

Economic and Social Commission for Asia and the Pacific

Seventieth session

Bangkok, 4-8 August 2014 (Phase II)*

Item 3(d) of the provisional agenda

Review of issues pertinent to the subsidiary structure of the Commission, including the work of the regional institutions: environment and development

Report of the Coordinating Committee for Geoscience Programmes in East and Southeast Asia**

Note by the secretariat

The Secretariat transmits to the Commission the report submitted by the Coordinating Committee for Geoscience Programmes in East and Southeast Asia for information.

Summary

CCOP had successfully carried out most of its planned activities for the year 2013 focused on enhancing coordination of the geoscience programmes of the national geoscientific institutions of member countries, continued human resource development and institutional capacity building, greater flow of technical information between the member countries, cooperating countries and organizations of CCOP. Cooperating countries and organizations continued to provide technical support for activities contributing to sustainable geo-resources and environmentally sound development in the CCOP region. Member countries also provided in-kind support to CCOP work programmes to optimize the benefits of the support provided by the cooperating countries and organizations.

During the year, a total of 25 activities including seminars, workshops and meetings were organized and attended by 864 participants from the member countries including Myanmar. The following are the technical activities organized in the year 2013:

- 1) CCOP-Norway Cooperation Program for Enhancing Public Petroleum Management of the CCOP Member Countries (EPPM Program): Dissemination Seminars:
 - 1.1) LEMIGAS, Jakarta – 20 March 2013 (25 participants);
 - 1.2) PETRONAS, Kuala Lumpur- 21 March 2013 (22 participants); and
 - 1.3) DMF, Bangkok - 22 March 2013 (18 participants).
- 2) CCOP CO₂ Storage Mapping Program (CCS-M) Launching Seminar, 29 April 2013, Bali, Indonesia (42 participants).
- 3) CCS-M Training Course (T1): Geological Storage Selection and Characterization, 30 April – 3 May 2014, Bali, Indonesia (42 participants).

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- 4) CCS-M Training Course (T2): CO2 Storage Capacity Estimation, 20-23 August 2013, Bangkok, Thailand (42 participants).
- 5) CCS-M C3S1: China Case Study - Seminar on CCS Policy Framework and Applied Technologies, 6-8 November 2013, Shanghai, China (50 participants).
- 6) Seminar on "China-ASEAN International cooperation and exchanges on Development of Unconventional Oil & Gas Resources", 12-14 November 2013, Hangzhou, China (18 participants).
- 7) CGS-CCOP-ASEAN Workshop on Geochemical Mapping was held on 3-8 September 2013, Nanning, China (24 participants).
- 8) East and Southeast Asia Geopark Symposium, 26-30 March 2013, Ubon Ratchathani, Thailand (200 participants).
- 9) CCOP-GSJ/AIST Project on Groundwater Assessment and Control in the CCOP Region Phase II Meeting, 26-28 February 2013, Hanoi, Viet Nam (18 participants)
- 10) CCOP-DeISEA II Short course on Coastal Geology and Management, 16-23 March 2013, Kuala Terengganu and Kota Bharu, Malaysia (53 participants).
- 11) Technical Seminar on "Modern Remote Sensing for Integrated National Land Safety and Management - International Satellite Constellation 2013", 20 March 2013, Bangkok, Thailand (54 participants).
- 12) CCOP-DMR-DPIM SEMINAR on Best Practices on Mining: Safety and Public Engagement, 28-30 May 2013, Thailand (26 participants).
- 13) CCOP/KIGAM/IS-Geo Training course on Groundwater Theory and Application, 24 June to 9 July 2013, Daejeon, Republic of Korea (17 participants).
- 14) CCOP-KIGAM-DGR-DMR-AIT Technical Workshop on Solution for Groundwater Problems in CCOP Region, 7-10 October 2013, Pathumthani, Thailand (25 participants).
- 15) The 2nd G-EVER International Symposium and the 1st IUGS & SCJ International Workshop, 19-20 October 2013, Sendai, Japan (40 participants).
- 16) CCOP-DMR-VIGMR Training course on Community-based Landslide Mitigation, 17 July 2013, Bangkok, Thailand (42 participants).
- 17) CCOP-VIGMR-DMR Seminar on Community Based Landslide Mitigation, 19-20 November 2013, Hanoi City and Bac Kan province, Viet Nam (30 participants).
- 18) ISGEO Training Course on Coastal Geology and Geohazards (GeoCoast), 2-13 September 2013, Daejeon Republic of Korea (13 participants).
- 19) First Stone Geoharitage Meeting, 22 October 2013, Sendai, Japan (17 participants).
- 20) ASEAN Harmonized Geology Project Kick-Off Activity, 21 October 2013, Sendai, Japan (10 participants).
- 21) Expert Meeting on Web-Based GIS and Recent Geoscience Database, 25 October 2013, Sendai, Japan (20 participants).
- 22) CCOP-CGS Capability Enhancing on Integrated Geophysical and Geochemical Data Processing Project (IGDP) Training/Workshop, 18-20 June, 2013, Kunming, China (21 participants).
- 23) First Meeting for CCOP High Education Support Network Program, 22 October 2013, Sendai, Japan (16 participants).

The East Asia Geoscience and Environmental Research (EAGER) Project continued, providing a grant for researches in Geoscience and Environment in East and Southeast Asia to candidates from the Member Country hosting the CCOP Annual Session.

ESCAP and CCOP continued to maintain consultations and cooperation through mutual participation in major annual meetings, networking and exchange of publications.

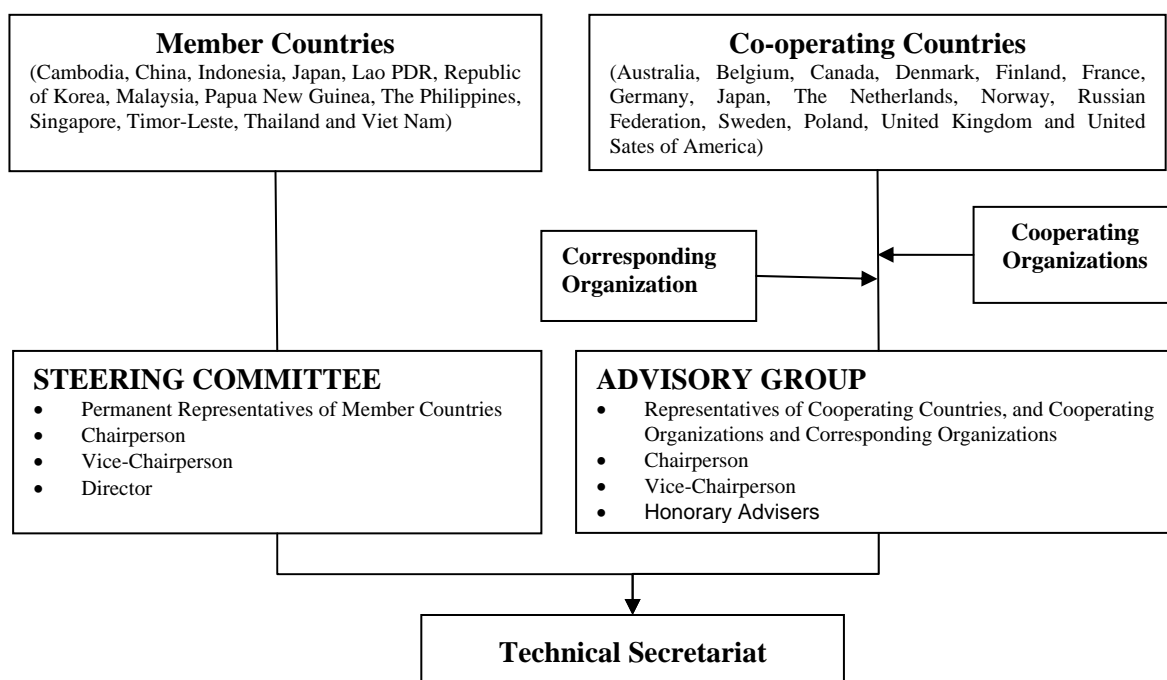
Introduction

The Coordinating Committee for Geoscience Programmes in East and Southeast Asia (CCOP) is an intergovernmental organization whose mission is to contribute significantly to the economic development and sustainable management of the environment and improvement of the quality of life of its Member Countries by the application of Earth science knowledge through outreach, cooperation and partnership, knowledge enhancement and training, and data information.

The CCOP “Coordinating Committee for Offshore Prospecting in Asia” was first established in 1966 under the auspices of ESCAP and the United Nations. CCOP became an independent intergovernmental organization in 1987. The name was changed in 1994 to Coordinating Committee for Coastal and Offshore Geoscience Programmes in East and Southeast Asia. In 2001, CCOP has reviewed and redefined its programmes and activities accompanied by a name-change to Coordinating Committee for Geoscience Programmes in East and Southeast Asia. In 2010, a new strategic plan has been formulated with the focus on the following:

- **Outreach** - to enhance influence with decision makers, investors and the public through the provision of relevant Earth science information and to develop appropriate skills for communicating effectively with CCOP stakeholders.
- **Cooperation and Partnership** - to enhance the internal and external partnerships to improve the quality, reach application and impact of our Earth science information and knowledge.
- **Knowledge Enhancement and Sharing** - to manage, promote, share and exploit the region’s Earth science information and skills.
- **Data and Information** - to advance sharing of data and information and integrate Earth science data across national boundaries.

Figure 1
Operational Organization Chart of CCOP



CCOP has 13 member countries; Cambodia, China, Indonesia, Japan, Lao PDR, Malaysia, Papua New Guinea, The Philippines, Republic of Korea, Singapore, Timor-Leste, Thailand and Viet Nam. CCOP is being supported by 15 cooperating countries and 13 international organizations. The CCOP Technical Secretariat is responsible for the coordination of all activities carried out by CCOP, headed by a Director, who reports to the CCOP Steering Committee consisting of one permanent representative from each member country. The Headquarters of the CCOP Technical Secretariat is located in Bangkok, Thailand. CCOP's operational organization chart is illustrated in figure 1.

I. Technical Activities

In 2013, there were 25 activities organized by CCOP, attended by 864 participants from Member Countries (Table 1).

Table 1
Summary of CCOP Member Countries' Participation in Technical Activities

Sector	No. of activities	No. of participants
Geo-resources	11	459
Geo-environment	9	321
Geo-information	5	84
TOTAL	25	864

1. GEO-RESOURCES SECTOR

1) CCOP-Norway Cooperation Program for Enhancing Public Petroleum Management of the CCOP Member Countries (EPPM Program)

The CCOP TS completed the implementation of the EPPM Program that is funded by the Royal Norwegian Government in the amount NOK15 Million. The program incorporates three (3) Projects:

- Petroleum Resource Management with a focus on Natural Gas (P1);
- Natural Gas Field Development and Environmental Issues (P2); and
- Metadata on Natural Gas Resources of the CCOP Region (P3).

In 2013, the EPPM P1 Dissemination Seminar was conducted as the final activity of the EPPM Program which highlighted by the reporting of the case study team to the stakeholders and representatives from the Royal Norwegian Embassies in the case study countries the outcomes and recommendations from the North Sumatra – Mergui Basin case study. The case study area is a petroleum basin that is shared by three Member Countries of CCOP: Indonesia, Malaysia and Thailand. The Seminar was conducted as a back-to-back event in Jakarta, Kuala Lumpur and Bangkok from 20 to 22 March 2013 with schedule and number of participants as follows:

- 1.1) LEMIGAS, Jakarta – 20 March 2013 (25 participants);
- 1.2) PETRONAS, Kuala Lumpur- 21 March 2013 (22 participants); and
- 1.3) DMF, Bangkok - 22 March 2013 (18 participants).

The aim was to report the outcomes and recommendations of the study teams to the stakeholders. The case study was supported by technical activities including a series of workshops & training courses, coordination meetings, and geological fieldwork conducted over a period of ~4 years. The case study countries provided the data and local expertise over their area of the basin. The data and knowledge from the 3 countries were integrated and combined with expertise from Norway and other cooperating countries that resulted in a better understanding of the broad geological picture of the basin that can be translated into a higher drilling success in the future. The other member countries of CCOP also participated in the technical activities. The methodologies and workflow that were applied were according to international standards, which are available and free for countries to implement for their own basin study. Special technical training sessions were also conducted to support the specific needs of the case study teams and the member countries participating in EPPM P1.

The EPPM-dedicated website www.ccop.or.th/eppm is the repository of all records and information of the activities of the programmes and also offers free download to the general public.

2) CCS-M PROGRAM

Signing of the Agreement between CCOP and Global Carbon Capture & Storage Institute (GCCSI) for the CCOP CO₂ Storage Mapping Program (CCS-M)

During the 60th CCOP Steering Committee Meeting in Ubon Ratchathani, Thailand (26 March 2013), CCOP and Global CCS Institute signed the Agreement to implement the Facilitation Phase (Year 1) of the 4-year CCS-M. The Agreement includes a fund commitment from GCCSI in the amount AUD 0.5 Million to support the capacity building activities of CCS-M. This marks another milestone in CCOP with a new and very prestigious partner in GCCSI, a world leader in advocating for CCS as one of the options required to reduce greenhouse gas emissions, both from the power generation and industrial sources.

The goal of the CCS-M is to enable the government organizations in the CCOP Member Countries to:

- * Provide a high level overview of the potential for large-scale CO₂ storage;
- * Enhance their capacity and capability in the assessment of geological sites for the safe and long-term storage of CO₂; and
- * Increase their understanding of the potential of CO₂ for enhanced oil/gas recovery.

In the year 2013, the following activities under this project were carried out:

2.1) CCS-M Launching Seminar (S1), 29 April 2013, Bali, Indonesia (42 participants).

2.2) CCS-M Training Course (T1): Geological Storage Selection and Characterization, 30 April – 3 May 2014, Bali, Indonesia (42 participants).

2.3) CCS-M Training Course (T2): CO₂ Storage Capacity Estimation, 20-23 August 2013, Bangkok, Thailand (42 participants).

2.4) CCS-M C3S1: China Case Study - Seminar on CCS Policy Framework and Applied Technologies, 6-8 November 2013, Shanghai, China (50 participants).

Norway's Commitment to Support the CCS-M Program

The Norwegian Government through the Royal Norwegian Embassy in Jakarta signed an Agreement last 28 November 2013 with the CCOP Technical Secretariat to support the CCS-M Program with a fund commitment of NOK5.0 Million. The new fund will be used cover the activities of CCS-M during the period from 1 December 2013 to 31 December 2014.

For details on the technical activities, please see the CCS-M Webpage, <http://www.ccop.or.th/ccsm>.

3) MLR-CCOP-CNECC Seminar on China-ASEAN International Cooperation & Exchanges on Development of Unconventional Oil & Gas Resources

The Technology and International Cooperation Department and Strategic Research Center of Oil and Gas Resources (Ministry of Land and Natural Resources, China) in cooperation with CCOP and CNECC organized a seminar on "China-ASEAN International cooperation and exchanges on Development of Unconventional Oil & Gas Resources" on 12-14 November 2013 in Hangzhou, China. The meeting was attended by 18 speakers from Cambodia, China, Republic of Korea, Malaysia, Thailand, Viet Nam and CCOP TS.

The purpose of this seminar was to provide a world-class meeting place for cooperation and information exchanges between China and ASEAN countries on the unconventional oil and gas resources. The seminar discussed on the present situation and latest progress on the development of the unconventional oil and gas resources, identifying ways to play an even more active role in control of development trends and cooperation exchange projects, and demonstrate the policies, regulations and management framework in this filed.

4) Geochemical Baseline Project

The 4-year CGS-CCOP-ASEAN Geochemical Mapping Project was financially supported by China Geological Survey since 2012. The first stage (2012-2013) focused on Training and Manual Preparation with a CGS-CCOP-IUGS Geochemical Mapping Seminar held in March 2012 and a CGS-CCOP-ASEAN-IUGS Workshop on Geochemical Mapping held in September 2013 in Nanjing, China.

Following the kick-off meeting in 2012 in Nanjing (China), the CGS-CCOP-ASEAN Workshop on Geochemical Mapping was held on 3-8 September 2013 in Nanning, China with attendance of 24 participants, including 12 from CCOP MCs (China, Cambodia, Lao PDR, Malaysia, Papua New Guinea, Philippines, Thailand, Viet Nam), 2 from Mongolia, 1 from Greece, 8 from CGS (China) and 1 from CCOP TS. The workshop program included 2-day Indoor Lectures on Global-scale Geochemical Baselines, Regional-/National-scale Geochemical Mapping, Analytical Scheme and Quality Monitoring System for Geochemical Mapping, Geochemical Data Management and Map Generation, Application of Geochemical Mapping for Mineral and Environmental Assessment, 1-day Discussion Meeting on the CGS-CCOP-ASEAN Geochemical Mapping Manual and 2-day Field Sampling Training on global-scale floodplain/

overbank sediment and soil sampling, national-scale stream sediment and soil sampling in tropical forest terrains. The discussion among the Project leader and CCOP member countries was fruitful with plan for case studies for 2014 and 2015, starting in Lao PDR and PNG in the first quarter of 2014.

The next stage (2014-2015) of the project will focus on geochemical mapping with workshop on training and pilot study to test and refine the recommended manual drafted in 2013. In order to facilitate the implementation of this stage, CCOP TS in cooperation with the Project leader are forming a CCOP/ASEAN Working Group on Geochemical Mapping. The Working Group will include one Geochemist/Geologist and one management official from each country's geological authority, and will lead and coordinate their country's working group doing the geochemical mapping on global and regional/national scales. Member countries are called to nominate two (2) Geochemists/Geologists to be members of the subject Working Group.

5) DMR-CCOP Geopark Symposium

The Royal Thai Department of Mineral Resources and CCOP Technical Secretariat, organized the East and Southeast Asia Geopark Symposium, which was held on 26-30 March 2013 at Sunee Grand Hotel, Ubon Ratchathani, Thailand with 40 participants from China, Finland, Indonesia, Japan, Lao PDR, Malaysia, Viet Nam and 160 other participants from Thailand. The symposium focused on issues related to geoheritage sites and proposed areas for geopark in South, Southeast and East Asia. Geoheritage sites can be used as geological evidences and correlation standards, and supporting materials for further geological researches, and in turn can help to enhance the community socio-economic benefits on the basis of integrated development and management.

The symposium was opened by Dr. Phitya Pukaman, Vice Minister of Ministry of Natural Resources and Environment of Thailand with 200 participants from CCOP Member Countries and local Thai participants. The symposium included one day technical presentations by Geopark Technical Experts from Finland, China, Japan, Viet Nam, Thailand and Indonesia and exhibition displaying Geopark activities in Thailand. Moreover, the organizer also arranged 3 days excursion to visit several Geosites in Ubon Ratchathani and Kalasin provinces.

6) CCOP-GSJ/AIST Project on Groundwater Assessment and Control in the CCOP Region

GSJ/AIST generously continues its support for CCOP-GSJ/AIST Project on Groundwater, Phase II.

The CCOP-AIST Groundwater Project Phase II Meeting was held on 26-28 February in Hanoi, Viet Nam with 18 participants from Cambodia, China, Indonesia, Japan, Republic of Korea, Malaysia, Myanmar, Papua New Guinea, Philippines, Thailand, Timor - Leste and Viet Nam. The workshop covered progress report of Groundwater Project Phase 2, Country Reports, Working Group Meeting on Progress report of hydrological mapping by Thailand and Viet Nam, and discussion for status and working plan.

The follow-up activity: Mapping procedure - considering description of hydrological data will be carried out during the period of April 2013 to March 2014. The CCOP-GSJ/AIST Groundwater Project Phase II will have its final meeting and workshop on 18-20 March 2014 in Bandung, Indonesia. In cooperation with the Geological Agency of Indonesia, this activity aims to

update the working group of the progress of the project, as well as share the current developments of groundwater activities in each country.

2. GEO-ENVIRONMENT SECTOR

1) CCOP-GSJ/AIST Project on Integrated Geological Assessment of Deltas in Southeast Asia Phase 2 (DELSEA II Project)

The DelSEA Project has been generously supported by GSJ/AIST, Japan since 2004. Phase II of the project, DelSEA II, is one of the Geo-Environment programs which has been conducted since 2008 jointly with IGCP-475 DeltaMAP project for annual meetings and seminars. The main purposes are to foster exchange of modern knowledge on deltas, Quaternary geology, sequence stratigraphy, and geological coastal management and to enhance joint study for better understanding of deltaic coasts and geological assessment for coastal management.

The CCOP-DelSEA II Short course on Coastal Geology and Management was held on 16-23 March 2013 in Kuala Terengganu and Kota Bharu, Malaysia with 53 participants from Cambodia, China, Indonesia, Japan, Republic of Korea, Malaysia, Thailand, Timor-Leste and Viet Nam. The training course included 3-day course lecture on coastal geology and coastal management, including core cutting, core description, and core interpretation, countries reports by CCOP member countries, and followed by 2-day geological excursion and field discussion along the coasts from Terengganu to Kota Bharu (Kelantan delta), Malaysia.

2) Environmental Analysis Support Programme in the CCOP and Other Regions

The 48th CCOP Steering Committees Meeting in Daejeon, Republic of Korea endorsed the “Environmental Analysis Support Programme in the CCOP and other regions” which was proposed by AIST/GSJ under the auspices of Japan Radioisotope Association and Iwate Medical University. This programme has continued supporting in-kind services on environmental specimens, which are analyzed by PIXE method. The service is still open up to the maximum number of 500 samples per year and it will be continued annually.

3) CCOP-UOT-DMR Technical Seminar and Workshop on “Modern Remote Sensing For Integrated National Land Safety and Management - International Satellite Constellation”

The Technical Seminar on “Modern Remote Sensing for Integrated National Land Safety and Management - International Satellite Constellation 2013” was jointly organized by University of Tokyo, VisionTech (Japan), Department of Mineral Resources (DMR), Thailand and CCOP Technical Secretariat in Bangkok, Thailand on 20 March 2013 with participation of 54 participants, including 5 speakers, 45 participants from Thailand, Germany, Japan and 4 CCOP TS staff.

During the seminar, speakers presented natural hazard problems and mitigation plan in Thailand, and shared experiences on application of Remote Sensing tools for natural hazard monitoring and management. The last session of the seminar is the panel discussion focused on 3 main topics: 1) Future possibility of radar remote sensing for hazard monitoring; 2) Requirements for achievement of effective satellite monitoring system;

3) Possibility of future collaboration framework between Japan, Thailand and other CCOP countries.

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

The seminar was held on 28-30 May 2013 in Thailand, with participation of 7 participants from CCOP member countries, 26 participants from Thailand and all of CCOP staff. During the 1-day seminar, participants discussed on the United Nations Framework Classification (UNFC) for Fossil Energy and Mineral Reserves and Resources, listened to presentation of countries' reports and shared experiences on mineral resources, mining safety and public engagement in mineral development, environmental impact issues and its mitigation measures and mine rehabilitation.

The one-day seminar was followed by a short visit to Geological Museum of Thailand under guidance by DMR and 2 days of excursion to Cement Factory and Limestone Open Pit under operation by Siam City Cement Group (SCG CEMENT Co. Ltd.) in Kaeng Khoi district, Saraburi province, Perlite mine at Pnomchat hill, Lopburi province, Chatree Gold Mine under operation by Akara Gold Mining Co. Ltd. and ore sample storage in Phichit province and Construction Sand Quarry operated by the Concrete Product and Aggregate Co. Ltd. at Phak Hai District in Ayutthaya province.

5) CCOP/KIGAM Project: "Solution for Groundwater Problems in CCOP Region"

5.1) CCOP/KIGAM/IS-Geo Training course on Groundwater Theory and Application

CCOP Technical Secretariat is organizing the subject training course in cooperation with International School for Geoscience Resources (IS-Geo) of Korea Institute of Geoscience and Mineral Resources (KIGAM) on 24 June to 9 July 2013 in Daejeon, Republic of Korea. This training course is within the framework of the 4-year (2013-2017) CCOP-KIGAM Project "Solution for groundwater problems in CCOP region", kindly supported by KIGAM, Republic of Korea with attendance of 17 participants from CCOP member countries and 1 participant from CCOP TS.

The aim of the training course is to provide participants from CCOP member countries with a clear understanding of fundamental concepts, theory and application of groundwater and to share information, best practices on groundwater in member countries.

5.2) CCOP-KIGAM-DGR-DMR-AIT Technical Workshop on Solution for Groundwater Problems in CCOP Region

On 7-10 October 2013, the CCOP Technical Secretariat, together with Korea Institute of Geoscience and Mineral Resources (KIGAM, Republic of Korea), Department of Groundwater Resources (DGR, Thailand), Department of Mineral Resources (DMR, Thailand) and Asian Institute of Technology (AIT, Thailand) has successfully co-organized the CCOP-KIGAM-DGR-DMR-AIT Technical Workshop on "Solution for groundwater problems in CCOP region" in Pathumthani, Thailand, with 25 participants from CCOP Member Countries, project leader from KIGAM, 1 invited guest, 3 resource persons and 4 CCOP staff. This is one of collaboration activities between CCOP, KIGAM, DGR, DMR and AIT, within the framework of the

CCOP-KIGAM Project on “Solution for groundwater problems in CCOP region”, kindly supported by KIGAM, Republic of Korea.

The workshop included a two-day seminar with keynote presentations by KIGAM, AIT, countries’ report presentation and plenary discussion, followed by a visit to Geological Museum of DMR (Thailand) and the Groundwater Regional Center 2 in Suphan Buri province. Presentation of countries’ reports focused on hot issues of groundwater utilization and management. The obtained information is a useful output for planning of case study areas and program of the following project activities. Participants later visited the project areas for “Groundwater purification for drinking water for elementary school” and “Groundwater for agricultural irrigation system”.

CCOPTS is in communication with KIGAM (Republic of Korea) on planning for the project activities of the Step 2 – “Finding cooperative measures to solve the groundwater problems” in 2014.

6) The 2nd G-EVER International Symposium and the 1st IUGS & SCJ International Workshop

The CCOP Technical Secretariat, together with G-EVER Consortium, Geological Survey of Japan (GSJ), National Institute of Advanced Industrial Science and Technology (AIST) the International Union of Geological Sciences (IUGS), Science Council of Japan (SCJ) co-organized the 2nd G-EVER International Symposium and the 1st IUGS & SCJ International Workshop on 19-20 October 2013 in Sendai City Information & Industrial Plaza, Japan. The symposiums aimed to encourage extensive discussions on the present situation of natural disaster mitigation from earthquake, tsunami, volcanic eruption and landslide in the Asia and Pacific regions.

The topics are (1) important research works and priorities to make strong resilience to our society, (2) ideal hazard maps which are essential to the society and Asia-Pacific scale hazard assessment activities, and (3) importance of contributions to solid earth science. The symposium and workshop were attended by 40 participants with 30 talks, 26 posters and intensive discussions on next-decade mitigation processes to reduce the risks of natural hazards.

7) CCOP-VIGMR-DMR Project on Community-Based Landslide Mitigation

During the 60th CCOP Steering Committee in March 2013 in Ubon Ratchathani - Thailand, landslide geologists of Thai team and Viet Nam team visited the Land Watch Network in Ubon Ratchathani and initiated the cooperation project on landslide mitigation.

7.1) CCOP-DMR-VIGMR Training course on Community-based Landslide Mitigation

Within the framework of the CCOP-DMR-VIGMR Project on Landslide Mitigation, the CCOP-DMR-VIGMR Training course on Community-based Landslide Mitigation held on 17 July 2013 in Bangkok, Thailand included a technical seminar and a following 3-day excursion to visit models of Community Based Landslide Mitigation in Phetchabun, Uttaradit and Chiang Mai provinces. The seminar and fieldtrip was attended by 9 participants from CCOP member countries (Indonesia, Malaysia, Philippines, Thailand, Viet Nam) 28 local participants from the Department of Mineral Resources (DMR) of Thailand and 5 CCOP TS staff.

The seminar on 17 July 2013 in Bangkok was held in the meeting room of DMR where CCOP participants presented and discussed the country reports. On July 18, participants visited the first group of Community Based Landslide Mitigation in Thailand and joined the simulation exercise of local network in response to landslide in Lom Sak district, Phetchabun province. A short stop at Phitsanulok province was to introduce the participants on position of the subducting plate boundary. On July 19, participants discussed with local coordinators of the community network for Landslide Mitigation in Lablae district, Uttaradit province and visit some rehabilitation locations along the way to Chiang Mai. On July 20, participants joined the Training course for locals on Community Based Landslide Mitigation in Doi Saket district, Chiang Mai. There were Community of Pa Miang local residents and Pa Miang municipal rescue officers took part in the training course.

7.2) CCOP - VIGMR - DMR Seminar on Community Based Landslide Mitigation

Within the framework of the CCOP-DMR-VIGMR Project on Landslide Mitigation, the CCOP-VIGMR-DMR seminar on Community Based Landslide Mitigation was held on 19-20 November 2013 in Hanoi city and Bac Kan province, Viet Nam. The seminar aimed to contribute to exchange knowledge of community based network for landslide and geohazard mitigation. The current status of landslide investigation in Viet Nam, Thailand and other CCOP member countries were presented in this seminar. The venue on 19 November 2013 in Hanoi was held in the meeting room of Viet Nam Petroleum Institute (VPI). The seminar includes a half-day presentation and a following one-and-a-half day excursion to visit models of Community Based Landslide Mitigation in Bac Kan province. The seminar and fieldtrip was attended by 30 participants, including 4 nominated scientists from CCOP member countries (Indonesia, Malaysia, Thailand and Viet Nam), 24 scientists from the Viet Nam Institute of Geosciences and Mineral Resources and 2 CCOPTS staff. During 19-20 November 2013, participants traveled to Bac Kan province for visiting the case study area of Community Based Landslide Mitigation in Viet Nam. In the morning of November 20, participants had a meeting with the local authorities.

Landslide Watch Network establishing, capacity building activities for knowledge exchange among resource persons from Thailand, Viet Nam and other interested CCOP member countries will be planned for 2014.

8) KIGAM/IS-GEO/CCOP Regular Training Courses

The International School for Geoscience Resources of KIGAM coordinated with CCOP to present an intensive training course on Coastal Geology and Geohazards (GeoCoast) in Daejeon (Republic of Korea) on 2-13 September 2013. The course aims to foster professionals from the developing countries in the fields of coastal geology and research as well as to enhance the capabilities of the cooperating countries/organizations with Republic of Korea/KIGAM. The training course was attended by 13 participants from CCOP member countries (Cambodia, Indonesia, Malaysia, Papua New Guinea, Philippines, Thailand, and Viet Nam). During two weeks, the participants have listened to the lectures on 2 modules: 1) Tide-dominated Coasts and Human Impacts and 2) Wave-dominated Coasts and Coastal Geohazards, taken part to the Western Korean Coast (Tide-dominated) and Eastern Korean Coast (Wave-dominated) and also entailed a briefing with country report at the end of the course.

3. GEO-INFORMATION SECTOR

1) CCOP Book Project: “Stone Heritage In East And Southeast Asia”

The CCOP Book Project: “Stone Heritage in East and Southeast Asia” was proposed by GSJ and approved by the 60th CCOP Steering Committee in Ubon Ratchathani, Thailand in 2013. A task group was then formed including national coordinators of CCOP member countries.

The first Stone Geoheritage meeting was held on 22 October 2013 at the Sendai International Center, in conjunction with the 49th Annual Session in Sendai, Japan. The meeting was attended by 17 participants from Japan, Cambodia, Indonesia, Malaysia, Lao PDR, Papua New Guinea, Viet Nam, United Kingdom and CCOPTS. During the meeting, participants listened to the project introduction by Dr. Hirokazu Kato – the project leader, presentations on stone geoheritages in CCOP countries by participants from member countries, and discussed on the book content as well as working schedule. Questions were raised on the project title, stone geoheritage definition and temporal/spatial classification to be used, working scope and plan. The project leader and CCOPTS will communicate with the national coordinators for further discussion and detail guidance.

2) ASEAN Harmonized Geology Project (ASEAN Seamless Geology Project)

The ASEAN Harmonized Geology Project was endorsed by the ASOMM Database Committee on 28 August, 2013. As a kick-off activity, an open discussion on ASEAN Harmonized Geology was held on 21 October 2013, in adjacent to the 49th CCOP Annual Session. The meeting was started with an introduction of ASEAN Seamless Geology and followed by discussion on cooperation activities of seamless geology in CCOP/Indochina region and National Geological Maps of ASEAN. A total of 10 representatives of ASEAN countries and the organizations concerned to the ASEAN Harmonized Geology were attended, including participants from Thailand, Malaysia, Myanmar, Indonesia, Philippines, Lao PDR, Japan and Viet Nam.

3) Expert Meeting on Web-Based GIS and Recent Geoscience Database

The Geological Survey of Japan in collaboration with CCOPTS organized the Expert Meeting on Web-based GIS and Recent Geoscience Database on 25 October 2013 in Sendai International Center, Sendai, Japan, in adjacent to the 49th CCOP Annual Session. The meeting was attended by 20 participants from China, Indonesia, Japan, Malaysia, Myanmar, Thailand and Viet Nam. Presentations and discussion focused on the web-based GIS, which has been developed for geoscience data management. The recent technology of web-based GIS and examples of its application in database management programs in the CCOP region were also presented. The applications are 1) mineral resources database, 2) compilation of seamless geology, 3) groundwater monitoring system, and 4) geo-hazard monitoring system.

4) Integrated Geophysical Data Processing (IGDP) for CCOP

The 57th CCOP SC Meeting held on March 2011 in Chiangmai, Thailand endorsed the IGDP Project, which was proposed and 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, by enhancing the ability and capacity in the field of geo-data management and processing. Software modification and

translation into English has been done and a user manual is also ready. A training course planned in 2012 in China for CCOP and also ASEAN countries has been postponed to 2013.

The CCOP-CGS Capability Enhancing on Integrated Geophysical and Geochemical Data Processing Project (IGDP) Training/Workshop was held in 18-20 June, 2013 in Kunming, China. Twelve geophysicists and geochemists representing eleven CCOP Member Countries, one from Myanmar, and fifteen Chinese participants attended the event hosted by the IGDP Project Leader, Prof. Dr. Zhang Minghua. There were 21 participants from MCs, 3 distinguished guests, 3 resources persons and 2 CCOP TS staff. During the first day, participants from 12 countries (Cambodia, China, Indonesia, Japan, Republic of Korea, Lao PDR, Malaysia, Papua New Guinea, Thailand, Timor-Leste, Viet Nam and Myanmar) delivered country reports summarizing their national geophysical and geochemical data processing activities and shared information on the status of their survey programs. All participants were guided by CGS colleagues in installation of IGDP software in compatibility with MapInfo. An introduction to ICIS-IGDP software and usage training session was conducted including 3D modeling and inversion and GM data preprocessing. Future plans for the project were discussed.

5) CCOP High Education Support Network Program

The CCOP High Education Support Network Program was proposed by a group of professors from Yamaguchi University (Japan), Asian Institute of Technology (AIT, Thailand) and CCOPTS. On 22 October 2013 in Sendai, Japan, the first meeting was held in conjunction with the 49th CCOP Annual Session with 16 participants from Japan, Republic of Korea, Malaysia, Indonesia, Thailand, Papua New Guinea, Viet Nam and CCOPTS. The objective of this CCOP High Education Support Network Program was determined as to support young staff in CCOP member countries related institutes and surveys who want to study master or doctor course in the university and to make efforts to give opportunity to study higher education for such young staffs.

Initially, the Network Supporting Countries include Japan (Yamaguchi University, Akita University, Kanazawa University, Nagoya University and Tohoku University), Republic of Korea, China, Europe, America, and Oceania. The next meeting of the CCOP High Education Support Network Program is scheduled on 4 March 2014 in Chiang Mai, Thailand, in conjunction with the 62nd CCOP Steering Committee. Other member countries in CCOP Network are welcomed to participate and facilitate further connection for the network.

II. Publications

The following publications were produced in 2013.

1. General Publication

CCOP E-News Volumes in 2013: The CCOP E-News is meant to give the latest news and information on CCOP activities around the region and worldwide. This replaces the former printed CCOP Newsletter and will be issued several times a year. Published in 2013, volume 4 number 1, 2 and 3 can be downloaded at CCOP website in PDF format:

Vol.4 No.1 (April): http://www.ccop.or.th/download/e-news/CCOP_e-news2013-04v4n1.pdf

Vol.4 No.2 (July): http://www.ccop.or.th/download/e-news/CCOP_e-news2013-04v4n2.pdf

Vol.4 No.3 (Oct): http://www.ccop.or.th/download/e-news/CCOP_e-news2013-04v4n3.pdf

2. CCOP Annual Session Proceedings

1) Publication of the 48th CCOP Annual Session Part I

This publication is the proceedings of the 48th CCOP Annual Session held in Langkawi, Malaysia on 5-8 November 2012. The proceedings include the minutes of the session, CCOP Progress Report and its Workplan, Member and Cooperating Countries Reports as well as Cooperating Organizations Reports, among others.

The PDF file of the proceedings is of 5.6MB filesize and can be downloaded from <http://www.ccop.or.th/download/as/48as1.pdf>.

2) Publication of the 48th CCOP Annual Session Part II

This publication in the volume 59, Bulletin of the Geological Society of Malaysia of the Thematic Session on “Geoscience Innovations for Sustainable Development: The Future We Want” at the 48th CCOP Annual Session held in Langkawi, Malaysia on 22-23 November 2012 has been completed in late 2013. Volume 59 is a collection of 15 papers based on basic, applied and policy research on geoscience. The first five articles are thematic papers presented at the 48th CCOP Annual Session held from 5-8 November 2012 in Langkawi, Malaysia and the other papers were papers presented at the National Geoscience Conference and the Petroleum Geology Conference and Exhibition.

Its PDF file can be downloaded from this link, http://www.ccop.or.th/download/as/48as2_GSM_Bull59S.pdf. It is of 114 pages in color, and its filesize is around 4MB.

3. CCOP Steering Committee Meeting Reports

1) Report of the 59th CCOP Steering Committee Meeting

The Report of the 59th CCOP Steering Committee Meeting, 9-10 November 2012, Langkawi, Malaysia has been circulated to all the Member Countries by email in PDF format.

2) Report of the 60th CCOP Steering Committee Meeting

Report including the minutes of the Steering Committee Meeting held in Ubon Ratchathani, Thailand on March 2013 has been published electronically in PDF format and circulated to all the Member Countries by email.

4. Technical Activities Reports/Proceedings

1) Project Report on CCOP-GSJ/AIST-MONRE Groundwater Project Phase II Meeting, 26-28 February 2013, Hanoi, Viet Nam

This report includes country reports from Cambodia, China, Indonesia, Japan, Republic of Korea, Malaysia, Myanmar, Papua New Guinea, Philippines, Thailand, Timor-Leste and Viet Nam, in various topics relevant to the project. It is of 146 pages in color.

2) CCS-M Program

The workshop and seminar reports and proceedings of these activities were published on the CCOP website, <http://www.ccop.or.th/ccsm/>.

3) EPPM Program

The workshop and seminar reports and proceedings of these activities were published on the CCOP website, <http://www.ccop.or.th/eppm/>.

III. Cooperation with ESCAP

ESCAP and CCOP continued to maintain consultations and cooperation through networking and exchange of publications. CCOP reports to the ESCAP Commission Sessions, takes part in the related technical meetings and participates in the Sub-Committee Meeting on Environment and Sustainable Development and ICT Committee Session.

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