



CCOP

COORDINATING COMMITTEE FOR GEOSCIENCE
PROGRAMMES IN EAST AND SOUTHEAST ASIA

40th Anniversary of CCOP



ANNUAL REPORT 2006

CCOP TECHNICAL SECRETARIAT
BANGKOK, THAILAND



A World of Difference

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Message from the Chairperson



The year 2006 witnesses a steady economic growth in the whole CCOP region. Because fossil fuel still accounts for more than 80% of consumed energy, we also see an increased competition over the access to geo-resources, especially for oil and natural gas in all over the world. Economic growth also has a negative impact on environment. The Member Countries are continuing to face with threats of tsunamis, flooding, landslides, coastal erosions, forest degradation, global warming etc. In this context, CCOP as a coordinating body for geoscience programmes in East and Southeast Asia plays an important role in promoting geo-science inputs to sustainable development of all Member Countries.

In 2006, CCOP in cooperation with its Member Countries and Cooperating Countries has been successful in completion of the 4-year Petroleum Policy and Management (PPM) Project supported by the Norwegian Agency for Development Cooperation (NORAD), Ministry of Foreign Affairs, Norway, with the positive responses on project impacts from Member Countries which build the strong foundation for continuing the efforts in the proposed new Enhancing Public Petroleum Management (EPPM) project. The 3-year Institutional Capacity Building in CCOP Countries Phase 1 Project supported by the Danish Government is being implemented with record number of activities that bring geoscientists from different countries and organizations together on joint case studies. PETRAD Seminars supported by Ministry of Oil and Energy, and other agencies in Norway are continuously being implemented in collaboration with PETRAD and achieved record number of activities in this year. Community and Small-Scale Mining in Asia (CASM-Asia) project supported by World Bank and Geological Survey of Japan, National Institute for Advanced Industrial Science and Technology (GSJ/AIST) has gone its second year with two key seminars on social and technological issues.

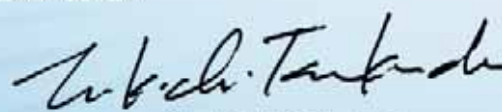
As a fast track action to the devastating Tsunami on 26 December 2005 which affected three of our CCOP Member Countries-Indonesia, Malaysia and Thailand, the Project on Tsunami Risk Reduction Measures with Focus on Landuse and Rehabilitation was launched in 2005. This year, International Seminar disseminating the project results organized by CCOP in collaboration with the Department of Mineral Resources, Thailand had achieved a record number of participants from the stakeholders, planners, decision-makers as well as the international community. The 6th International Workshop on Seismic Analysis in the South and Southeast Asia Regions supported by UNESCO, USGS was successfully organized by CCOP in collaboration with the Department of Mineral Resources, Thailand. The DelSEA project, Research on the Coastal Environment Management Strategy of the Asian Delta Region continues to have support from GSJ/AIST. These are some examples of the of activities within Geo-Environment Sector.

In Geo-Information Sector, the SANGIS Programme supported by CIFEG and UNESCO resulted in publication of the Asian Multilingual Thesaurus (AMTG) and the web interactive version of the AMTG is now under development. SANGIS Bibliographic Database now is available on the CCOP website. GAIN and other projects supported by the GSJ/AIST were continued.

On this auspicious occasion on the 40th Anniversary of CCOP, I would like to thank the Member Countries, Cooperating Countries and Organizations, Honorary Advisors and the Community for their active support, contributions, assistance, guidance and participation in the successful implementation of CCOP activities throughout the past four decades.

I would like to congratulate the Director of the CCOP Technical Secretariat and the Staff for their efforts making the highest level of activities during the year. I believe CCOP will achieve greater success in 2007.

Let's further strengthen our team for greater geoscience input for our sustainable future.



Dr. Eikichi Tsukuda
Chairperson
CCOP Steering Committee

About CCOP

CCOP: The Coordinating Committee for Geoscience Programmes in East and Southeast Asia

Vision: Geoscience for a sustainable future

Missions: To facilitate and coordinate the implementation of applied geoscience programmes in East and Southeast Asia in order to contribute to economic development and an improved quality of life within the region

Strategic focus:

- ★ Enhanced coordination of the geoscience programmes of the national geoscientific institutions of the CCOP Member Countries in order to promote cooperation and to maximize the benefits of programmes of regional significance.
- ★ Continued human resource development and institutional capacity building in accord with national priorities in order to achieve greater regional self-sufficiency in providing the geoscience inputs to sustainable economic development, sound environmental management and improvement of the welfare of the people of the region.
- ★ A greater flow of technical information between the Member Countries, Cooperating Countries and Cooperating Organizations of CCOP in order to share such information for their mutual benefit, to learn from each other's experience and to identify further opportunities for cooperation in capacity building.

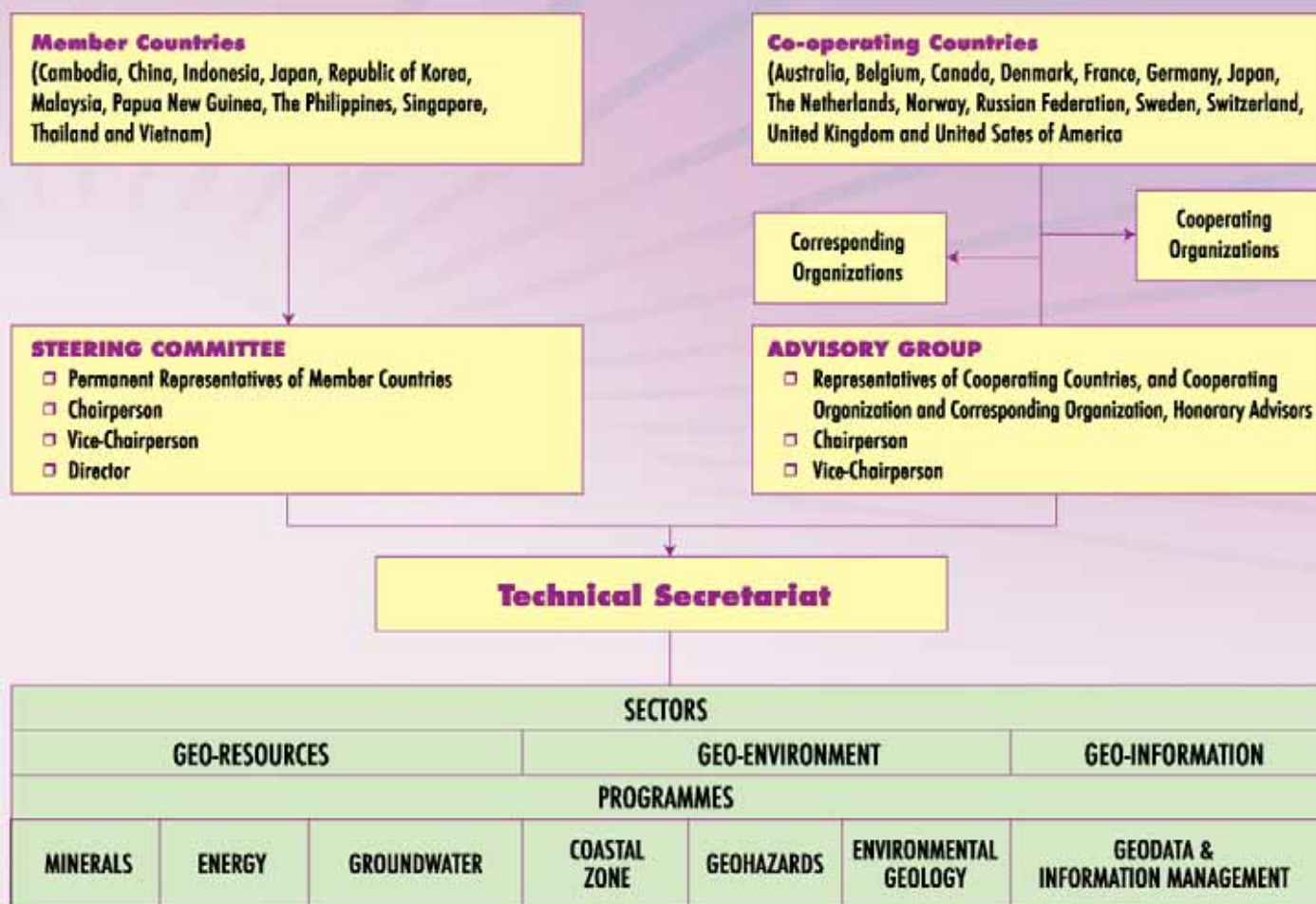
Member Countries: Cambodia, China, Indonesia, Japan, Malaysia, Papua New Guinea, The Philippines, Republic of Korea, Singapore, Thailand and Vietnam.

Cooperating Countries: Australia, Belgium, Canada, Denmark, France, Germany, Japan, The Netherlands, Norway, Russian Federation, Sweden, Switzerland, United Kingdom and United States of America.

Cooperating Organizations: ASCOPE, CIFEG, CPC, EUROGEOSURVEYS, GETECH, IOC, IOMAC, IUGS, PETRAD, UN-ESCAP, UNEP, UNESCO, WORLD BANK.

Management and Organization

ORGANIZATION CHART OF CCOP



As of 31 December 2006, the CCOP Technical Secretariat (CCOP T/S) has fifteen personnel, comprising six professional and nine supporting staff. During the reporting period, Mr. Niran Chaimanee from DMR, Thailand joined in the position of Regional Expert on 1 April 2006. Two Sector Managers, for Geo-Environment Sector and Geo-Information Sector had been appointed by 1 September 2006. The Sector Manager for Geo-Environment was re-designated from the incumbent Regional Expert position. The Sector Manager for Geo-Information had been appointed with the promotion of the Manager of the GeoInformation and Geodata Management as approved by the Steering Committee. Dr. Nguyen Hong Minh from Petrovietnam, Vietnam also joined in the position of Geo-Resources Sector Manager on 16 November 2006, so the full Sector Managers' scheme was implemented since November last year. During the period, the Sector Managers were engaged in strategic management and planning for the scope of work covered by the positions, development of sectoral network with Member Countries, enhancement of management capacity of Technical Secretariat, enhancing marketing of CCOP services and products, assisting in organizing technical activities, preparation and editing reports, publications, etc.

At the 46th Steering Committee Meeting held in Beijing, China on 19-20 September 2005, Japan and Korea have been elected as Chairman and Vice-Chairman of the CCOP Steering Committee Meeting respectively. Dr. Eikichi Tsukuda, Deputy-Permanent Representative of Japan to CCOP, Research Coordinator of the Geological Survey of Japan, AIST succeeded Mr. Somsak Potisat, Permanent Representative of Thailand to CCOP, Director General, Department of Mineral Resources as Chairman of the CCOP Steering Committee Meeting from 1 January 2006 - 31 December 2007.

Dr. David Prior, Honorary Adviser, and Dr. Jos de Sonnevile, Representative of the Netherlands to CCOP continued their services as Chairman and Vice Chairman respectively of the CCOP Advisory Group.

Mr. Jun Niimi, Minister of the Embassy of Japan in Bangkok, succeeded Mr. Yoshinobu Hiraishi as the Permanent Representative of Japan to CCOP. Mr. Suyartono, Secretary of GAI, Dr. Thamrin Sihite, Head of Planning & Cooperation Bureau - Secretariat General of the Ministry of Energy and Mineral Resources, and Dr. Djadjang Sukarna, Head of Center for Geological Survey were appointed as Deputy Permanent Representatives of Indonesia. Mr. Horacio Ramos resumed his position as the Director of the Mines and Geoscience Bureau of the Philippines and as the Permanent Representative to CCOP, and Mr. Ramon Alan Oca, the Department of Energy, Philippines, succeeded Mr. Ranilo Abando as Deputy Permanent Representative. Dr. Seong-Cheon Shin succeeded Dr. Sang Kyu Lee as the Vice-President of Korea Institute of Geoscience and Mineral Resources, and as the Deputy Permanent Representative of Korea to CCOP. Mr. Sieng Sotham, Director of the Department of Geology, General Department of Mineral Resources of Cambodia, succeeded Mr. Chrea Vichett as the Deputy Permanent Representative of Cambodia to CCOP. Mr. James Wanjik succeeded Mr. Stevie Nion as Secretary of the Department of Mining, Papua New Guinea (PNG), and as the Permanent Representative of PNG to CCOP. Mr. Erling Kvadsheim succeeded Mr. Øystein Kristiansen as Representative of Norway to CCOP.

On behalf of CCOP, we would also like to thank Mr. Somsak Potisat for his outstanding service as Chairman of CCOP Steering Committee for 2004-2005, Mr. Jeremias Dolino, Mr. Yoshinobu Hiraishi and Mr. Stevie Nion for their distinguished service as Permanent Representative to CCOP, Mr. Øystein Kristiansen as Representative of Norway to CCOP and their valuable contributions to CCOP in the past years.

Highlights for the Year 2006

47th and 48th CCOP Steering Committee Meetings and 43rd CCOP Annual Session

The CCOP Steering Committee Meetings are held twice a year to review the programmes and activities of CCOP while the CCOP Annual Session assemble the three constituent units of CCOP, the Member Countries, the Cooperating Countries and Organizations and Advisors, for a General Consultative Meeting and country and organization presentations.



■ 43rd CCOP Annual Session, November 2006, Daejeon, Republic of Korea

The 47th CCOP Steering Committee Meeting held in Krabi, Thailand, 29-31 March 2006 had discussed the administration, personnel, finance matters, and new initiatives for CCOP technical activities. The meeting also approved the Business Plan for 2006-2007.

The 43rd CCOP Annual Session and 48th Steering Committee Meeting was held on 30 October - 3 November 2006 in Daejeon, Republic of Korea.

The main focus of the Annual Session was on progress report, financial matters, workplan and the status of current projects and new initiatives. The Steering Committee approved the proposed budget for 2007 and discussed various CCOP activities covering the three main sectors on Geo-resources, Geo-environment and Geo-information. A thematic session, organized by CCOP, KIGAM, together with Korea Gas Hydrate R&D Organization (GHDO), was held on the topic "New Energy Resources in the CCOP Region with two themes Gas Hydrate and Coalbed Methane". A roundtable dialogue on the 'Role of Geoscience in Governance for sustainable Development and Human Security' has also been organized during the Annual Session in cooperation with the Commission on Geoscience for Environmental Management of the International Union of Geological Sciences (IUGS-GEM).



■ Participants of thematic session "New Energy Resources in the CCOP Region with two themes Gas Hydrate and Coalbed Methane"



■ Field excursion during the 43rd CCOP Annual Session and 48th Steering Committee Meeting

Technical Cooperation and Activities

Technical Cooperation

Cooperating Countries and Organizations continued to provide support for CCOP activities in order to contribute more geoscience inputs to sustainable development in the Member Countries. Member Countries also provided in-kind support to CCOP programmes, to maximize the benefits of the support provided by the Cooperating Countries and Organizations. Other Cooperating Countries continued their technical support to a number of CCOP programmes through implementation of bilateral activities with CCOP Member Countries.

Summary of CCOP Technical Cooperation with Cooperating Countries and Organizations

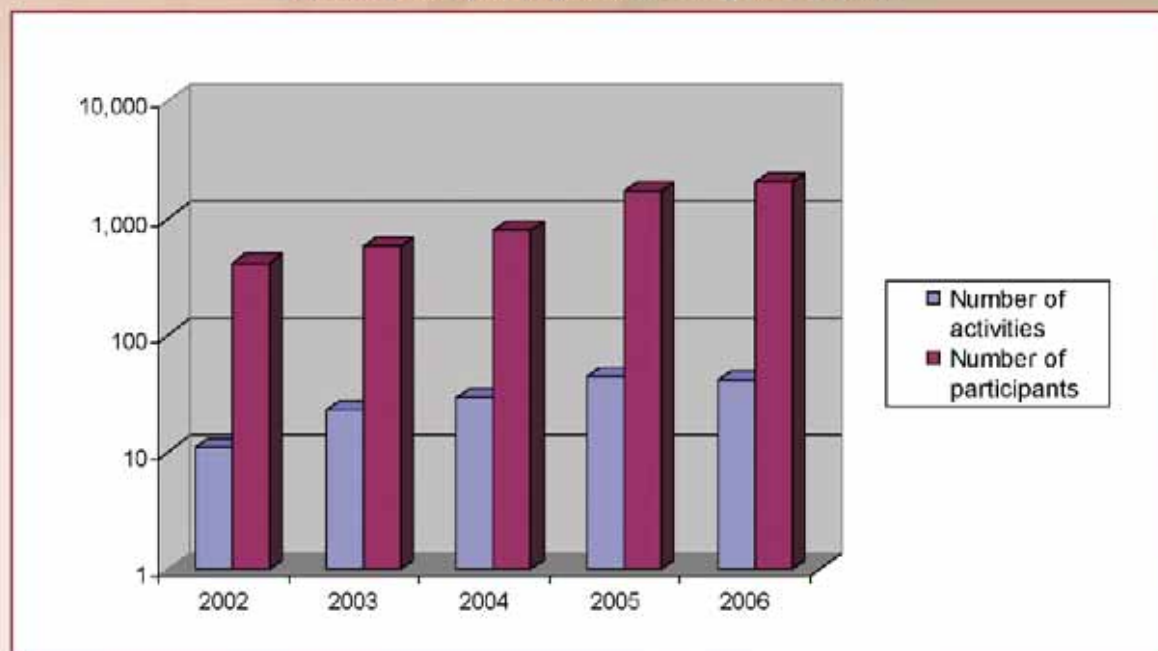
Cooperating Country/Organization	Activities
Canada	<ul style="list-style-type: none"> ☆ Cooperation and support for an Ocean and Coastal Mapping Workshop to Member Countries which is available to MC on bilateral basis.
Denmark	<ul style="list-style-type: none"> ☆ Support of the Capacity Building in CCOP Countries Project Phase 1 (ICB-CCOP 1) in the petroleum sector. ☆ Submitted a project concept on Sustainable Community for Small Scale Mining in East and Southeast Asia.
France	<ul style="list-style-type: none"> ☆ Support to the SANGIS and Asian Multilingual Thesaurus through CIFEG. A new project on European-Asian thesaurus is also being discussed.
Japan	<ul style="list-style-type: none"> ☆ Five projects are being supported for 2006-2007, 4 with GSJ/AIST and 1 with University of Tokyo. ☆ Cooperation and support for the CASM-Asia Project ☆ A new project proposal on Human Security and Environmental Protection in Artisanal/Small Scale Mining in East and Southeast Asia submitted to Yamagata U. for support ☆ A proposal developed for a groundwater project for Cambodia with regional component involving CCOP.
Germany	<ul style="list-style-type: none"> ☆ Cooperation / communication through bilateral projects with Member Countries
The Netherlands	<ul style="list-style-type: none"> ☆ Assisted in seeking funding support for the CCOP Tsunami Project.
Norway	<ul style="list-style-type: none"> ☆ Support for the Petroleum Policy and Management (PPM) Project Support of the project on Tsunami Risk Reduction Measures With focus on Land use and Rehabilitation Through PETRAD, CCOP organized tailor-made bilateral seminars for the CCOP Member Countries Support for preparation of project document for proposed new project on Enhancing Public Petroleum Management (EPPM) after completion of PPM. ☆ Support for preparation of project document for Phase 2, Tsunami Risk Assessment and Mitigation in Southeast Asia.

<i>Cooperating Country/Organization</i>	<i>Activities</i>
United Kingdom	<ul style="list-style-type: none"> ☆ Cooperation with GETECH in the production of aeromagnetic and gravity maps Organization of a Workshop with GETECH on integration of data for petroleum exploration being discussed. Assistance in seeking funding support for CCOP's tsunami project by DFID, and through EUROGEOSURVEYS from the EU
United States of America	<ul style="list-style-type: none"> ☆ Through U.S. Geological Survey, cooperation on the implementation of the Global Mineral Resource Assessment Project (GMRAP) for Southeast Asia Offered seminars on gas-hydrates and coal bed methane for MC on bilateral basis Joint organization of a workshop on Seismic Analysis for Earthquakes Initiative on Sea Grant model programme for the region with NOAA Texas A & M University made available Fellowships for the Member Countries CCOP's interest in USAID supported Indian Ocean Tsunami Warning System Project
Asean Council on Petroleum (ASCOPE)	<ul style="list-style-type: none"> ☆ Maintained close cooperation through jointly organizing seminars, information exchanges for the benefit of the Member Countries. Participation in ASCOPE Joint Committees Meeting to discuss current issues on CCOP and ASCOPE energy programmes.
Circum Pacific Council	<ul style="list-style-type: none"> ☆ Cooperation on the WGGC Project CPC named CCOP as the international secretariat for the proposed International Energy Conference 2007. New initiative on Fueling the Rim and discussion on a project to develop new modules of RIMSIM game for different scenarios
Economic and Social Commission for Asia and the Pacific (ESCAP)	<ul style="list-style-type: none"> ☆ Information exchange and discussion, cooperation on technical activities as well as organizing workshops and conferences. CCOP reports to the UN-ESCAP Commission Session and participates in the subcommittee meetings
United Nations Environment Programme- ISDR	<ul style="list-style-type: none"> ☆ Took part in ISDR regional workshop on mitigation, preparedness and development for tsunami early warning system in Indian Ocean Region and preliminary discussion for the preparation of the first global platform on disaster risk reduction
International Union of Geological Sciences (IUGS)	<ul style="list-style-type: none"> ☆ CCOP is an Associate Partner in the International Year of Planet Earth. IUGS support to CCOP activities. Application for Associate Membership in IUGS. Cooperation in various IUGS/IGCP projects and IUGS Commission activities. Joint organization of Roundtable Dialog for 2006 Annual Session with IUGS/GEM
United Nations Educational, Scientific & Cultural Organization (UNESCO)	<ul style="list-style-type: none"> ☆ Support for SANGIS - Bibliographic Phase, provided Server to host SANGIS in CCOP T/S and publication of Asian Multilingual Thesaurus for Geoscience Information exchange, discussion and cooperation on CCOP technical activities were continued and new initiatives on groundwater discussed
The World Bank	<ul style="list-style-type: none"> ☆ Support for CASM Asia-Pacific coordinated by CCOP for the region

Technical Programmes and Activities

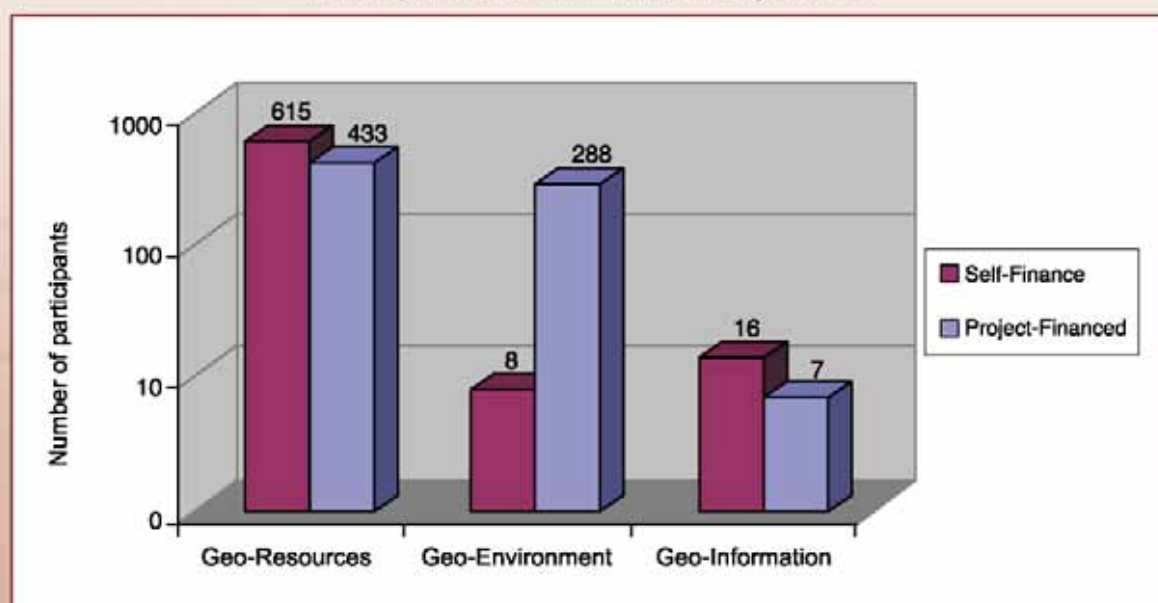
The Technical Secretariat has achieved the outstanding performance regarding its planned targets under all three sectors. The number of activities and participants increased dramatically within the last five years.

Activities and participation during last 5 years



During 2006, a record number of **41** seminars, technical meetings/workshops and trainings were held and attended by **1,619** participants (2,082 participants if including all participants from local organizers, resources speakers, VIP, Technical Secretariat and participants from other countries etc.). Aiming at capacity building and technology transfer, these activities were highly appreciated by the participants. Many of them attended these technical events on self-finance basis which is evidence of high interests of Member Countries in CCOP activities. Visits to Member Countries were made by CCOP experts to provide advisory services.

Participation in CCOP activities by sectors



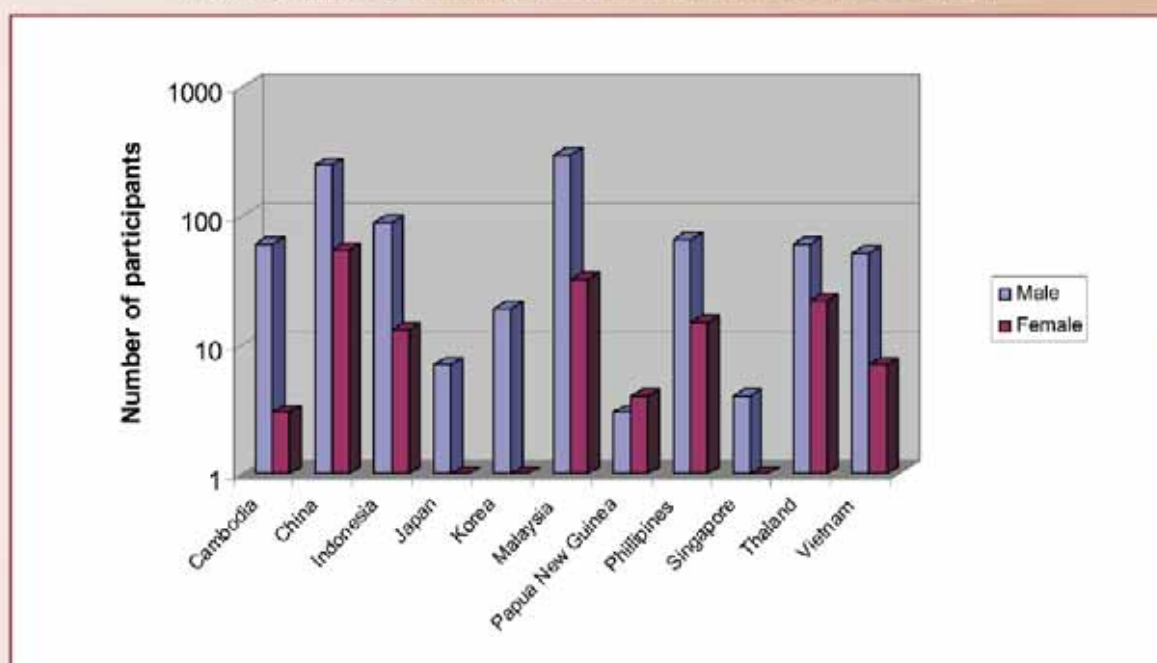
Geo-Resources Sector

Our partnership with the earth

The socio-economic development of Member Countries depends, to a large extent, on the supply of geo-resources. The partnership with the earth is essential for their discovery, responsible usage and effective management. Under this sector CCOP geo-scientific programmes of research and development aim to strengthen the Member Countries technical capabilities in establishing the developmental potential of their mineral, energy and groundwater resources and promoting their socially responsible and environmentally sustainable exploration, conservation and development.

Under the Geo-Resources sector, intensive activities were conducted throughout the year with total number of 32 workshops and seminars. There were 1109 participants from CCOP Member Countries that attended these activities.

Participation by Member Countries in Geo-Resources Sector



GEO-RESOURCES SECTOR: ENERGY PROGRAMME

Energy is essential for development. In CCOP Member Countries, oil, natural gas, coal and lignite play very important role as a number of the CCOP member states is both an important producer and consumer of such energy. CCOP activities in the energy programme have been sustained as a systematic regional endeavour of geo-energy resource assessment, evaluation and management which is fundamental to sustainable development of the region. In this programme, two projects and a series of collaborative seminars could be named as outstanding activities in year 2006.

1) Petroleum Policy and Management Project (PPM)

The year 2006 marked the successful completion of the 4-year PPM Project, which has been based on a series of case studies utilizing the lessons learned from the previous NORAD-funded projects in a hands-on setting using country data from diverse settings. The overall goal is to develop human resources and to promote public sector institutional capacity-building in the petroleum management of the CCOP Member Countries.

This was done through the implementation of four case studies supported by workshops, seminars and expert visits, addressing issues on resource assessment, economic modeling, legal and fiscal systems, and exploration and licensing strategies. The case studies were carried out in Cambodia, Philippines, China and Indonesia. During this final year, the following activities have been carried out:



Case Study Workshops / Dissemination Seminars

- 6th Cambodia Workshop and Dissemination Seminar, 21-25 February, Seam Reap and June 30, Phnom Penh, with 29 and 17 participants respectively;
- 5th Philippines Workshop and Dissemination seminar, 14-18 March, Cebu and 12 May, Manila with 29 and 21 participants respectively;
- 4th China Workshop and Dissemination Seminar, 30 May-3 June and 5 June, Beijing, with 33 and 19 participants respectively;
- 4th Indonesia Workshop and Dissemination Seminar, 13-17 June and 3 August, Jakarta, with 33 and 32 participants respectively;

Expert Visits to Case Study Countries and Training Courses

- Training Course on Plan Development Operations (PDO), 18-19 January, Phnom Penh, Cambodia, 10 participants;
- Training Course on Simulation of Tight - Sandstone Gas Reservoir, 18-19 May, Deyang, China, with 15 participants;
- Training Course on Reservoir Management Planning/Practices and POD, 7-10 February, Manila, Philippines, with 32 participants.

Seminar

The 5th PPM Project Seminar was held on 26-29 July in Bangkok, Thailand. The seminar was attended by 26 participants from 8 Member Countries.

Planning Meetings

Four Planning Workshops/National Project Coordination Committee (NPCC) Meetings in all the four case study countries were organized to work out coordination plans for the project's activities. The Project Coordinator also represented the Technical Secretariat in the ASCOPE Joint Committees Meetings, in PETRAD seminars and other petroleum-related conferences.

CCOP-NPD-MFA Annual Review Meeting

The CCOP-NPD and CCOP-MFA (Norwegian Embassy in Bangkok) PPM Annual Meetings for 2006 were held in Bangkok on 14 and 27-28 June, and 8 December respectively. The meetings focused on the institution support to the project and review of implemented activities.

Project Impact

As reported by the National Coordinators, listed below are some of the impacts of the PPM Project.

- Improved understanding of the petroleum potential and policies of the CCOP Member Countries, especially the case study countries
- Information and Knowledge learned are disseminated through reporting and conduct of seminars in the participant's respective organization
- Adoption of some concepts learned in basin assessment and exploration investment promotions.
- The Project provided a good forum of building closer relationship and cooperation.
- PPM is easily implemented based on the already established network. This network also functions outside the project.
- Easier facilitation of new projects in the CCOP T/S.

The final report of the PPM Project is divided into 2 volumes: i) Volume 1 as the report on the activities conducted to support the case studies and other administrative accomplishments; ii) Volume 2 written by the case study participants providing details on the results and recommendations of the case studies as well as the report from the other Member Countries not hosting the case studies. This volume also highlights how information and knowledge learned from Project activities were given value and used to enhance their capacities. The final report of the Project was produced both in hard and digital copies, which were delivered to Member Countries and NORAD, Ministry of Foreign Affairs, Norway.

The PPM Project homepage <http://www.ccop.or.th/PPM> provides complete information of the Project and all its activities.

A new project concept as follow up to the PPM Project was already prepared by the Technical Secretariat and submitted to the Norwegian Embassy in Bangkok for review. The Embassy has recommended for the preparation of the full Project Proposal on Enhancing Public Petroleum Management (EPPM) in CCOP Member Countries. A Coordinators' Forum had been held in October 2006 to discuss in details the objectives, outputs, and activities of the EPPM Project. The Embassy has also approved the extension of the PPM Project Coordinator's service up to the end of June 2007 to prepare the EPPM Project documents to be submitted to the Norwegian Embassy and to organize the follow up PPM activities including Seminars on the Practice of Knowledge Management (PKM), Seminar on the Clean Development Mechanism (CDM) and CCOP-NORWAY Oil and Gas Conference (OGC).

2) Institutional Capacity Building in CCOP Countries Project Phase I (ICB-CCOP 1)

The 3-year DANIDA-supported ICB-CCOP 1 Project started in January 2005. The long-term objective of the project is to strengthen the capacity of the public authorities within the CCOP Member Countries to assess their countries' hydrocarbon potentials. It involves cross-border case studies in Vietnam-China and Indonesia-Malaysia- Philippines. Following are activities of the project in this year.



Meetings, Workshops, Seminars, Field Trips

- **ICB-CCOP1 1st Malaysia Workshop and Field Trip**, 26 February - 5 March, 2006 in Sandakan, Lahad Datu & Sahabat, Malaysia, 25 participants. The workshop established the work plans which serve as the concrete foundation for the implementation of the project.
- **ICB-CCOP1 Hainan Field Trip**, 9-12 April, 2006, on Hainan Island, China, with 10 participants, for studying the eastern on-shore area to the Yinggehai-Song Hong basin.
- **ICB-CCOP1 Hanoi Field Trip**, 14-17 May, 2006 in Hanoi Trough, northeast Vietnam, with 11 participants, for studying the western onshore area to the Yinggehai-Song Hong basin.
- **ICB-CCOP1 1st Bangkok Meeting on Sulu Sea - East Sabah Basin & Yinggehai - Song Hong Basin Case Study**, 10-11 August 2006, Bangkok, Thailand
- **ICB-CCOP1 1st Qingdao Meeting on Yinggehai - Song Hong Basin Case Study**, 28-29 August, 2006, Qingdao, China
- **CCOP/ICB-PETRAD-CNOOC-MLR-CGS Seminar on CO₂ Issues in Petroleum E&P**, 23-25 November 2006, Guilin, China

Trainings, Expert Visits

- **ICB-CCOP1 Training Course on Organic Geochemistry and Petrology in Petroleum Exploration**, 11-14 September 2006, Beijing, China
- **ICB-CCOP1 Hanoi Training courses: Petroleum System Modeling Software User Training & Application Training**, 8-13 May 2006, Hanoi, Vietnam. Experts from the software company IES, GEUS and VPI were invited as the resource persons to facilitate the training courses.
- The originally planned "Fractured Basement Reservoir Training Course" has been postponed to May 2007 because the invited regional experts from Vietnam were not available at the time.

Details of the ICB Project can be accessed at the website: <http://www.ccop.or.th/techdetail.asp?id=31>

3) CCOP-PETRAD Seminars

There is a strong need for human resources development in a wide range of topics related to geo-resources in the Member Countries. The series of tailor-made seminars funded by Norway and organized by CCOP, PETRAD in cooperation with Government Institutions and National Oil Companies in Member and Cooperating Countries were designed to meet these needs.

During the year, seven seminars, excluding the joined one with ICB-CCOP 1 project, were held with a total number of 479 participants

- **CCOP-PETRAD-PETRONAS Seminar on Advanced Seismic Analysis**, 6-8 March 2006, in Putrajaya, Malaysia, completed with 53 participants; 21 papers were presented by 15 guest speakers from Norway, USA and from the Region;
- **CCOP-PETRAD-CNOOC-MLR Seminar on Drilling and Downhole Management and Technology**, 24-26 April 2006, in Tianjin, China, completed with 108 participants; 19 Papers were presented by 14 guest speakers from Norway and from the Region;
- **CCOP-PETRAD-PETRONAS Seminar on Deepwater Technology**, 22-26 May 2006, in Kota Kinabalu, Malaysia, completed with 73 participants; 36 papers were presented by 34 guest speakers from Norway, and from the Region;
- **ASCOPE-PTT-CCOP-PETRAD Seminar on Crisis Communications Planning**, 22-23 June 2006, in Bangkok, Thailand, completed with 51 participants; 8 papers were presented by 3 guest speakers from Norwegian Petroleum Safety Authority (PSA), Norway;
- **CCOP-PETRAD-MLR-CGS Seminar on Petroleum Policy and Management**, 14-19 August 2006, Chengdu, China, 57 participants;
- **PETRONAS-PETRAD-INTSOK-CCOP Seminar on Drilling, Well Service and Completion New Technology "Acquiring New Technology for Local Content"**, 4-6 September 2006, Langkawi, Malaysia;
- **PETRONAS-PETRAD-INTSOK-CCOP Brownfield Technology Seminar Creating Value Through Brownfield Re-development**, Penang, Malaysia, 11-13 December 2006.



CCOP-PETRAD “TNA” Training Needs Assessment, a diagnostic tool to identify petroleum sector training and institutional requirement continued to be available. This activity is in co-operation with The Bridge Group and Stavanger University College.

CCOP-PETRAD-AGWA (Active Management of Groundwater Aquifers). A meeting on assessing the interest of Member Countries on AGWA was held during the 42nd Annual Session. A Working Group Meeting planned for 2006 has been postponed to 2007.

GEO-RESOURCES SECTOR: MINERALS PROGRAMME

1) CCOP-USGS Global Mineral Resource Assessment Project

The CCOP-USGS Global Mineral Resource Assessment Project (GMRAP) is part of a 5-year initiative to assess the identified and undiscovered non-fuel mineral resource of the world. Since 2003, three workshops had been conducted for the CCOP Member Countries, in 2003, 2004 and 2005, and the final workshop is planned to be held in 2007. To date, assessment for porphyry and sediment hosted copper have been completed and the draft final report prepared.

2) Community and Small-Scale Mining in Asia (CASM-Asia) Project

The CASM-Asia Project has been endorsed by the 44th Steering Committee Meeting held on 19-20 November 2005 in Tsukuba, Japan. This three-year project, from 1 May 2005 to 31 April 2008, is supported by the World Bank in close cooperation with the Geological Survey of Japan, AIST. The objective of the project is to function as a hub for CASM activities through which cooperation network of those engaged or have interest in artisanal/small scale mining can be built and to bridge the artisanal/small miners with the stakeholders, communities, technology and science in the Asia-Pacific region.

After the Inaugural Meeting held in Bangkok, Thailand on 25-26 July 2005, two workshops were organized in the second half of 2006.

CASM-Asia Workshop on Artisanal/Small-Scale Mining Social Issues was held in Hanoi, Vietnam on 16-18 August 2006, by CCOP, Geological Survey of Japan, AIST and the Department of Geology and Minerals of Vietnam. Twenty four participants from the CCOP Member Countries, India, Mongolia and United Kingdom joined the workshop. The workshop reviewed actions of each country participating in the project, learned about stories of social issues of artisanal/small-scale mining in Asia. The participants also had a good chance to visit coal-mining company, a stone quarry and the World Natural Heritage Ha Long bay in Quang Ninh province.



CCOP-GSJ/AIST-GAI CASM-Asia Workshop on the State-of-the-Art of Science and Technology to Protect the Environment and People was conducted on 27-29 November 2006, in Bandung, Indonesia. The Workshop had been organized by CCOP and Geological Agency Indonesia with sponsorship from CCOP, World Bank, Geological Survey of Japan/AIST and Geological Agency Indonesia. Forty one participants from CCOP Member Countries, speakers from Japan, India, UK, Mongolia, Germany, and representatives from UNIDO in Indonesia joined the workshop. The workshop had discussed about ASM database and technological issues, latest understanding of epithermal gold mineralization, clay minerals, extraction of gold using halogen-containing organic system, environmental sampling for mercury study, and application of PIXE to environmental studies, analysis of traditional versus alternative technologies, technical solutions for ASM etc. The participants also had visited the KUD Mekarjaya's gold mine in Ceneam Sub-District, Tasikmalaya Regency, West Java Province, which is 15 km South East of Bandung, to get first hand information on technological issues of local ASM workers.

GEO-RESOURCES SECTOR: GROUNDWATER PROGRAMME

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

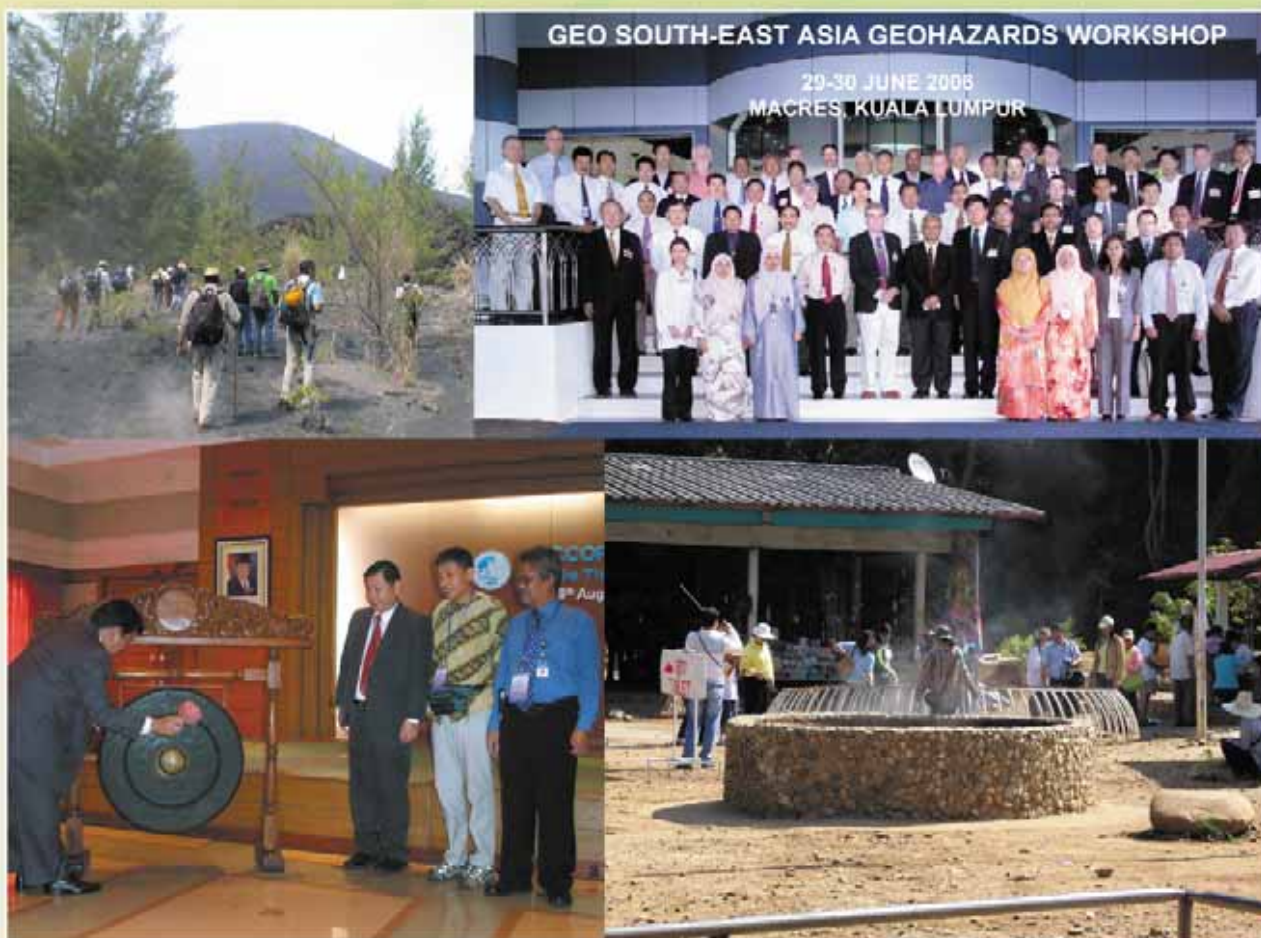
The CCOP-GSJ/AIST Project on Groundwater Assessment and Control in the CCOP Region originally named Groundwater Assessment along Great River Basins in East and Southeast Asia, is a 5-year project which commenced in April 2004 with the support of the Geological Survey of Japan, AIST. The project aims to evaluate groundwater resources and environments through its monitoring. It is subdivided into 3 sub-projects: (1) Groundwater Environment and Management in the Urban Coastal Area, (2) Groundwater and Land Subsidence Monitoring and (3) Groundwater Evaluation Using Monitoring System. These sub-projects are led by Japan, China and Korea respectively.

During the year, the CCOP-GSJ/AIST-CGS Meeting and 2nd Training Course “Groundwater Assessment and Control in the CCOP Region”, supported by Japan AIST/GSJ, GREEN, and CGS of China, was held on 25-27 September 2006 in Beijing, China, with 22 participants. The objective of this meeting was to follow-up the progress of the three sub-projects activities and to have better understanding on groundwater data evaluation.



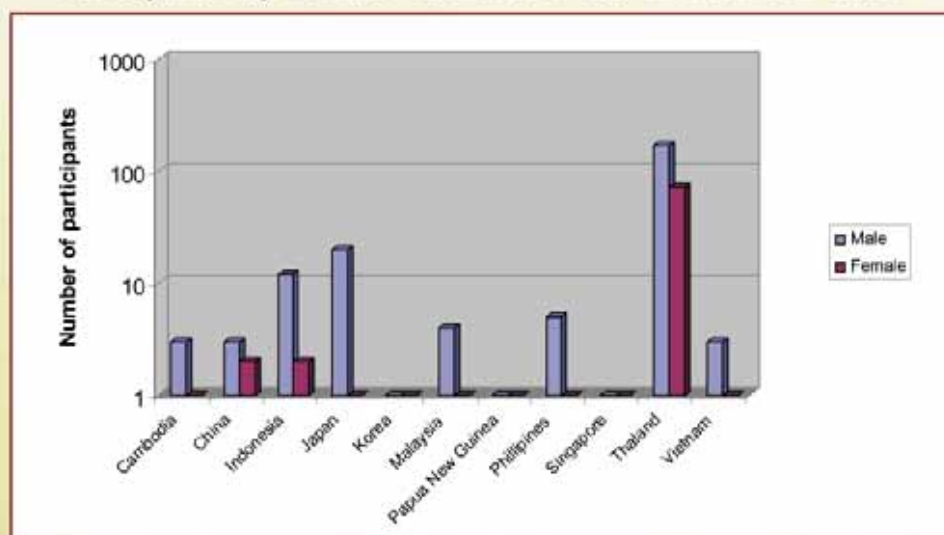
Geo-Environment Sector

The natural environment: our common heritage



The Geo-environment sector's activities were carried out intensively throughout the year on subject related to geohazard and geoenvironment programmes with total number of 8 workshops and seminars. Participants of these activities were mainly from CCOP Member Countries and tsunami affected countries; a total number of 487 took part.

Participation by Member Countries in Geo-Environment Sector



GEO-ENVIRONMENT SECTOR: GEOHAZARDS PROGRAMME

1) CCOP-GSJ/AIST Field Workshop for Volcanic Hazards Mitigation

The CCOP-GSJ/AIST Project on Field Workshop for Volcanic Hazards Mitigation is a 4-year project which commenced in April 2004 with the support of the Geological Survey of Japan, AIST. The project's 3rd Field Workshop was organized in Bandung, Indonesia from 29 Aug - 3 September 2006 with 22 participants.

Fifteen papers were presented during the 2 days workshop. The Volcanic survey for Hazard Potential, Measures and Monitoring in Indonesia, the present status of Mayon Volcano Eruption and Volcano hazard Mitigation and Eruption Forecasting in the Philippines and Volcano Geology of Japan and new technology for Volcano monitoring were reported. Field excursion was carried out with a visit to the lahar and pyroclastic flow deposits of Papandaya Volcano, DVGHM Observatory Station of Active Volcano and the geochemical field survey at the summit of the Krakatua volcano complex.

Volcanologists could learn the various types of eruption and hazard assessments in Indonesia, the Philippine and Japan in this workshop. It can be concluded that understanding the mechanism and typical character of each volcano type can lead to the monitoring and evacuation before eruption. Alarm system, and education also are important for public resilience. The Philippines will be the host country for the final workshop/technical seminar of this project in conjunction with the CCOP Annual Session in 2007.

2) Project on Tsunami Risk Reduction Measures with Focus on Landuse and Rehabilitation

Upon the approval of the project by the 45th Steering Committee Meeting, 31 March to 2 April 2005 in Phuket, Thailand, implementation of the Royal Norwegian government supported project on "Tsunami Risk Reduction Measures with Focus on Landuse and Rehabilitation" commenced in June 2005. The project was conducted by the Norwegian Geotechnical Institute (NGI), in close cooperation with the Department of Mineral Resources (DMR), Thailand and the CCOP Technical Secretariat.

An **International Dissemination Seminar** promulgating the study, the results and recommendations had been held in Bangkok, Thailand on 9 March 2006, participated by about 263 including representatives from the December 26 tsunami affected countries, Sri Lanka, India, Indonesia, Malaysia, and other CCOP Member Countries, representatives of regional and international agencies as well as local Thai participants.

A Project report entitled "Tsunami Risk Reduction Measures with focus on Land Use and Rehabilitation was prepared and distributed. A summary (short version) of the full technical report, prepared specially for the stake holders and general public and translated in Thai were printed (2,000 copies) in dual languages, Thai and English for use in the International dissemination seminar, and for distribution to relevant interest parties. The full Project report and the Summary are available for downloading through CCOP website.

Subsequent to the success of the project, CCOP is in discussion with NGI and the Royal Norwegian Embassy to conduct a phase II project on tsunami risk assessment and mitigation in South and Southeast Asia. The Tsunami Phase II Project Meeting for preparation and planning was held in Bangkok, Thailand, 3-6 October 2006.

3) The Sixth International Workshop on Seismic Analysis in the South and Southeast Asia Regions



■ *Field excursion during International Workshop on Seismic Analysis in the South and Southeast Asia Regions*

The United Nations Educational, Scientific and Cultural Organization (UNESCO), the U.S. Geological Survey (USGS), and earth science organizations in the South Asia Region have sponsored a series of 5 previous workshops on reducing earthquake losses. The Sixth International Workshop on Seismic Analysis in the South and Southeast Asia co-hosted by the Coordinating Committee for Geoscience Programmes in East and Southeast Asia (CCOP) and the Department of Mineral Resources, Thailand, was held from 4 to 7 December 2006 at the Imperial Mae Ping Hotel, Chiang Mai, Thailand.

A total of 48 participants from Bangladesh, Bhutan, China, India, Indonesia, Iran, Nepal, Pakistan, Sri Lanka, Thailand, The United Kingdom, The United States of America attended the workshop. This sixth workshop focused on various issues such as Processing of the 8 October 2005 Kashmir earthquake and associated aftershock data using SEISAN, Seismicity map and ISC data - input from the participants whether they are satisfied with the ISC seismicity listing and Regional fault map - Resolve nomenclature for the geologic/tectonic features, create a cross-reference table that will relate terminology for the various national maps.

GEO-ENVIRONMENT SECTOR: COASTAL ZONE PROGRAMME

1) CCOP-GSJ/AIST Project on Integrated Geological Assessment of Deltas in Southeast Asia (DelSEA Project)

The CCOP-GSJ/AIST Project on Integrated Geological Assessment of Deltas in Southeast Asia (DelSEA Project) is a 4-year project which commenced in April 2004 with the support of the Geological Survey of Japan, AIST as part of the IGCP 475 "*DeltaMAP*" project. During the reporting period, 2 main activities were operated.

The first activity, the **Second Meeting of the CCOP DelSEA Project** was held at University Brunei Darussalam, Brunei during 13-18 February 2006 in conjunction with second annual meeting of IGCP-475 *"DeltaMAP"* and APN Mega Delta in Asia. Eight participants from the CCOP Member Countries participated in this meeting.

The second activity, a **Seismic Survey In The Mekong River In Cambodia** was conducted as a bilateral joint research between the Geological Survey of Japan, AIST (GSJ, AIST) and the General Department of Mineral Resources of Cambodia (GDMR) as part of CCOP DelSEA project, Integrated Geological Assessment for Deltas in Southeast and East Asia, during April 19 to April 30, 2006, supported by Grant-in-aid for Scientific Research (Kakenhi) of JSPS, AIST, and CCOP. Twelve-channel and single channel seismic survey by using EG&G Uniboom and Garmin GPS was done from Kampong Cham to Vietnam border in the Mekong River, Phnom Penh to Takhmau of the Bassac River and Prek Kdam to Phnom Penh of the Tonle Sap River. All data will be processed in GSJ, AIST and the result will be published in appropriate international journals.



■ *Seismic Survey In The Mekong River In Cambodia*

GEO-ENVIRONMENTAL SECTOR: ENVIRONMENTAL GEOLOGY PROGRAMME

1) Research on the Coastal Environment Management Strategy of the Asian Delta Region (Phase I)

The CCOP-GSJ/AIST Research Project on Coastal Environment Management Strategy of the Asian Delta Region (Phase I) is a 3-year project which was started in April 2004 and finally concluded in 2006. The Project has been supported by Tokyo University and DMR.

A Final Report Meeting of the joint project on *"Research on the Coastal Environment Management Strategy of the Asian Delta Region"* was held on 13 December 2006 at CCOP Technical Secretariat in Bangkok with the total number of 12 participants. The meeting discussed the final wrap up of the project and preparation of the Project Report. The meeting agreed that it is necessary to add future data sets acquired by Japanese team to the past data sets for the consistent and continued monitoring. For the monitoring, resource person who knows the remote-sensing technology is necessary in Thailand. Lastly, further collaboration between the Thai government and the Japanese team is necessary to promote the future monitoring.

In conjunction with this meeting, the **Technical Seminar and Workshop on “Strategy for Sustainable Coastal Development and Management: Application of Coastal Geo-environmental Knowledge for Coastal Zone Management of Thailand”** was also organized on 14 December 2006 at Bangkok, Thailand with about 50 participants from Thai’s government agencies, local governments and universities. The technical papers on environmental geology were presented. The titles include, Study on the Strategy for Sustainable Development along the Coast of Thailand; Current Status and Future Potential of PALSAR Data Usage; Coastal Resources Management of Thailand and Mitigation Measures for Coastal Erosion Problems along the Coast of Surat Thani Nakorn Sri Thammarat and Songkla Provinces, the Southern Thailand.

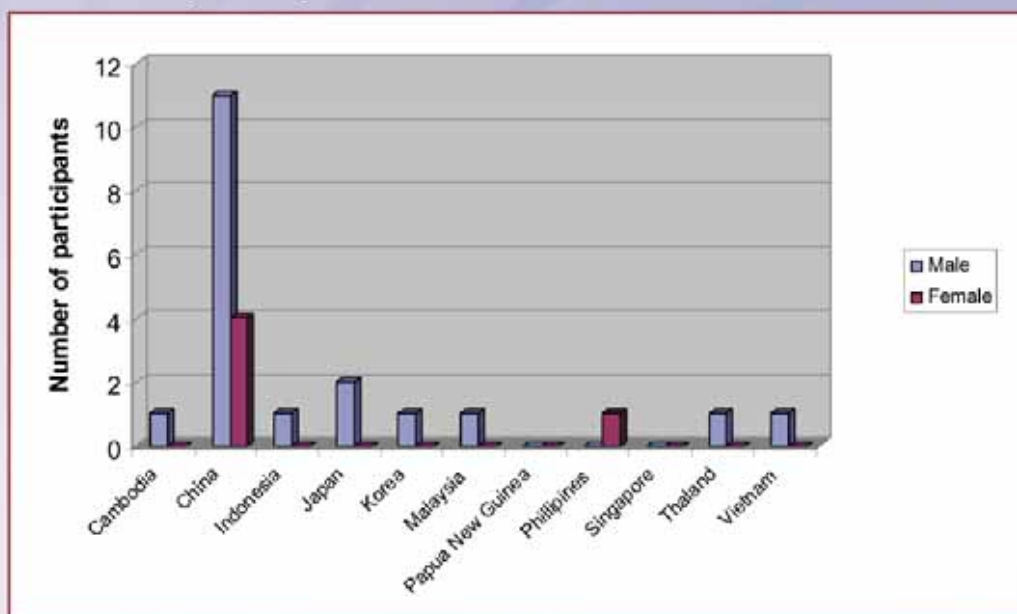


■ *The Technical Seminar and Workshop on “Strategy for Sustainable Coastal Development and Management: Application of Coastal Geo-environmental Knowledge for Coastal Zone Management of Thailand” at Bangkok, Thailand.*

Geo-Information Sector

The Geo-information sector's activities were mainly focused on in-house geo-information and database management; 1 workshop with 23 participants was organized.

Participation by Member Countries in Geo-Information Sector



1) SANGIS Programme

CCOP-CIFEG- UNESCO Asian Multilingual Thesaurus for Geoscience (AMTG)

The Asian Multilingual Thesaurus is a tool for information retrieval across language barriers. This facilitates multilingual research and information exchange. CCOP Member Countries participating in this initiative include Cambodia, China, Indonesia, Japan, Korea, Malaysia, Thailand and Vietnam. Lao PDR was also invited to participate. The Thesaurus shall be integrated in the SANGIS Bibliographic Database, enabling each country to work on its own language.



The printed AMTG has been published in February 2006. Copies of which were distributed to the CCOP Member Countries by the Technical Secretariat. UNESCO-Jakarta, the funding source of the publication has also distributed free copies to its network. Its electronic copy in PDF format has been made available for download at http://www.ccop.or.th/download/pub/AMTG_2006.pdf and printed copies are available from the CCOP Technical Secretariat for free upon request.

The web interactive version of the AMTG is now under development. Beta version is now up at <http://www.ccop.or.th/amtg>. Comments for the improvement of the web interactive version are welcome.

SANGIS Bibliographic Database

UNESCO through CIFEG provided the Technical Secretariat a server to host the SANGIS web database. The SANGIS web database can now be accessed at <http://www.ccop.or.th/sangis>. Data from the Member Countries are most welcome for the population and update of the database.

With the compilation of the AMTG, the SANGIS bibliographic database on Microsoft Access application has been enriched, with the AMTG integrated into the system.

2) GRIDNET Programme

The GRIDNET programme (Geoscience Report and Information Dissemination Network) aims to ensure that information, reports and other products from Cooperating Country and Organisation's bilateral and other aid-funded research projects relevant to the CCOP region are made available to organizations in CCOP Member Countries. The titles available in GRIDNET as well as the web links to the reports/publications of some Cooperating Countries can be seen in the CCOP Homepage,

3) CCOP-GSJ/AIST Project on Geoscience Asian Information Network (GAIN)

The CCOP-GSJ/AIST Project on Geoscience Asian Information Network (GAIN) is a 3-year project which was started in April 2004, and is being supported by the Geological Survey of Japan, AIST. This project aims to establish a clearinghouse of geoscience information of East and Southeast Asia where customers worldwide can get the necessary information on the availability of geoscientific information particularly of CCOP Member Countries. The website for the CCOP Metadata Clearinghouse is at <http://www.aist.go.jp/RIODB/GeoMetaData/ASIA/>

Under this project, the 4th Working Group Meeting of CCOP Metadata Project was held on 4-8 September 2006 in Guangzhou, China. The meeting was attended by 23 participants from the Member Countries.



Publication and Documentation

Twenty newsletters, proceedings and reports were published during the year 2006. The workshop and seminar reports and proceedings of the projects, Petroleum Policy and Management (PPM) and the Institutional Capacity Building in CCOP Member Countries (ICB-CCOP 1) are published at the CCOP website.

A World of Difference

The book written by Anthony Reedman and Yoshihiko Shimazaki on the occasion of the 40th Anniversary of Coordinating Committee For Geoscience Programmes In East And Southeast Asia.



General Publication

CCOP Newsletter Vol. 30 # 1/2 (January-June 2005)

The Newsletter presents highlights of activities for the period January-June, 2005.

CCOP Newsletter Vol. 30 # 3/4 (July-December 2005)

The Newsletter presents highlights of activities for the period July-December, 2005.

CCOP Annual Report 2005

The CCOP Annual Report presents a summary of all the activities of CCOP for the year 2005.

CCOP Annual Session Proceedings

Proceedings of the 41st CCOP Annual Session Part II (Thematic Session)

Includes papers presented at the thematic session on "Geo-environment of Delta and Groundwater Management in East and Southeast Asia", 17 November 2004, Tsukuba, Japan (Hard-copy and CD-ROM).

Proceedings of the 42nd CCOP Annual Session Part I

Proceedings of the 42nd CCOP Annual Session Part I, documentation of the 42nd CCOP Annual Session Meeting, 13-18 September, 2005, Beijing, People's Republic of China (Hard-copy & CD-Rom).

Proceedings of the 42nd CCOP Annual Session Part II (Thematic Session)

Includes papers presented at the thematic session on "Sustainable Development of Geo-Resources and Geo-Environment" on 16-17 September 2005 during the 42nd CCOP Annual Session in Beijing, People's Republic of China. (Hard-copy)

CCOP Steering Committee Meeting Reports

Report of the 47th CCOP Steering Committee Meeting

A report on the minutes of the Steering Committee Meeting held in Ao Nang Villa, Krabi, Thailand on 29-31 March 2006 (Hard-copy).

Report of the 48th CCOP Steering Committee Meeting

A report on the minutes of the Steering Committee Meeting held in KIGAM, Daejeon, Republic of Korea on 4-5 November 2006 (Hard-copy).

Technical Activities Reports/Proceedings

Final Report of the Project on Tsunami Risk Reduction Measures with Focus on Landuse and Rehabilitation

This is the final report of the CCOP-DMR Project on Tsunami Risk Reduction Measures with Focus on Landuse and Rehabilitation funded by the Ministry of Foreign Affairs, Royal Norwegian Embassy of Bangkok, Thailand and conducted by the Norwegian Geotechnical Institute (NGI). (Hard-copy and CD-ROM)

Asian Multilingual Thesaurus of Geoscience

A Multilingual Thesaurus of Geoscience with 5,867 terms in 11 languages: English (the base reference), Khmer, Chinese, French, Indonesian, Japanese, Korean, Lao, Malaysian, Thai and Vietnamese. (Hard-copy)

PPM Project

Final Report of the Petroleum Policy and Management (PPM) Project

This publication is the final report of the Petroleum Policy and Management (PPM) Project of CCOP in cooperation with the Norwegian Petroleum Directorate (NPD) with the support of the Norwegian Agency for Development Cooperation (NORAD) conducted from 2002-2006. (Hard-copy)

Proceedings of the PPM Projects' Workshops/Seminars are published in the Web.

ICB-CCOP 1 Project

Proceedings of ICB-CCOP 1 Projects' Workshops/Seminars are published in the Web.

PETRAD Seminars

Report of the CCOP-PETRAD-PETRONAS Seminar on Advanced Seismic Analysis

A documentation of the CCOP-PETRAD-PETRONAS Seminar on Advanced Seismic Analysis in Putrajaya, Malaysia on 6-8 March 2006 (Hard-copy and CD-ROM).

Report of the CCOP-PETRAD-INTSOK- NOOC-MLR-CGS Seminar on Drilling, Downhole Technology and Well Services

A documentation of the CCOP-PETRAD-INTSOK- NOOC-MLR-CGS Seminar on Drilling, Downhole Technology and Well Services in Teda, China on 24-26 April 2006 (Hard-copy and CD-ROM).

Report of the CCOP-PETRAD-PETRONAS-INTSOK Seminar on Deepwater Technology - Creating Local Value from Deepwater Development

A documentation of the CCOP-PETRAD-PETRONAS-INTSOK Seminar on Deepwater Technology - Creating Local Value from Deepwater Development in Kota Kinabalu, Malaysia, 22-25 May 2006 (Hard-copy and CD-ROM).

Report of the CCOP-PETRAD-ASCOPE-PTT Seminar on Crisis Communication - Planning and Preparedness

A documentation of the CCOP-PETRAD-ASCOPE-PTT Seminar on Crisis Communication – Planning and Preparedness in Bangkok, Thailand on 22-23 June 2006 (Hard-copy and CD-ROM)

Report of the CCOP-PETRAD-MLR-CGS Seminar on Petroleum Policy and Management

A documentation of the CCOP-PETRAD-MLR-CGS Seminar on Petroleum Policy and Management in Chengdu, China on 14-18 August 2006 (Hard-copy and CD-ROM).

Report of the CCOP-PETRAD-PETRONAS Seminar on Drilling and Well Services

A documentation of the CCOP-PETRAD-PETRONAS Seminar on Drilling and Well Services in Langkawi, Malaysia on 4-6 September 2006 (Hard-copy and CD-ROM).

Report of the CCOP-PETRAD-CNOOC-ICB CCOP-1 Seminar on CO₂ Issues in Petroleum Exploration and Production

A documentation of the CCOP-PETRAD-CNOOC-ICB CCOP-1 Seminar on CO₂ Issues in Petroleum Exploration and Production in Guilin, China on 23-25 November 2006 (Hard-copy and CD-ROM).

Report of the CCOP-PETRAD-PETRONAS Seminar on Brown Fields

A documentation of the CCOP-PETRAD-PETRONAS Seminar on Brown Fields in Penang, Malaysia on 11-13 December 2006 (Hard-copy and CD-ROM).

Fellowships and Grants

1) CCOP Texas A & M University Fellowship Programme

The CCOP Texas A & M University (TAMU) Fellowship is a cooperative programme between CCOP and the Texas A&M University in the USA. Under this programme TAMU will provide graduate education fellowships to outstanding government and industry personnel from the CCOP Member Countries. In addition to the educational aspects, the project hopes to develop joint research projects between TAMU faculty and scientists and agencies in the CCOP Member Countries.

The first recipient of the award was Ms. Corazon Sta. Ana from the Department of Energy of the Philippines. She had completed her Master of Science degree in Geology from TAMU in August 2006. The second recipient is Mr. Kelin Zhuang from China. He was registered for the Spring Semester and will start his PhD in Wastal Geo-Morphology in January 2007 at TAMU.

With Ms. Sta. Ana completing her studies and Mr. Zhuang starting, two more places are still available for the CCOP Member Countries under this program.



■ *Dr. Terman presenting EAGER Award to Mr. Seung-Pil Jung, Seoul National University*

2) East Asia Geoscience and Environmental Research (EAGER) Project

The EAGER Project is a trust fund set up in the Geological Society of America with personal contribution of Dr. Maurice "Ric" Terman, CCOP Honorary Advisor, to be used for funding research in geoscience in the region. Under the programme, a grant will be made available for researches in Geoscience and Environment in East and Southeast Asia to candidates from the Member Country hosting the CCOP Annual Session.

For 2006, at the 43rd CCOP Annual Session, the EAGER award was announced and presented by Dr. Terman to Mr. Seung-Pil Jung, Seoul National University with the research entitled "Integration of DFN Model and Production Data for the Characterization of a Fractured Reservoir Using the Ensemble Kalman Filter".

Meetings and Missions

The Director attended the Circum Pacific Council Annual Meeting which was held in Wellington, New Zealand 3-5 April 2006 and presented the CPC Asia Report to the Meeting. The meeting discussed the new proposed program and other organization matters. The Meeting also discussed various other cooperation activities including geothermics, workshop on marine benthic habitats, aggregates, etc. The meeting also approved the holding of a marine benthic habitats workshop in New Caledonia, a workshop on 'water issues' to be hosted by the Russian Academy in 2008 and a workshop on 'water and energy from renewable resources to be held in Mexico'. A suggestion was also made by Dr. Ric Terman, Honorary Advisor of CCOP for a project to develop coastal risk assessment map focusing risk assessment in the aftermath of tsunamis.

The Director and the Regional Expert attended the following meetings related to tsunami to promote CCOP's collaborative project on tsunami.

- UNEP-ISDR. Regional Workshop on Mitigation, Preparedness and Development for Tsunami Early Warning Systems in the Indian Ocean Region, Bangkok 14-16 June 2006
- Preliminary Regional Discussion of the UN/ISDR. Reference Group for the Preparation of the first Global Platform on Disaster Risk Reduction, Bangkok, 19-20 June 2006

Regional Expert, Sector Managers and Project Coordinators also attended conferences and meetings so that they are updated with recent developments in the field of geosciences and to seek new opportunities for collaboration:

- The 2nd Joint Project Team Meeting (JPTM) for Establishing the Disaster Management Support System in the Asia-Pacific Region, 27-28 June, Bangkok, Thailand
- GEO SE Asia Geohazards Workshop, 29-30 June, Malaysia
- Merapi International Workshop and Volcano International Gathering 2006, 4-8 September, Yogyakarta, Indonesia
- ASCOPE Working Committees Meeting, 13th ASCOPE Joint Committees Meeting, 7-9 September, Hanoi, Vietnam
- TSOP (The Society for Organic Petrology), 20-22 September, China
- Mission Trip to Japan - GEO-Grid & CASM-Asia Discussion, 25-29 September, Tsukuba, Japan
- International Conference "Fractured Basement Reservoir", 15-19 November, VungTau, Vietnam
- 1st Gem and Jewelry International Conference, 6-7 December, Bangkok, Thailand

On behalf of CCOP, the Director would like to thank the Permanent Representatives of the Member Countries, and Representatives of Cooperating Countries and Organizations and their staff for the excellent arrangement and the fine programme made for the visits. They have accorded the warmest of hospitality, close cooperation and assistance that had facilitated greatly the successful completion of the mission. The CPC meeting was supported by CPC. Their generosity and assistance to CCOP is deeply appreciated.

Financial Highlights

From January 1 to December 31, 2006, Member Countries' total cash contributions amounted to **USD 419,096.07**, of which USD 118,780.47 were for the arrears of 2004, USD 105,0315.60 for the arrears of 2005 and USD 195,000 cash contributions for 2006. The expected cash contributions from the rest of the Member Countries are **USD 87,002.93** for 2004-2005, **USD 100,000** for 2006 and **USD 295,000** for 2007.

At the end of 31 December 2006, total income for the year 2006 was **USD 662,261.19**. In addition to Member Countries' contributions mentioned above, the Technical Secretariat also earned **USD 212,103.92** from the management of projects during this period. The amount of **USD 1,077.95** was received from sale of publications and USD 29,983.25 was received from other incomes which included interest earned and miscellaneous incomes. The expenditure of **USD 436,129.96** was incurred for operation and administrative support. As of December 31, 2006, the CCOP General Fund registered a cash balance of **USD 500,988.19**. Detail on CCOP Projects and CCOP Short-term Project financial Statement were also shown. In comparison with 2005 performance, the revenue and expenditure clearly reflects the significant development and increase in technical activities.

The Technical Secretariat office premise is continuously being provided by the Royal Thai Government, through the kind arrangement of the Department of Mineral Resources (DMR), Ministry of Environment and Natural Resources, at the 24th floor of the Thai CC Tower, Sathorn Tai Road, Bangkok, Thailand. This provision amounts to **USD 39,745** for the year 2006. The Royal Thai Government through the DMR also accorded the privileges and the cooperation to enable the Technical Secretariat to operate efficiently and effectively.

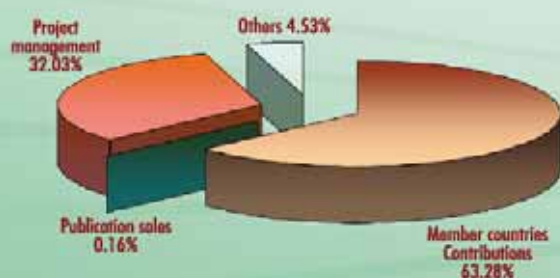
MEMBER COUNTRIES' CASH CONTRIBUTIONS For the year ended December 31, 2006 (amount in US Dollars)

Member Country	Received in the year 2006			Expected to receive in the year 2007		
	2004 Contribution	2005 Contribution	2006 Contribution	Arrears of 2004-2005 Contribution	Arrears of 2006 Contribution	2007 Contribution
Cambodia			5,000.00			5,000.00
China	28,000.00			72,000.00	50,000.00	50,000.00
Indonesia	25,000.00	25,000.00	25,000.00			25,000.00
Japan 1)						-
Korea	60,000.00	60,000.00	60,000.00			60,000.00
Malaysia			50,000.00			50,000.00
Papua New Guinea				4,416.47	10,000.00	10,000.00
Philippines	5,780.47	20,315.60		10,586.46	40,000.00	40,000.00
Singapore						-
Thailand			40,000.00			40,000.00
Vietnam			15,000.00			15,000.00
Total	118,780.47	105,315.60	195,000.00	87,002.93	100,000.00	295,000.00

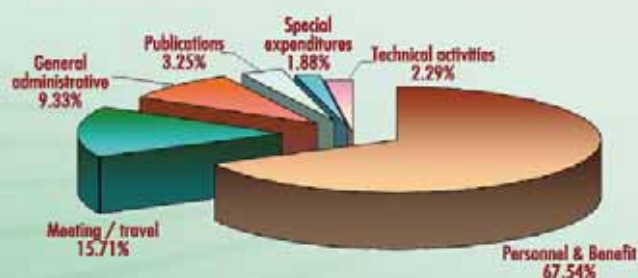
CCOP FINANCIAL STATEMENT
For the year ended December 31, 2006
(amount in US Dollars)

	2005		2006	
	USD	%	USD	%
Fund Balance	400,308.03		397,826.54	
Income:				
Member Countries' Contributions	190,366.91	52.95	419,096.07	63.28
Publications sales	80.62	0.02	1,077.95	0.16
Project management	160,386.45	44.61	212,103.92	32.03
Others	8,711.54	2.42	29,983.25	4.53
Total Income	359,545.52	100.00	662,261.19	100.00
Expenditures :				
Personnel expenses	264,656.33	72.16	294,536.69	67.54
Meeting / travel expenses	44,960.45	12.26	68,523.24	15.71
General administrative expenses	29,087.09	7.93	40,676.14	9.33
Publications	11,687.05	3.19	14,183.34	3.25
Technical activity support	5,046.56	1.37	10,003.43	2.29
Special expenditures	11,333.57	3.09	8,207.12	1.88
Others	-	-	-	-
Total Expenditure	366,771.05	100.00	436,129.96	100.00
Income over/(under) expenses	(7,225.53)		226,131.23	
Total Fund Balance before adjustment.	393,082.50		623,957.77	
Adjusting entries				
Unrealized gain/(loss) on exchange rate for Retained Earning	4,744.04		(4,989.61)	
Tax payable	-		-	
Year-end Balance	397,826.54		618,968.16	
Adjustment to reflect actual cash inflow/(outflow) :				
Receivables & Advance	-		-	
Office equipment (net)	(13,471.17)		(11,929.35)	
Advance	(58,412.94)		(107,582.98)	
Tax deductible	875.32		1,532.36	
Year-end Cash Balance	326,817.75		500,988.19	

Revenue for the year 2006



Expenditure for the year 2006



CCOP PROJECTS FINANCIAL STATEMENT

For the year ended December 31, 2006

(amount in US Dollars)

	JECF (A) FUND		PPM FUND		DANIDA FUND	
	2005	2006	2005	2006	2005	2006
Fund Balance	3,741.18	637.10	522,344.43	613,789.81	-	45,841.40
Income :						
<i>Received from Fund</i>	-	-	612,811.94	-	104,462.72	649,045.80
<i>Others</i>	188.82	899.13	5,961.55	20,356.20	749.99	14,181.59
Total Income	188.82	899.13	618,773.49	20,356.20	105,212.71	663,227.39
Expenditures :						
<i>Technical Activities Expenses</i>	3,366.15	-	528,391.01	466,201.64	60,137.09	496,168.68
Total Expenditure	3,366.15	-	528,391.01	466,201.64	60,137.09	496,168.68
Income over/(under) expenses	(3,177.15)	899.13	90,382.48	(445,845.44)	45,075.62	167,058.71
Adjusting entries :						
<i>Unrealized gain/(loss) on exchange rate for Retained Earning</i>	73.25	11.38	1,062.90	(10,278.84)	765.78	(3,004.63)
Year-end Balance	637.10	1,547.61	613,789.81	157,665.53	45,841.40	209,895.48
Adjustment to reflect actual cash inflow/(outflow):						
<i>Tax deductible</i>	-	-	-	34.20	-	-
<i>Advance</i>	-	-	(41,101.53)	(39,871.75)	-	-
<i>Remittance to CCOP General Fund</i>	-	-	-	-	-	-
<i>Office equipment (net)</i>	(0.05)	(0.05)	-	-	-	-
Year-end Cash Balance	637.05	1,547.56	572,688.28	117,827.98	45,841.40	209,895.48

CCOP SHORT TERM PROJECTS FINANCIAL STATEMENT

For the year ended December 31, 2006

(amount in US Dollars)

	MFA Norway Fund		CASM Asia Fund	
	2005	2006	2005	2006
Fund Balance	-	173,271.78	-	19,287.58
Income :				
<i>Received from Fund</i>	391,193.48	302,746.61	46,863.93	54,972.13
<i>Others</i>	2,287.52	5,330.51	303.30	2,316.39
Total Income	393,481.00	308,077.12	47,167.23	57,288.52
Expenditures :				
<i>Technical Activities Expenses</i>	220,376.19	423,525.44	27,852.90	54,286.09
Total Expenditure	220,376.19	423,525.44	27,852.90	54,286.09
Income over/(under) expenses	173,104.81	(115,448.32)	19,314.33	3,002.43
Adjusting entries :				
<i>Unrealized gain/(loss) on exchange rate for Retained Earning</i>	166.97	(2,752.90)	(26.75)	(685.71)
Year-end Balance	173,271.78	55,070.56	19,287.58	21,604.30
Adjustment to reflect actual cash inflow/(outflow):				
<i>Tax deductible</i>	-	-	-	-
<i>Advance</i>	-	-	-	-
<i>Remittance to CCOP General Fund</i>	-	-	-	-
<i>Office equipment (net)</i>	-	-	-	-
Year-end Cash Balance	173,271.78	55,070.56	19,287.58	21,604.30

CCOP STEERING COMMITTEE/ MEMBER COUNTRIES PERMANENT REPRESENTATIVES (11)

The Steering Committee is a policy making body of CCOP, which shall establish policies and principles for CCOP activities, approve work plan, budget, accounts for each year, new programme proposals, establish subsidiary bodies, appoint the Director, receive and consider the reports of Director on the functions delegated to him.



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A World of Difference



It is not an exaggeration to say that CCOP has provided a unique platform for promoting regional cooperation, building trust and networks, and facilitating sharing and exchange of information, knowledge, and experience that are all so vital to Member Countries to accelerate their development.

What can be stated with certainty is that in a multitude of small but significant ways, through exchanges of experience and information, training and discussion, CCOP has made a real difference to many people's lives, both professionally and personally, throughout East and Southeast Asia and no doubt it will continue to do so in the future.

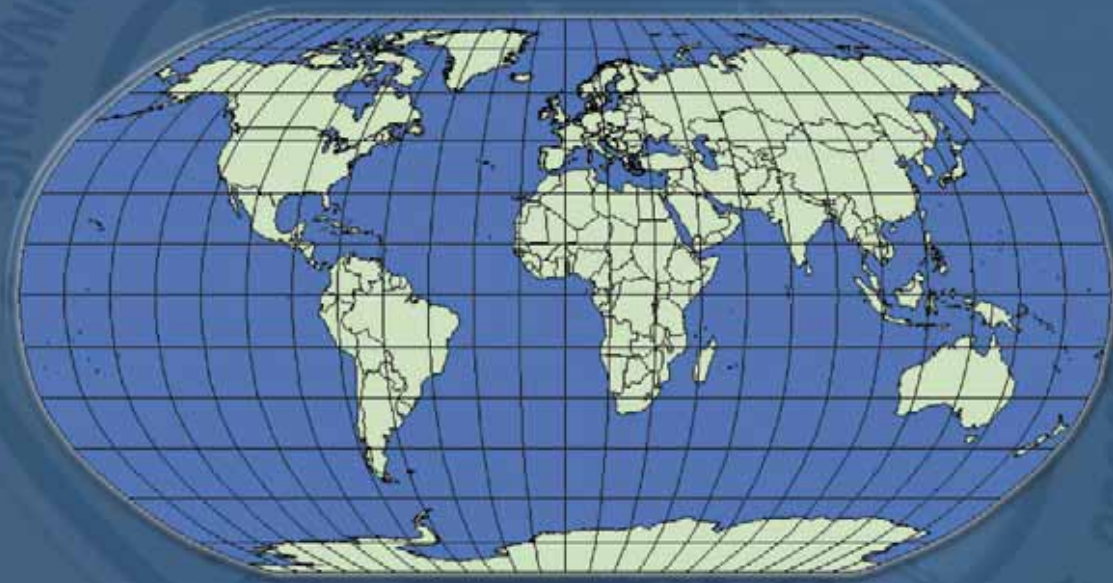


The fact that CCOP has not only survived, but has gone from strength to strength over the last forty years is proof that it was able to meet the challenges of the past and is well able to meet the challenges of the future... It was able to have a clear vision of its future, to continuously review its strategy and to re-engineer itself to meet the emerging challenges.

40th Anniversary of CCOP, 1966-2006

Background

The United Nations General Assembly has approved 2008 as the UN International Year of Planet Earth (IYPE). In practice, programmes associated with IYPE are aimed at raising worldwide public and political awareness of the importance of geoscience to the global community, and will operate during the three years from 2007 to 2009. The joint initiators of the international year were IUGS and UNESCO and CCOP is an Associate Partner in this initiative. Some CCOP Member and Cooperating Countries have already established National Committees for IYPE.



Initiatives

- The Annual Session of CCOP is a forum for information exchange regarding activities during the IYPE;
- CCOP is a co-ordinating body to incorporate more countries, encourage cross-border co-operation and add a regional dimension to individual national projects;
- CCOP to publish a book about the Geological Heritages of the CCOP region;
- CCOP calls for more initiatives from Member Countries.



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