minh Ngoc** took part in the field trip to Fang Geothermal Field in Chiang Mai and Mae Chan Hot Springs in Chiang Rai, Thailand with geothermal experts from JMG – Malaysia and DMR - Thailand. The visit was in line with the point of discussion agreed upon during the 9th MT-JGSC Meeting at Krabi in September 2012 and MT-JGSC Working Group Meeting at Surat Thani, 3rd April 2013 - under the capacity building in the field of renewal energy. The purpose of this visit was for capacity building to the Malaysian geothermal working group from JMG to carry out studies on the geothermal potential in Peninsular Malaysia, of which the geothermal system is expected to have similar characteristics to the Fang and Mae Chan. At the same time, the delegation took the opportunity to study the mini geothermal plant at Fang operating with the binary system.



Group of DMR-JMG-CCOP geologists visiting Mae Chan Hot Spring in Chiang Rai, Thailand

- On 20 May 2013, CCOPTS Director **Dr. Adichat Surinkum** and Regional Expert **Dr. Nguyen Thi Minh Ngoc** had a meeting with **Dr. Pham Huy Giao**, AIT with discussion on possibilities for AIT-CCOP cooperation. An MOA has been drafted and will be submitted to both sides for consideration and approval.
- On **21 May 2013**, CCS-M Coordinator **Mr. Simplicio Caluyong** attended “**ASEAN CCS Workshop**”, **Bandung, Indonesia**. Mr. Simplicio participated in the Workshop as one of the speakers in the session on CCS Policy and Planning. He presented the new CCOP CO₂ Storage Mapping Program (CCS-M) – a regional capacity building on CCS for the CCOP Member Countries. The presentation highlighted the goal and expected outcomes of the Program, and networking and cooperation with the Global CCS Institute, Norwegian Government and other partners. The CCS-M work plan for 2013 was also included in the presentation.
- On **22 May 2013**, CCOPTS Director **Dr. Adichat Surinkum** and staff of CCOP Technical Secretariat had a meeting with the Project Leader from the Geological Survey of Japan (GSJ), AIST, **Dr. Yohei Uchida**, **Prof. Isao Takashima** of Akita University, **Dr. Punya Charusiri** of the Department of Geology in the Chulalongkorn University at the Chulalongkorn University, Bangkok. Under the **CCOP-GSJ/AIST Groundwater Project**, the ‘**Development of Renewable Energy from Ground-Coupled Heat Pump System in the CCOP Region**’ will be undertaken, as a sub-project. The meeting was held to discuss this sub-project, and the pilot study which is planned to be in the city of Bangkok or nearby.
- On **28 May 2013**, CCS-M Coordinator **Mr. Simplicio Caluyong** participated in the **Conference Calls with the Bureau of the Expert Group on Resource Classification** on 28 May 2013. CCOP TS is a member of the Bureau and regular conference calls are organized by the Secretariat at UNECE’ Committee on Sustainable Energy (Geneva) to discuss items related to UNFC-2009. For this particular meeting, the following items were discussed:
 - a) EGRC 4th Session – Feedback from the participants
 - b) Specifications for UNFC – Status re Committee on Sustainable Energy and EXCOM
 - c) Establishment of the TAG, TF on Renewables, and TF on Nuclear Fuels, TF on injection and recipient reservoirs (new)
 - d) Education and outreach
 - e) The next Bureau call agenda.
- On 4 June 2013, CCOPTS Director **Dr. Adichat Surinkum** attended the meeting on “**Preliminary geothermal field survey**” with the Geothermal Working Team, consisting of PTT Public Company Limited, Department of Groundwater Resources, Department of Alternative Energy and Energy Efficiency, and DMR, Chiang Rai, Thailand. To investigate the geological conditions and related information for project development, collect hydrothermal water samples for scale analysis and identify the target area for further geophysical exploration.



Discussion on possible location for the pilot study site in Bangkok or nearby.

- On 5-7 June 2013, CCOPTS Director **Dr. Adichat Surinkum** attended a “**Seminar on Mineral Resources Classification Approach for DMR**”, in Nakhon Nayok, Thailand. Dr Adichat was the honored speaker in the Conceptual Frame work on Mineral Resources Classification Approach for DMR.
- On 10-11 June 2013, CCOPTS Director **Dr. Adichat Surinkum** together with GSJ Director General **Mr. Eikichi Tsukuda** and GSJ Senior specialist **Mr. Yasukuni Okubo**, made a courtesy visit to **Dr. Ye Myint Swe**, Director General and **U (Mr.) Toe Aung Kyaw**, Director at the **Department of Geological Survey and Mineral Exploration, Ministry of Mines, Naypyitaw, Myanmar** with discussion about the invitation to the CCOP Annual Session in Japan, to be members of CCOP and on the topic of ASEAN Mineral Resources DB Training conducted by Japan and ASEAN Seamless Geology Project.
- On 12-13 June 2013, CCOPTS Director **Dr. Adichat Surinkum** attended the “3rd South East Asian Industrial Minerals Conference”, Jakarta, Indonesia. Dr. Adichat was guest speaker on the topic of “Government plans for the Industrial Minerals of Thailand and development in the domestic industrial minerals sector.”
- On 14 June 2013, CCOPTS Director **Dr. Adichat Surinkum** and Regional Expert **Dr. Nguyen Thi Minh Ngoc** had a meeting with **Dr. Terzan Atmaca**, German Team Leader of the Lao-German TC Project "Support for the Mining Sector" and **Dr Arne Hoffmann-Rothe**, Head of the International Cooperation Unit Asia of BGR, at the CCOPTS office in Bangkok with discussions on cooperation in organizing workshops in 2014 on ground water protection or/and state management of the mineral sector.
- On 25-27 June 2013, CCOPTS Director **Dr. Adichat Surinkum** and TS Assistant for Project Operation and Information, **Ms. Piriya Boonsit**, attended a “**Workshop on ASEAN Mineral Database and Information System**”, Bali, Indonesia. At this workshop there were discussions about how to develop the minerals sector to be an engine for greater economic growth and social progress in the ASEAN region, to enhance trade and investment in the ASEAN minerals sector, and promote environmentally sound and socially responsible mineral development practices in the sustainable management and optimum utilization of mineral resources.



VIPs and Resource Persons from Geological Survey of Japan, AIST, China Geological Survey, Indonesia's Geological Agency and CCOP Technical Secretariat at the Workshop on ASEAN Mineral Database and Information System.



Participants from ASEAN countries in the meeting room.

Second Circular

CCOP 2013 in Sendai, Japan

49th Annual Session

20-24 October 2013

61st Steering Committee Meeting

25-26 October 2013

at

Sendai International Center (SIC)

<http://www.sira.or.jp/icenter/english/>

Supporting Organizations in Japan

Ministry of Economy, Trade and Industry
Sendai City
Kanazawa University
Japan Oil, Gas and Metals National Corporation
Japan International Cooperation Agency
Public Works Research Institute
Geological Society of Japan
Volcanological Society of Japan
Japanese Association of Groundwater Hydrology

Ministry of Foreign Affairs
Tohoku University
Japan Agency for Marine-Earth Science and Technology
Japan Space Systems
National Research Institute for Earth Science and Disaster Prevention
Japan Geotechnical Consultants Association
Seismological Society of Japan
Society of Resource Geology
Japanese Geoparks Network



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Upcoming CCOP Activities

| Date | Activity | Venue |
|--------------------------|---|-------------------|
| 24 June – 9 July 2013 | KIGAM Training Course on Groundwater Theory and Application http://www.ccop.or.th/activity/296 | Daejeon, Korea |
| 17 – 20 July 2013 | CCOP-DMR-VIGMR Seminar on Best Practices on Community-Based Landslide Mitigation http://www.ccop.or.th/activity/297 | Thailand |
| 20 – 23 Aug 2013 | CCS-M Training Course 2 (T2): Storage Capacity Estimation http://www.ccop.or.th/activity/295 | Bangkok, Thailand |
| 3-8 Sept 2013 | CCOP/ASEAN Workshop on Geochemical Mapping http://www.ccop.or.th/activity/299 | Nanning, China |
| 10 – 12 Sept 2013 | CCS-M Seminar (C3S1): CCS Policy Framework and Applied Technologies http://www.ccop.or.th/activity/298 | Beijing, China |
| 7 – 9 Oct 2013 | CCOP-KIGAM Project on Solutions for Groundwater Problems in CCOP region Workshop | Bangkok, Thailand |
| 20 – 24 Oct 2013 | 49 th CCOP Annual Session http://www.ccop.or.th/activity/288 | Sendai, Japan |
| 25 – 26 Oct 2013 | 61 st CCOP Steering Committee Meeting http://www.ccop.or.th/activity/289 | Sendai, Japan |
| 10-13 Dec 2013 | CCS-M Training Course 3 (T3): Mapping, GIS Applications and CCS Technologies | Malaysia |

For More Information

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