

# CCOP



## 2002 CCOP ANNUAL REPORT

COORDINATING COMMITTEE FOR GEOSCIENCE PROGRAMMES IN EAST AND  
SOUTHEAST ASIA (CCOP)

# CONTENTS

|                                                                                                   |    |
|---------------------------------------------------------------------------------------------------|----|
| ● Message from the Chairman                                                                       | 1  |
| ● CCOP                                                                                            | 2  |
| ● Management and Organization                                                                     | 3  |
| ● Milestones and Highlights for the Year 2002                                                     | 5  |
| ● Technical Cooperation and Activities                                                            | 7  |
| ● Director's Mission                                                                              | 14 |
| ● Publications                                                                                    | 15 |
| ● Financial Highlights                                                                            | 16 |
| ● List of CCOP Member Countries, Cooperating Countries<br>and Organizations and Honorary Advisers | 22 |

## CCOP Technical Secretariat

24th Floor, Suite 244-245, Thai CC Tower  
889 Sathorn Tai Road, Sathorn, Bangkok 10120, THAILAND  
Tel: (66) 02 672 3080 Fax: (66) 02 672 3082  
E-mail: [ccopts@ccop.or.th](mailto:ccopts@ccop.or.th) Website: <http://www.ccop.or.th>

# Message from the Chairman

On behalf of the CCOP, I congratulate the Director of the CCOP Technical Secretariat and Staff for successfully implementing the activities of CCOP for the year 2002. The year has been very inspiring as the number of activities increases with the implementation of new initiatives for CCOP.

The year 2002 witnessed the completion of the Resource Evaluation and Planning Project Phase II with the successful holding of its concluding activity: the Exploration Promotion Forum (EPF) for CCOP Member Countries which was held in Stavanger, Norway in August 2002. The EPF also included the development of a CCOP-EPF Website which will serve the continuous promotion of the Member Countries' oil and gas industry. Likewise, the Petroleum Policy and Management Project is now being implemented with the conduct of case studies in Cambodia, China, Indonesia and the Philippines. Our appreciation to the Norwegian Agency for Development Cooperation (NORAD) for the support to both activities. CCOP had also initiated a new project on Development of Techniques for Assessment of Landslide Hazards supported through the Korean Institute of Geoscience and Mineral Resources (KIGAM) by the Ministry of Science and Technology, Republic of Korea. Activities also continued under the Digital Compilation of Geoscientific Maps (DCGM) Phase IV Project, PETRAD Seminars, SANGIS and GRIDNET. Other activities such as seminars, workshops and meetings were also organized supported by the CCOP Cooperating Countries and Organizations as well as the Member Countries.

With the new Strategic Plan of CCOP, it is very encouraging to note that the new directions that are being pursued by CCOP have been very productive. I give my sincerest thanks to the Member Countries, Cooperating Countries and Organizations, Honorary Advisors and friends for their contributions and assistance, which led to the realization of its activities and success achieved by CCOP in 2002.

I would like to share my optimism with everyone that the coming year will be very promising for CCOP with high level of activities and implementation of new projects for the benefits of its Member Countries.



**Sov Chivkun**  
**Chairman**

CCOP Steering Committee

The Coordinating Committee for Geoscience Programmes in East and Southeast Asia (CCOP) is an intergovernmental organisation with the purpose of carrying out joint applied geoscience programmes for sustainable development in East and Southeast Asia.

The CCOP “**Coordinating Committee for Offshore Prospecting in Asia**” was first established in 1966 by China, Japan, Republic of Korea and The Philippines under the auspices of ESCAP and the United Nations. CCOP became an independent intergovernmental organisation in 1987 based on the common understanding of its Member Countries and the aspirations of the United Nations. The name was changed in 1994 to Coordinating Committee for Coastal and Offshore Geoscience Programmes in East and Southeast Asia. During this period, CCOP devoted itself to the coordination of, and cooperation in scientific activities related to coastal and offshore areas with respect to geological/geophysical surveys, regional map compilations, database development, development of human resources and transfer of state of the art technology. In 2001, CCOP has reviewed and re-defined its programmes and activities, formulated a new strategic plan with the strategic focus on the following:

- ☐ Enhanced coordination of the geoscience programmes of the national geoscientific institutions of the CCOP Member Countries in order to promote cooperation and to maximise 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.
- ☐ An greater flow of technical information between the Member Countries, Cooperating Countries and Cooperating Organisations 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.

With the new Strategic Plan, CCOP’s technical activities were divided into three Sectors and seven Programmes that will allow the adoption of clear targets for the achievement of CCOP’s strategic objectives.

- the **geo-resources sector**, consisting of the minerals programme, energy programme and groundwater programme
- the **geo-environment sector**, consisting of coastal zone programme, geohazards programme and environmental geology programme
- the **geoinformation sector** with the geodata and geoscience information management programme

CCOP has 11 member countries; Cambodia, China, Indonesia, Japan, Malaysia, Papua New Guinea, The Philippines, Republic of Korea, Singapore, Thailand and Vietnam. CCOP is being supported by 14 cooperating countries and 14 international organisations.

The CCOP Technical Secretariat is responsible for the co-ordination of all activities carried out by CCOP. The Secretariat is headed by a Director, who is reporting 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 achievements have proven that it is a successful organization with the following advantages in regional cooperation.

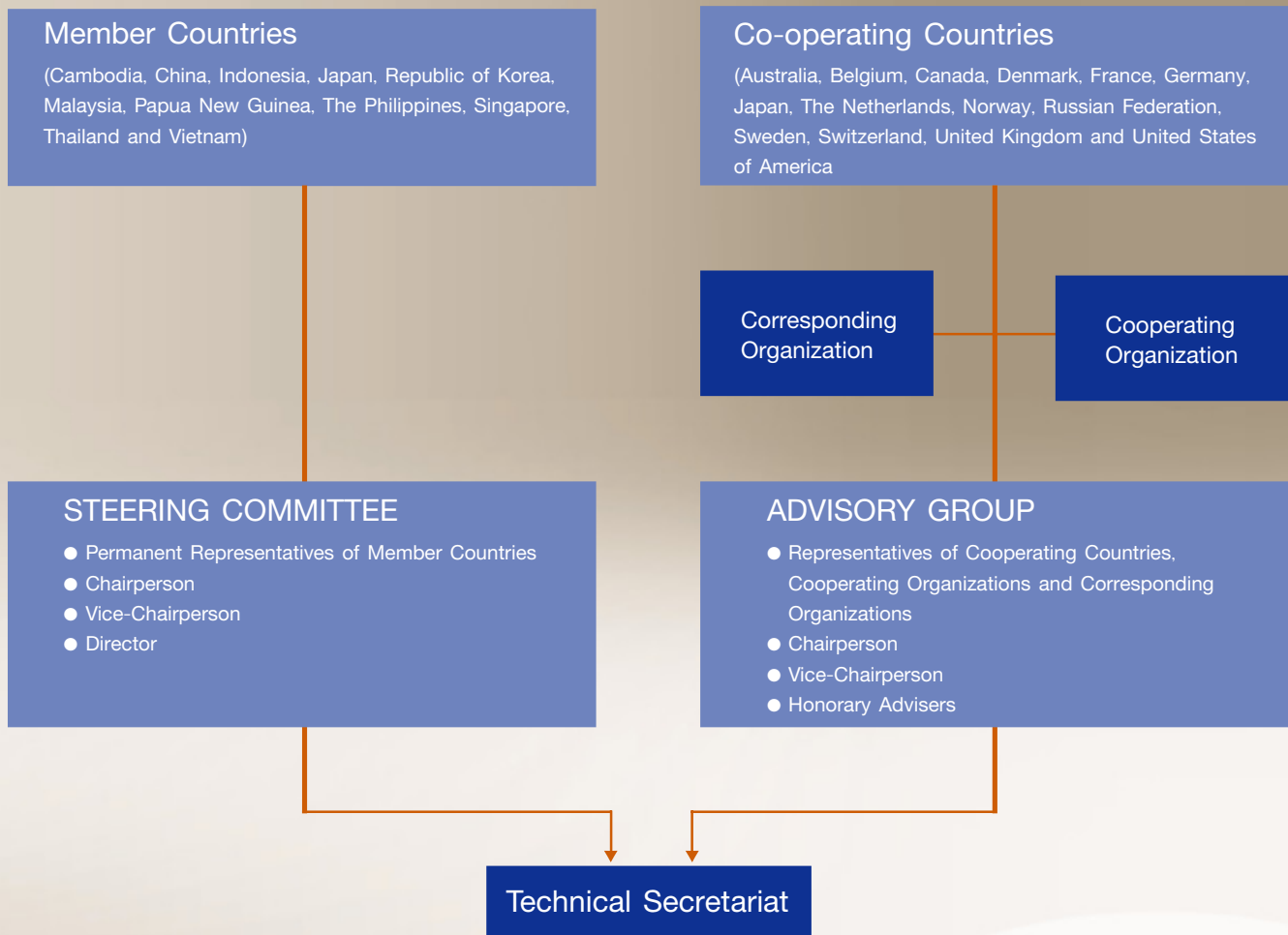
- Data exchange and sharing of institutional and administrative experiences
- Regional data compilation and regional resource mapping
- Training and human resource development
- Standardization of resource classification and nomenclature
- Harmonization of regulatory environment
- Joint investment promotion

CCOP’s financial source includes the cash contributions made by the Member Countries, project management cost received from major projects and other incomes. Funds for most technical activities are provided under project support to activity by concerned cooperating countries, member countries and organizations.

# FIGURE 1

## Management and Organization

### ORGANIZATION CHART OF CCOP



#### Professional Staff

**Mr. Chen Shick Pei**  
Director  
**Dr. Seville D. David Jr.**  
Regional Expert  
**Dr. Eizo Yamada**  
DCGM Project Coordinator  
**Mr. Gunnar Soiland**  
PPM Project Coordinator  
**Ms. Marivic Pulvera Uzarraga**  
Geodata and Information Management

#### Support Staff

**Mr. Anan Voratartrakul**  
Finance and Administration  
**Ms. Petcharat Sarawisutra**  
Technical Programmes  
**Ms. Sunit Prokati**  
Publication and Documentation  
**Mr. Piyawatchara Pranalnurt**  
Assistant in IT  
**Ms. Sansanee Wudhivanich**  
Secretary  
**Ms. Wanlaya Kanakarnjanakul**  
Assistant Finance  
**Mr. Visuth Theemasarn**  
Clerk/Driver  
**Ms. Tawee Butrakaew**  
Cleaner

During the reporting period, there have been several changes of personnel in the Technical Secretariat. Mr. Gunnar Soiland started his two-year term at the office as the Petroleum Policy and Management Project Coordinator in July 2002. A new Assistant in information technology (IT), Mr. Piyawatchara Pranalnrut, was hired in August 2002. Ms. Oraporn Suwanlertkij, Assistant in Finance resigned in August 2002 from CCOP and was replaced by Ms. Wanlaya Kanakarnjanakul in November 2002. As at 31<sup>st</sup> December 2002, the CCOP Technical Secretariat has thirteen personnel, comprising five professional and eight support staff.

Mr. Shigeki Sumi and Dr. Keiji Kimbara, Minister, Embassy of Japan in Thailand and Research Coordinator, Geological Survey of Japan, AIST were appointed as Permanent Representative and Deputy Permanent Representative of Japan to CCOP respectively. Dr. Tai Sup Lee is the new Permanent Representative of Korea to CCOP. As part of the bureaucratic reforms resulting in the reorganization of the Department of Mineral Resources (DMR), Thailand, Mr. Nopadon Mantajit was appointed as Director General of the Department of Mineral Fuels and he was succeeded by Mr. Somsak Potisat as the Director General of the Department of Mineral Resources and Permanent Representative of Thailand to CCOP. Dr. Ralph Currie was also designated as the Representative of Canada to CCOP. Dr. Tran Ngoc Canh replaced Dr. Nguyen Hiep as Permanent Representative of Vietnam to CCOP.

H.E. Sov Chivkun, Permanent Representative of Cambodia to CCOP started his term as the CCOP Steering Committee Chairman for the period 2002-2003.

Dr. David Prior, Honorary Advisor to CCOP, was re-elected as Chairman of the CCOP Advisory Group during the 39th CCOP Annual Session in Yogyakarta, Indonesia. Dr. Jos de Sonnevile, Representative of The Netherlands to CCOP, was elected as Vice-Chairman.

Through the kind arrangement of the Department of Mineral Resources, Ministry of Industry (to October 2002) and Ministry of Environment and Natural Resources, the Technical Secretariat has maintained its office premises provided by the Royal Thai Government, at the twenty-fourth floor of the Thai CC Tower, Sathorn Tai Road, Bangkok.



# Milestones and Highlights for the Year 2002

## CCOP Exploration Promotion Forum

CCOP with the support of the Government of Norway through NORAD successfully carried out the Exploration Promotion Forum (CCOP-EPF2002) for CCOP Member Countries in conjunction with Offshore Northern Seas (ONS2002) 15th International Conference, Exhibition and Festival in Stavanger, Norway in 27-30 August 2002. Member Countries presented the potentials and opportunities for exploration and development in their countries in the ONS 2002 Exhibition and the CCOP-EPF (2002) Conference. About fifty (50) senior government officials and representatives of the petroleum and energy sectors and national oil company executives of CCOP Member Countries attended this event. CCOP was assisted by PETRAD, the Bridge Group and the Norwegian Petroleum Directorate in the preparation and coordination in Norway.



**CCOP Exploration Promotion Forum**

New!!! **CCOP-EPF2002 in ONS2002**  
 15th International Conference, Exhibition & Festival  
 27-30 August 2002, Stavanger, Norway

Background Coordinators, Partners, Announcement

Coordinating Committee for Geoscience Programmes in East and Southeast Asia (CCOP)

Cambodia | China | Indonesia | Japan | Korea | Malaysia | Papua New Guinea | Philippines | Singapore | Thailand | Vietnam

"The boundaries and names shown and the designations used in this website on CCOP EPF do not imply official endorsement or acceptance by CCOP."

Copyright © Coordinating Committee for Geoscience Programmes in East and Southeast Asia (CCOP)  
 24th Floor, Suite 244-5, Thai CC Tower, 889 Sathorn Tai Road, Sathorn, Bangkok 10120, THAILAND  
 Tel : (662) 672-3080-1 Fax : (662) 673-3082 E-mail : ccopts@ccop.or.th  
 Last Update : 6 June 2002

Wide publicity was given to CCOP's participation in ONS2002 and it has attracted the attention of exploration companies, which have interest in the region and subsequently arranged some bilateral side-meetings. The CCOP Booth was also privileged to receive the King of Norway for photo session during the opening of the exhibition.

In support of this initiative, CCOP has also developed a homepage on Exploration Promotion Forum for CCOP Member Countries at <http://www.ccop.or.th/epf> which serves the continuous promotion of CCOP petroleum opportunities. Likewise, a dedicated August 2002 issue of the PetroMin Magazine was published on the petroleum industry of the CCOP region with write-up on individual Member Countries.

## 39<sup>th</sup> and 40<sup>th</sup> CCOP Steering Committee Meetings And 39<sup>th</sup> 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 assembles the three constituent units of CCOP, the Member Countries, the Cooperating Countries and Organisations and Advisors, for a General Consultative Meeting and country and organization presentations.

The 39<sup>th</sup> CCOP Steering Committee Meeting was held in Chiangmai, Thailand from 28 - 29 March 2002 and attended by 35 delegates from ten Member Countries, including the staff of the CCOP Technical Secretariat. Also present were resource persons from USGS and NOAA. Important highlights of the meeting were the endorsement of the Action Plan to implement the CCOP Strategic Plan and the revision of the CCOP Rules of Procedure.

The 39<sup>th</sup> CCOP Annual Session and 40<sup>th</sup> Steering Committee Meeting were held at the Hyatt Regency Yogyakarta, Yogyakarta, Indonesia on 22-25 and 28-29 October 2002 respectively. The host facilities were provided by the Republic of Indonesia through the Directorate General of Geology and Mineral Resources, Ministry of Energy and Mineral Resources (MEMR). The Annual Session was attended by 87 delegates from Member Countries, Cooperating Countries and Organizations.

The main focus of the meetings was on progress report, financial matters, workplan and the status of current projects and new initiatives. The Steering Committee approved the proposed budget for 2003 and discussed the various issues on CCOP activities covering the three sectors, Geo-resources, Geo-environment and Geo-information. A thematic session was also organized in conjunction with the Annual Session with the theme "Policy and Geoscientific Issues on the Sustainable Development of Geo-resources-Minerals, Energy and Groundwater"



# Technical Cooperation and Activities

## Technical Activities with Cooperating Countries and Organizations

The Cooperating Countries and Organizations continued to provide technical support for activities contributing to sustainable geo-resources and environmentally sound development in the CCOP region as summarized below. To optimize the benefits of the programme support provided by the Cooperating Countries and Organizations, the Member Countries also provide in-kind support to CCOP work programmes.

Other cooperating countries generally continued their technical support to a number of CCOP work programmes by providing valuable advice and guidance as well as the implementation of bilateral technical assistance to CCOP Member Countries. Thanks are due to all the cooperating countries and organizations for their provision of representatives to CCOP who have contributed in large measure to the review, assessment and formulation of CCOP work programmes.

| Cooperating Country/<br>Organization | Activities                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Canada</b>                        | Cooperation on the Ocean and Coastal Mapping Workshop in Qingdao, China on October 2002.<br>Possible support to a similar workshop to other Member Countries                                                                                                                                                                                                                                                                                           |
| <b>Denmark</b>                       | Cooperation on the Workshop on Interactive Mapping Techniques in Hanoi, Vietnam in January 2002.<br>Continued consultation for new initiatives for CCOP Member Countries                                                                                                                                                                                                                                                                               |
| <b>France</b>                        | Provided the services of Dr. Henri Fontaine, Pre-Tertiary Geologist<br>Support to the SANGIS Training-Bibliographic Phase and the CCOP Metadata Project through CIFEG and BRGM<br>Support for technical visits of CIFEG experts to Member Countries                                                                                                                                                                                                    |
| <b>Japan</b>                         | Contributions to the DCGM Project and institutional support with JECF<br>Funds and provision of non-reimbursable expert's services<br>Cooperation on the Symposium/Workshop on Geo-information via the Internet and CCOP Metadata in February 2002                                                                                                                                                                                                     |
| <b>Germany</b>                       | Discussion on possible support for a Workshop on Objective Oriented Project Planning                                                                                                                                                                                                                                                                                                                                                                   |
| <b>The Netherlands</b>               | Secretariat communicating with TNO-NITG seeking continuation of CCOP-Netherlands cooperation for new activities, particularly in coastal zone.<br>Support to the CCOP Metadata Project                                                                                                                                                                                                                                                                 |
| <b>Norway</b>                        | Supported the Resource Evaluation and Planning Phase II (REP II) Project- Exploration Promotion Forum<br>Through collaboration with PETRAD, CCOP organized tailor-made bilateral seminars/workshops for the Member Countries with Norwegian Government as well as oil and gas industry funding support<br>Support to the Petroleum Policy and Management (PPM) Project<br>Support for training on delineation of continental shelf is under discussion |

|                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>United Kingdom</b>                                                              | Cooperation on the KaR Metadata Project through the British Geological Survey<br>Cooperated with GETECH in the production of aeromagnetic and gravity maps in the CCOP region<br>Support for CCOP Metadata Project<br>Provided resource persons for various CCOP seminars/workshops                                                                                                                                                                 |
| <b>United States of America</b>                                                    | Cooperated with the Circum Pacific Council for the WGGC Project<br>Through U.S. Geological Survey cooperated for initiatives on gas hydrates, coal bed methane, global mineral resource assessment. Support for Integrated Ocean Drilling Programme for global climate change study is under discussion<br>Cooperations with NOAA on The National Sea Grant programme<br>Texas A & M University made available Fellowships for the Member Countries |
| <b>Asean Council on Petroleum (ASCOPE)</b>                                         | Close cooperation is maintained through information exchanges for the benefit of the Member Countries. Participation of the Secretariat in Joint Committees Meeting to discuss current issues on CCOP's energy programmes.<br>Participation in CCOP Exploration Promotion Forum-ONS 2002, Stavanger, Norway                                                                                                                                         |
| <b>Economic and Social Commission for Asia and the Pacific (ESCAP)</b>             | Cooperated in the organization of the SANGIS Training Programme - Bibliographic Phase, the DCGM IV Training on Geodata Management and support for CCOP Metadata Project<br>Information exchange and discussion, cooperation on technical activities as well as organizing workshops and conferences were continued                                                                                                                                  |
| <b>Intergovernmental Oceanographic Commission, Western Pacific (IOC/WESTPAC)</b>   | Regular communication for exchange of information related to integrated coastal zone management.                                                                                                                                                                                                                                                                                                                                                    |
| <b>United Nations Educational, Scientific &amp; Cultural Organization (UNESCO)</b> | Supported the organization of the SANGIS Training Programme - Bibliographic Phase and continued support for CCOP Metadata<br>Support for technical visits of CIFEG experts to Member Countries<br>Information exchange, discussion and cooperation on CCOP technical activities were continued                                                                                                                                                      |

## Member Countries' Participation in Technical Activities

The Technical Secretariat has met most of its planned targets under the following three sectors. **Eleven (11)** seminars, technical meetings/workshops and trainings were held and attended by **417** participants from the CCOP Member Countries. Aiming at technology transfer, these activities were highly appreciated by the participants. Visits to Member Countries were made by CCOP experts to provide advisory services.

| Sector             | No. of activities | No. of participants |
|--------------------|-------------------|---------------------|
| 1. Geo-resources   | 8 (*5)            | 333 (*237)          |
| 2. Geo-environment | -                 | -                   |
| 3. Geo-information | 3                 | 84                  |
| <b>TOTAL</b>       | <b>11</b>         | <b>417</b>          |

\* CCOP/ASCOPE/PETRAD bilateral activities

# GEO-RESOURCES SECTOR

All of us depend, to varying extents, on the earth's supply of natural resources to support, maintain and improve our lives. Many of these resources, vital to our national life-support systems, are geology dependent. Properly executed geoscientific programmes of research and development are essential for their discovery and responsible usage. Under this sector CCOP aims 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.

## ENERGY PROGRAMME

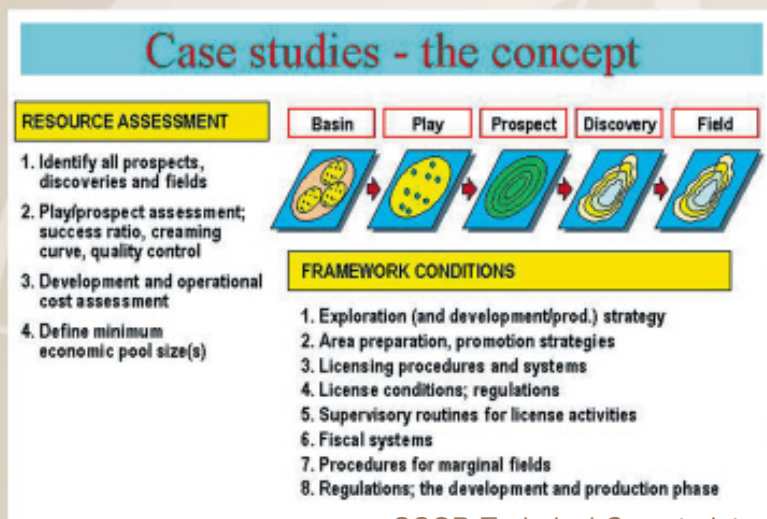
The production of the so-called fossil fuels - oil, natural gas and coal or lignite - is a very significant revenue earner in a number of the CCOP member states and the region as a whole is both an important producer and consumer of such products. CCOP programmes in the energy sector has been sustained as a systematic regional endeavor of resource assessment and evaluation which is fundamental to sustainable development of the hydrocarbon resources in the region. In addition important projects continued in relation to geothermal energy resources, which are a significant source of energy in several CCOP Member Countries.

### 1. Petroleum Policy and Management Project

The Norwegian Agency for Development Cooperation (NORAD) approved the Petroleum Policy and Management (PPM) project for CCOP with the signing of the CCOP-NORAD cooperation agreement in December 2001. Subsequently, the institutional support agreement between the Coordinating Committee for Geoscience Programmes in East and Southeast Asia (CCOP) and the Norwegian Petroleum Directorate (NPD) was signed on 22 April 2002. Under the cooperation, Mr. Gunnar Soiland, a senior geologist of NPD was seconded to CCOP in July 2002 as the Project Coordinator.

The Petroleum Policy and Management is a 4-year project aimed at a sustainable and efficient national petroleum management and policy, and to envisage the mechanism in improving such management and policy arrangement considering the changes in political, economic and market conditions. Other focus of the project includes capacity building, human resource development, and fostering closer cooperation among CCOP Member Countries' personnel involved in petroleum resources and management.

The project activities include the conduct of 4 case studies of the Sichuan Basin in China, Khmer Basin in Cambodia, Sulu Sea Basin in the Philippines, and the Kutei Basin in Indonesia. A series of seminars and workshops will also be held in conjunction with the Project.



## Visit to the PPM Project Case Study Countries

The PPM project was initiated by a visit by the PPM project coordinator Mr. Gunnar V. Soiland and Director of CCOP TS Mr. Chen Shick Pei in 10 - 22 June to the 4 countries that will host the case studies: China, Cambodia, Philippines and Indonesia. Discussions were held during the visits mainly with the national coordinators and senior government officials of concerned countries.



## PPM Project Kick-off seminar

The 1<sup>st</sup> Seminar of the Petroleum Policy Management (PPM) Project was held at Sofitel Silom Hotel, Bangkok, Thailand on September 11<sup>th</sup> -13<sup>th</sup>, 2002. The seminar was the kick-off activity for the PPM Project. Thirty-two participants from the CCOP Member Countries attended the seminar. The four case study countries, Cambodia, China, Indonesia, and the Philippines presented their case studies each with different setting from frontier to semi-mature and mature basins. Highlights of the seminar were the presentation on the implementation of the case studies and other activities of the PPM Project, particularly the planning and participation by personnel of other non case-study member countries in the case studies, organization of the Experts Group and project coordination.

## 2. Resource Evaluation and Planning Phase II (REP-II)

The REP-II project, which is supported by the Government of Norway through NORAD, has concluded its technical activities with the holding of the Exploration Promotion Forum for CCOP Member Countries mentioned earlier under milestones and highlights for 2002.



## 3. CCOP/ASCOPE/PETRAD Seminars

With the technical and financial support of Norway, CCOP/ASCOPE/PETRAD cooperation activities undertaken at the request of CCOP Member Countries were active and successful and the following seminars were organized:

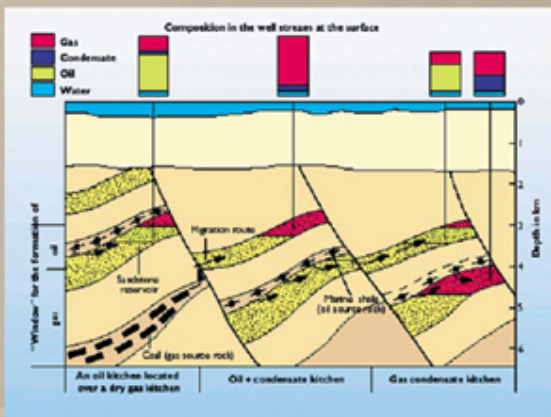
- CCOP-ASCOPE-PETRAD-PETROVIETNAM Seminar on IOR/EOR on 11-13 March 2002 was conducted in Vung Tau, Vietnam with thirty-five (35) participants.
- CCOP-PETRAD-MLR-CGS-GMGS-INTSOK Seminar on Deepwater Exploration and Field Development, Floating Production and Subsea Systems was held in Guangzhou, China on 8-10 April 2002 attended by 75 participants.

- CCOP- PETRAD-PETRONAS-Minerals and Geoscience Department-INTSOK Seminar on Deepwater Exploration and Field Development was organized in Port Dickson, Malaysia on 13-15 May 2002 attended by 39 participants.
- CCOP-PETRAD-MLR-CNOOC-INTSOK Seminar on Gas-Exploration, Production and Utilization was conducted in Chengdu, China on 9-11 October 2002 with 53 participants
- CCOP-PETRAD-ASCOPE-NORAD-CNPA Seminar on Natural gas Development was held in Phnom Penh, Cambodia on 2-6 December 2002 with 35 participants



#### 4. Workshop on Interactive Mapping Techniques for the Construction of Geological Reservoir Models

The Government of Denmark through its Royal Embassy in Hanoi in collaboration with CCOP, Vietnam Petroleum Institute (VPI) and the Geological Survey of Denmark and Greenland (GEUS) conducted the “*Workshop on Interactive Mapping Techniques for the Construction of Geological Reservoir Models*” held at the VPI, Hanoi, Vietnam on 14-25 January 2002. The workshop was attended by twenty (20) personnel from the CCOP Member Countries.



#### 5. CCOP/CPGDP Project on Geological Correlation (WGGC)

Data compilation is on-going in the framework of the Working Group on Geological Correlation (WGGC) Project. Maps and other information for publication are now under review by the compilers and Member Countries before final printing.

#### 6. Pre-Tertiary Geological Studies in Southeast Asia

Dr. Henri Fontaine, Expert Pre-Tertiary Geologist continued providing his technical services to the CCOP Member Countries in Pre-Tertiary Geological Research. In January-March and October 2002, he conducted paleontological and biostratigraphic studies in Thailand Malaysia.

## MINERALS PROGRAMME

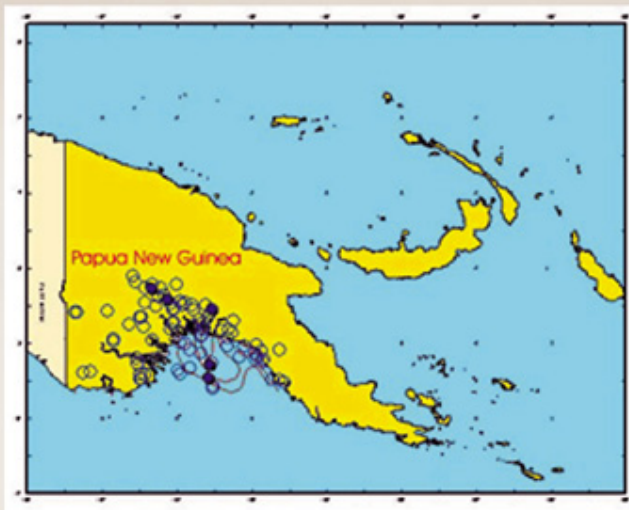
The Mineral Sector is geared towards enhancement of the capability of Member Countries in assessment, exploration and sustainable and environmentally sound management of mineral resources in their national territories.

### 1. Digital Compilation of Geoscientific Maps Phase IV Project (DCGM)

The Digital Compilation of Geoscientific Maps (DCGM) Project aims to compile geoscientific maps of East and Southeast Asia in digital form and to establish a database system in collaboration with the Member Countries of CCOP. This project has been financed by JAPAN-ESCAP Cooperation Fund (JECF), which is the Japanese contribution to technical activities of CCOP. The Geological Survey of Japan-AIST has greatly contributed to this project through its technical support.

The DCGM Phase IV Project entitled "*Compilation of Groundwater and Geothermal Databases in the CCOP Region*" is a three-year project starting in April 2001 that will compile the groundwater and geothermal databases and related digital maps of the region. The Project Coordinator is Dr. Eizo Yamada. Dr. Atsunao Marui from Japan and Dr. Byoung Woo Yum from Korea are the Chief Compilers for the Groundwater Database. Dr. Yasukuni Okubo from Japan is the Chief Compiler for the Geothermal Database. The following activities were undertaken in year 2002.

- The 2<sup>nd</sup> Workshop of DCGM Project Phase IV (Geothermal Database) was held in Makati, Philippines on 5-7 February 2002. A total of 23 participants from CCOP Member Countries and the Technical Secretariat attended the meeting.
- The DCGM IV Training on Geodata Management held at the ESS Training Center, UN ESCAP, Bangkok Thailand, on 19-22 November 2002. The training was conducted in cooperation with UN-ESCAP and attended by 11 personnel from the Member Countries
- The proceedings of the first and second workshops of the DCGM Phase IV were published in CD-Rom in January and May 2002 respectively.



- A preliminary Web site (<http://www.groundwater.jp/ccop/jp/indexhtml>) of the project on groundwater database was developed through the efforts of the chief compilers.
- The DCGM IV Project Coordinator, Dr. Eizo Yamada, had undertaken missions to the Philippines, United Kingdom, France, Japan and Malaysia to evaluate and assess the status of groundwater and geothermal databases that will be used for the Project as well as discuss cooperation in terms of providing resource persons for the activities of the project.

# GEO - INFORMATION SECTOR

The systematic collection of geological data leading to the establishment of national geoscience databases and information systems is undertaken by all the Member Countries of CCOP. The knowledge that flows from these activities can make a vital contribution to the objectives for sustainable development within the region. The effective use of the accumulated data, information and knowledge, however, will only be achieved in assisting these objectives if it is archived, processed and communicated to the potential users in ways that are appropriate to their requirements. By further encouraging this trend through training, regional co-operation, sharing of experience, CCOP seeks to stimulate, encourage and support sustainability by placing geoscience information and knowledge as a factor in all regulatory, planning and development decisions which have a potential impact on the environment and societal welfare within the region.

## 1. Southeast Asia Network on Geologic Information System (SANGIS): Bibliographic Phase

CCOP in collaboration with Centre International de la Formation des Echange Geologiques (CIFEG), ESCAP and UNESCO successfully organized the SANGIS Training: Bibliographic Phase (Group 2) on 21-25 January 2002 at the ESS Training Center of UN ESCAP. This hands-on training programme was attended by nine (9) participants from the second group of CCOP Member Countries: China, Korea, Papua New Guinea and Vietnam, as well as Lao PDR, Technical Secretariat and ESCAP. Training for Group 1 was earlier held in June 2001. SANGIS network training for all the CCOP Member Countries is now completed and SANGIS is now being implemented with the cooperation of the Member Countries. Some of the Member Countries had already forwarded their data which were subsequently uploaded to the SANGIS Website.

Technical visits were conducted by CIFEG experts to CCOP Member Countries-Indonesia, Cambodia, Vietnam and Thailand, as well as Lao PDR, and implementation and use of the SANGIS Application were discussed.



## 2. International Seminar on Geoinformation via the Internet and Workshop on CCOP Metadata

CCOP and the Geological Survey of Japan-National Institute of Advanced Industrial Science and Technology (GSJ-AIST) in cooperation with ESCAP and UNESCO organized the International Symposium on Geoinformation via Internet" and "International Workshop for CCOP Metadata", February 18-22, 2002 in Tsukuba, Japan. These two (2) meetings were attended by 75 representatives from the CCOP Member Countries and Cooperating Countries and Organizations.



### 3. GRIDNET Programme

The GRIDNET (Geoscience Report Information Dissemination Network) Programme aims to ensure that reports and other products from Cooperating Country and Organisation’s bilateral and other aid funded research projects in, or relevant to, the CCOP region are made available to organisations in CCOP Member Countries. The Technical Secretariat has already implemented this programme and materials supplied by Member and Cooperating Countries are already being uploaded to the CCOP Website - <http://www.ccop.or.th/projects/Grid-net/reports.html>

### 4. CCOP IT Improvement Plan

The Technical Secretariat has continuously implemented its IT Improvement Plan. CCOP upgraded its Internet connectivity from Analog Dial-Up Connection to Asynchronous Digital Subscriber’s Line (ADSL). The new Internet connectivity gives the organization a dedicated, uninterrupted Internet connection and doubling the bandwidth compared with the old system. This would enable the organization to effectively and efficiently avail the usage of the Internet in its communication and information dissemination activities.

A new file server was purchased that will house all the data and information which CCOP has been producing. All the data which are in the old CCOP file server will be moved to the new file server. An external tape drive was purchased and is attached to the newly acquired file server for Back-Up System hardware. Data from the file server will be backed-up regularly.

## Director’s Mission

### Mission to Member and Cooperating Countries

The Director of the Technical Secretariat conducts mission to Member Countries to discuss the implementation of various technical activities of CCOP Member Countries and to make consultations on the needs of Member Countries for specific programmes. Mission to Cooperating Countries are also undertaken to discuss current programmes as well as to follow-up on new initiatives that are being pursued by CCOP. During the reporting period the following missions were conducted:

- Malaysia : 16-18 January 2002
- Philippines : 5-7 February 2002
- Vietnam : 11-13 March 2002
- Mission to PPM Case Study Countries : Cambodia, China, the Philippines and Indonesia - 10-21 June 2002
- Norway : 1 September 2002
- Republic of Korea : 24-27 September 2002
- Cambodia : 2-4 December 2002

# Publications

The following were published during the reporting period :

## **CCOP Annual Report for Year 2001**

(Report covering the period January - December 2001)

## **CCOP Technical Bulletin Vol. 30**

Hardcopy version of the results of the Digital Compilation of Geoscientific Maps Project Phase III (DCGM III) on Urban Geoscientific Data of East & South East Asia

## **Arc Explorer Version of Urban Geoscientific Data of East & South East Asia (CD-ROM)**

Arc Explorer version of the results of the DCGM III Project on Urban Geoscientific Data of East & South East Asia

## **CCOP Newsletter vol. 26 nos. 3 & 4**

Highlights of activities for the period July-December 2001

## **Report on the Workshop on Interactive Mapping Techniques for the Construction of Geological Reservoir Models (with CD-ROM)**

Presents highlights of the Workshop on Interactive Mapping Techniques for the Construction of Geological Reservoir Models held in Hanoi, Vietnam on 14-25 January 2002.

## **CCOP Strategic Plan**

The new strategic plan of CCOP has been developed to provide guidelines for the future role and activities of CCOP.

## **Proceedings of the Second Workshop of DCGM IV: Geothermal Database (CD-Rom)**

Proceedings of the Second Workshop of DCGM IV Project: Geothermal Database held on 5-7 February, 2002 in Makati City, Philippines.

## **Transactions, International Symposium on Geoinformation via Internet and International Workshop for CCOP Metadata (CD-Rom)**

Contains papers and abstracts of presentations by delegates from CCOP Member Countries and Cooperating Countries and Organizations at the symposium and workshop held in Tsukuba, Japan in 18-22 February 2002.

## **Proceedings 38<sup>th</sup> CCOP Annual Session Thematic Session (CD-Rom)**

Proceedings of the 38<sup>th</sup> CCOP Annual Session thematic session on "Challenges of the geoscience organizations and the impact on their current status and organizational structure" held in Phnom Penh, Cambodia on 26 October 2001.

## **CCOP Newsletter Vol. 27 Nos. 1 & 2**

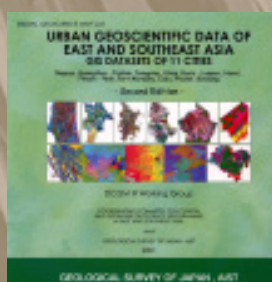
Highlights of activities for the period January-June 2002

## **Report on the 1st Petroleum Policy and Management (PPM) Project (Kick-Off Seminar) (CD-Rom)**

Proceedings of 1<sup>st</sup> Petroleum Policy and Management (PPM) Project Meeting (Kick-Off Seminar) held in Bangkok, Thailand on 11-13 September 2002. The proceedings contains the report of the seminar and presentations of Case Study Countries, Cambodia, China, Indonesia and Philippines.

## **CCOP Technical Bulletin Vol. 31 (with CD-Rom)**

Geotectonic Map of East and Southeast Asia: Sheets 1, 2, 3 and 8 - Second product of the CCOP-CPCEMR Geotectonic Map Project.



# Financial Highlights



## MEMBER COUNTRIES CONTRIBUTIONS

For the year ended December 31, 2002

(amount in US Dollars)

| Member Country                   | Received in the year 2002 |                                    | Expected to receive in the year 2003 |                   |                                    |
|----------------------------------|---------------------------|------------------------------------|--------------------------------------|-------------------|------------------------------------|
|                                  | 1999 - 2001               | 2002                               | 1999 - 2001                          | 2002              | 2003                               |
|                                  | Contribution              | Contribution                       | Contribution                         | Contribution      | Contribution                       |
| Cambodia                         |                           | 5,000.00                           |                                      |                   | 5,000.00                           |
| China <sup>1)</sup>              |                           | -                                  |                                      | 50,000.00         | 50,000.00                          |
| Indonesia                        |                           | -                                  | 25,000.00                            | 25,000.00         | 25,000.00                          |
| Japan <sup>2)</sup>              |                           | (36,828.32)                        |                                      |                   | (36,000.00)                        |
| Korea                            |                           | 60,000.00                          |                                      |                   | 60,000.00                          |
| Malaysia                         |                           | 50,000.00                          |                                      |                   | 50,000.00                          |
| Papua New Guinea                 | 10,000.00                 | 10,000.00                          |                                      | -                 | 10,000.00                          |
| Philippines <sup>3)</sup>        | 55,589.00                 | -                                  | -                                    | 40,000.00         | 40,000.00                          |
| Singapore                        | -                         | -                                  | -                                    | -                 | -                                  |
| Thailand                         |                           | 40,000.00                          |                                      |                   | 40,000.00                          |
| Vietnam                          |                           | 15,000.00                          |                                      |                   | 15,000.00                          |
| <b>Total<br/>(Included JECF)</b> | <b>65,589.00</b>          | <b>180,000.00<br/>(216,828.32)</b> | <b>25,000.00</b>                     | <b>115,000.00</b> | <b>295,000.00<br/>(331,000.00)</b> |

1) Contribution received from China after December 2002

2) JECF Funds Project B. for administrative support

3) The amount of USD55,589 consisted of contributions for 1999 (USD15,434.66), 2000 (USD20,000) and 2001 (USD20,153.99).

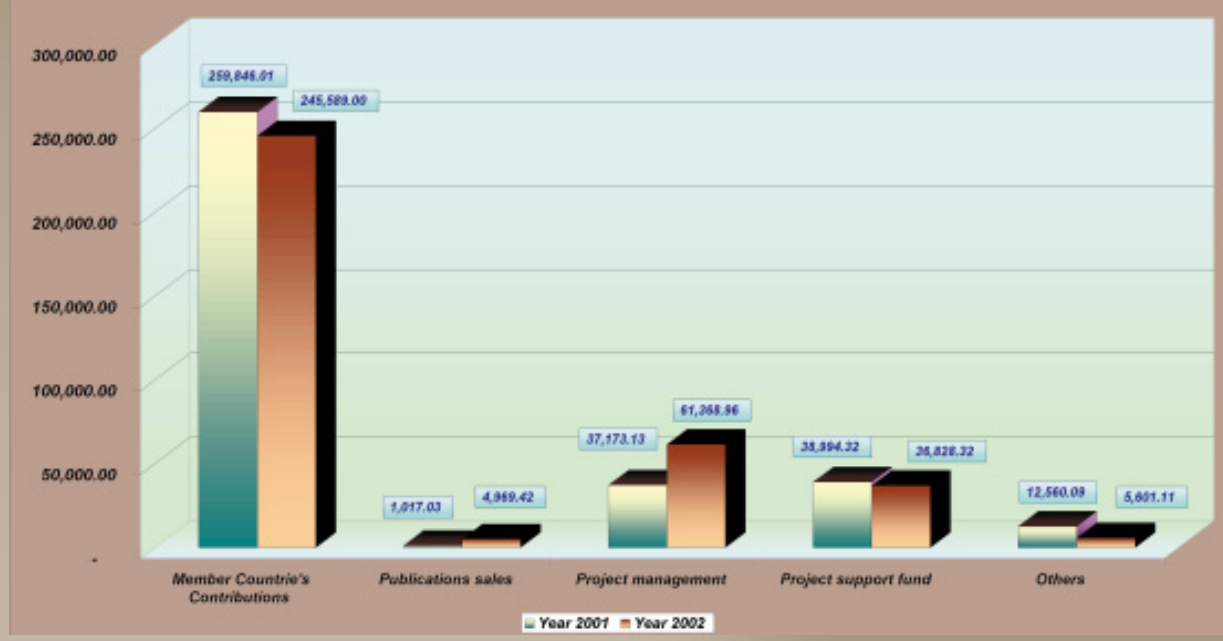
Amount of USD36,524.91 was received after December 2002 as partial 2002 contribution.



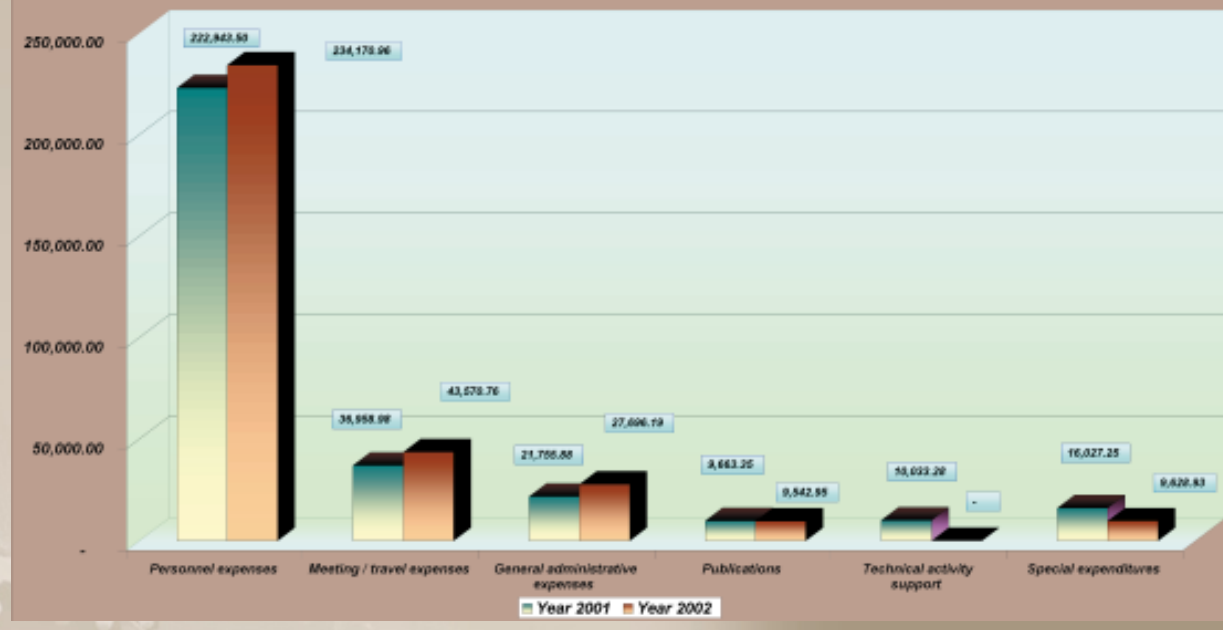
**CCOP FINANCIAL STATEMENT**  
 For the year ended December 31, 2002  
 (amount in US Dollars)

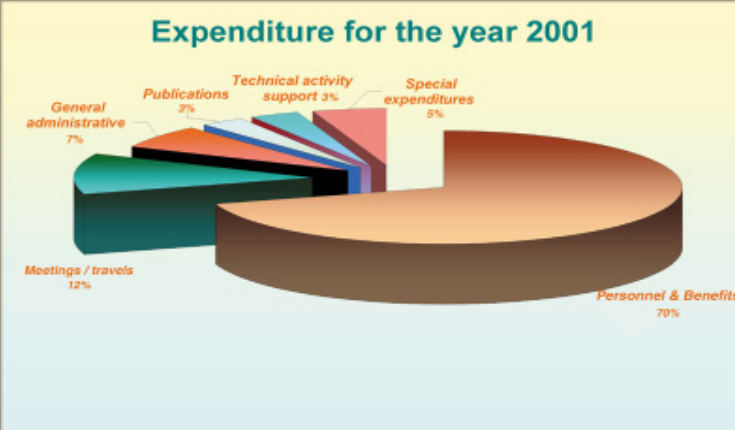
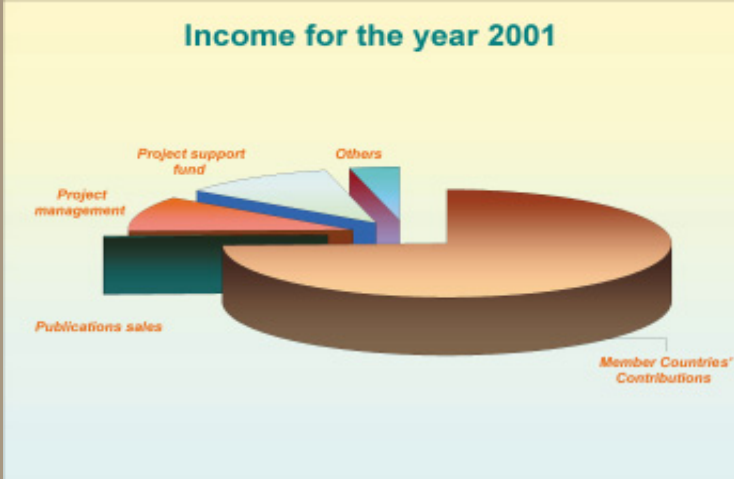
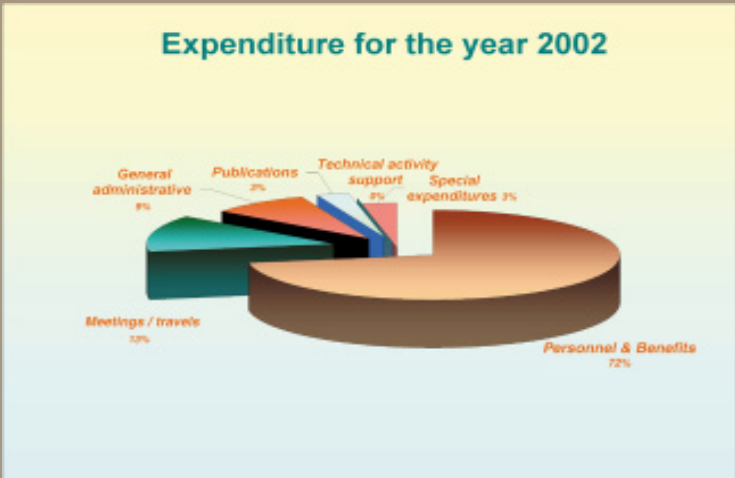
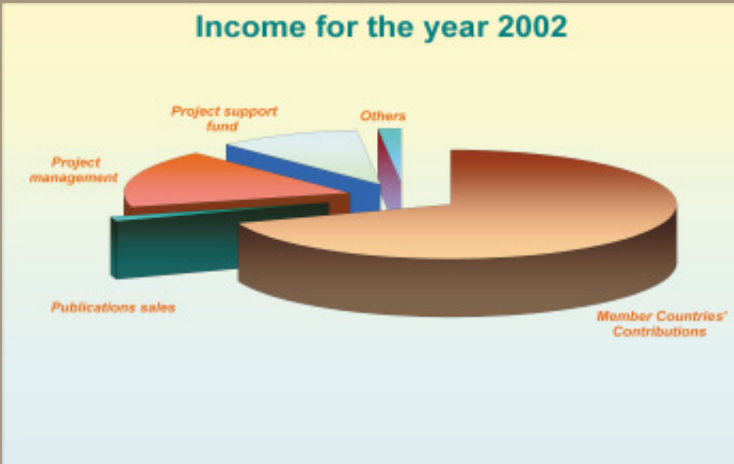
|                                                              | 2001              | 2002              |
|--------------------------------------------------------------|-------------------|-------------------|
|                                                              | USD               | USD               |
| Fund Balance                                                 | 329,929.06        | 359,500.96        |
| <b>Income :</b>                                              |                   |                   |
| Member Countries' Contributions                              | 259,846.01        | 245,589.00        |
| Publications sales                                           | 1,017.03          | 4,969.42          |
| Project management                                           | 37,173.13         | 61,368.96         |
| Project support fund                                         | 38,994.32         | 36,828.32         |
| Others                                                       | 12,560.09         | 5,601.11          |
| <b>Total Income</b>                                          | <b>349,590.58</b> | <b>354,356.81</b> |
| <b>Expenditures :</b>                                        |                   |                   |
| Personnel expenses                                           | 222,943.50        | 234,170.96        |
| Meeting / travel expenses                                    | 36,958.98         | 43,570.76         |
| General administrative expenses                              | 21,755.88         | 27,696.19         |
| Publications                                                 | 9,663.35          | 9,542.95          |
| Technical activity support                                   | 10,033.28         | -                 |
| Special expenditures                                         | 16,027.25         | 9,628.93          |
| Others                                                       | -                 | -                 |
| <b>Total Expenditures</b>                                    | <b>317,382.24</b> | <b>324,609.79</b> |
| Income over/(under) expenses                                 | 32,208.34         | 29,747.02         |
| Total Fund Balance before adjustment                         | 362,137.40        | 389,247.98        |
| Adjusting entries                                            |                   |                   |
| Unrealized gain/(loss) on exchange rate for Retained Earning | (2,636.44)        | 1,283.05          |
| Tax payable                                                  | -                 | -                 |
| <b>Year-end Balance</b>                                      | <b>359,500.96</b> | <b>390,531.03</b> |
| Adjustment to reflect actual cash inflow/(outflow) :         |                   |                   |
| Receivables & Advance                                        | (4,438.28)        | (12,428.65)       |
| Office equipment (net)                                       | (27,787.49)       | (31,507.58)       |
| Unrealized gain/(loss) on exchange rate from fund transfer   | -                 | -                 |
| Account payable                                              | 380.09            | -                 |
| Tax deductible                                               | 438.95            | 442.89            |
| <b>Year-end Cash Balance</b>                                 | <b>328,094.23</b> | <b>347,037.69</b> |

## Income Chart



## Expenditure Chart







## CCOP PROJECTS FINANCIAL STATEMENT

For the year ended December 31, 2002

(amount in US Dollars)

|                                                                     | JECF (A) FUND    |                  | JAPAN FUND      |                 | PPM Fund |                   | REP II FUND       |                   |
|---------------------------------------------------------------------|------------------|------------------|-----------------|-----------------|----------|-------------------|-------------------|-------------------|
|                                                                     | 2001             | 2002             | 2001            | 2002            | 2001     | 2002              | 2001              | 2002              |
| <b>Fund Balance</b>                                                 | 41,954.16        | 58,154.74        | 9,607.73        | 9,791.71        | -        | -                 | 223,089.10        | 173,386.23        |
| <b>Income :</b>                                                     |                  |                  |                 |                 |          |                   |                   |                   |
| <i>Received from Fund</i>                                           | 80,000.00        | 58,499.12        | -               | -               | -        | 610,697.06        | -                 | 39,947.00         |
| <i>Others</i>                                                       | (1,436.20)       | 837.15           | 200.73          | 161.33          | -        | 629.55            | 7,162.52          | 8,756.51          |
| <b>Total Income</b>                                                 | <b>78,563.80</b> | <b>59,336.27</b> | <b>200.73</b>   | <b>161.33</b>   | <b>-</b> | <b>611,326.61</b> | <b>7,162.52</b>   | <b>48,703.51</b>  |
| <b>Expenditures :</b>                                               |                  |                  |                 |                 |          |                   |                   |                   |
| <i>Technical Activities Expenses</i>                                | 64,869.92        | 33,183.63        | -               | 9,807.49        | -        | 290,197.72        | 58,227.62         | 201,428.50        |
| <b>Total Expenditure</b>                                            | <b>64,869.92</b> | <b>33,183.63</b> | <b>-</b>        | <b>9,807.49</b> | <b>-</b> | <b>290,197.72</b> | <b>58,227.62</b>  | <b>201,428.50</b> |
| <b>Income over/(under) expenses</b>                                 | 13,693.88        | 26,152.64        | 200.73          | (9,646.16)      | -        | 321,128.89        | (51,065.10)       | (152,724.99)      |
| <b>Adjusting entries :</b>                                          |                  |                  |                 |                 |          |                   |                   |                   |
| <i>Unrealized gain/(loss) on exchange rate for Retained Earning</i> | 2,506.70         | (100.14)         | (16.75)         | (92.82)         | -        | 2,144.50          | 1,362.23          | 2,457.67          |
| <b>Year-end Balance</b>                                             | <b>58,154.74</b> | <b>84,207.24</b> | <b>9,791.71</b> | <b>52.73</b>    | <b>-</b> | <b>323,273.39</b> | <b>173,386.23</b> | <b>23,118.91</b>  |
| <b>Adjustment to reflect actual cash inflow/(outflow):</b>          |                  |                  |                 |                 |          |                   |                   |                   |
| Tax deductible                                                      | -                | -                | -               | -               | -        | 74.31             | -                 | 312.17            |
| Advance                                                             | -                | -                | -               | -               | -        | -                 | (43,208.880)      | -                 |
| Remittance to CCOP General Fund                                     | -                | -                | -               | (52.73)         | -        | -                 | -                 | -                 |
| Office equipment (net)                                              | (1,146.37)       | (447.31)         | -               | -               | -        | -                 | -                 | -                 |
| <b>Year-end Cash Balance</b>                                        | <b>57,008.37</b> | <b>83,759.93</b> | <b>9,791.71</b> | <b>-</b>        | <b>-</b> | <b>280,138.82</b> | <b>173,386.23</b> | <b>23,431.08</b>  |

# CCOP MEMBER COUNTRIES AND PERMANENT REPRESENTATIVES (11)

## CAMBODIA:

H.E. Mr. Sov Chivkun  
Chairman, CCOP Steering Committee  
Permanent Representative of Cambodia to CCOP  
Director General  
General Department of Mineral Resources (GDMR)  
Ministry of Industry, Mines and Energy  
45, Preah Norodom Blvd., Phnom Penh  
Cambodia

## CHINA:

Prof. Dr. Zhang Hongtao  
Permanent Representative of China to CCOP  
Deputy Director-General  
China Geological Survey  
Ministry of Land and Resources  
No. 37, Guangyingyuan Xiqu  
Xicheng District, Beijing 100035  
People's Republic of China

## INDONESIA:

Dr. Wimpy S. Tjetjep  
Permanent Representative of Indonesia to CCOP  
Director-General  
Directorate General of Geology and Mineral Resources  
Ministry of Energy and Mineral Resources  
Jl. Prof. Dr. Supomo, S.H.No.10, Jakarta 12870  
Indonesia

## JAPAN:

Mr. Shigeki Sumi  
Permanent Representative of Japan to CCOP  
Minister  
Embassy of Japan  
1674, New Petchburi Road Bangkok 10320  
Thailand

## KOREA:

Dr. Tai-Sup Lee  
Permanent Representative of Korea to CCOP  
President  
Korea Institute of Geoscience and Mineral Resources  
(KIGAM)  
30, Kajung-dong, Yusong-ku  
Taejon 305-350  
Republic of Korea

## MALAYSIA:

Dr. Chu Ling Heng  
Permanent Representative of Malaysia to CCOP  
Director-General  
Minerals and Geoscience Department  
20th Fl., Tabung Haji Bldg., 50658 Kuala Lumpur  
Malaysia

## PAPUA NEW GUINEA:

Mr. Kuma Aua  
Permanent Representative of Papua New Guinea to CCOP  
Secretary  
Department of Mining  
Private Mail Bag, Port Moresby Post Office  
Papua New Guinea

## THE PHILIPPINES:

Mr. Horacio C. Ramos  
Permanent Representative of Philippines to CCOP  
Director, Mines and Geosciences Bureau  
Department of Environment and Natural Resources  
North Avenue, Diliman, Quezon City  
The Philippines

## SINGAPORE:

Mr. Chang Chin Nam  
Deputy Director, Industry Development Division,  
Economic Development Board  
250, North Bridge Road, #24-00 Raffles City Tower  
Singapore 0617

## THAILAND:

Mr. Somsak Potisat  
Permanent Representative of Thailand to CCOP  
Director-General  
Department of Mineral Resources (DMR)  
Rama VI Road, Bangkok 10400  
Thailand

## VIET NAM:

Dr. Tran Ngoc Canh  
Permanent Representative of Vietnam to CCOP  
Vice President, PETROVIETNAM  
22, Ngo Quyen Street, Hanoi  
Socialist Republic of Vietnam

# CCOP COOPERATING COUNTRIES AND REPRESENTATIVES (14)

## AUSTRALIA:

Prof. Clinton Bruce Foster  
 Representative of Australia to CCOP  
 Petroleum Research Group Leader  
 Australian Geological Survey Organization (AGSO)  
 G.P.O. Box 378, Canberra, ACT 2601  
 Australia

## BELGIUM:

Prof.Dr.Ir. Leon Dejonghe  
 Representative of Belgium to CCOP  
 International Co-operation  
 Belgian Geological Survey  
 Jennerstraat 13 (Leopoldspark), 1000 Brussels  
 Belgium

## CANADA:

Dr. Ralph G. Currie  
 Representative of Canada to CCOP  
 Head, Pacific Geoscience Centre  
 Geological Survey of Canada  
 9860 West Saauich Road  
 P.O.Box 6000, Sidney  
 British Columbia, V8L 4B2 Canada

## DENMARK:

Mr. Ioannis Abatzis  
 Representative of Denmark to CCOP  
 Senior Adviser  
 Geological Survey of Denmark and Greenland (GEUS)  
 Thoravej 8, DK 2400, Copenhagen NV  
 Denmark

## FRANCE:

Mr. Jean-Claude Lezier  
 Area Manager Asia, International Division  
 Bureau de Recherche Geologiques et Miniere (BRGM)  
 BP 6009, 45060 Orleans Cedex  
 France

## GERMANY:

Prof. Dr. -Ing. Friedrich-W. Wellmer  
 President  
 Bundesanstalt fur Geowissenschaften und Rohstoffe (BGR)  
 Federal Institute for Geosciences and Natural Resources  
 Stilleweg 2, Post Box 510153  
 D-30655 Hannover  
 Germany

## THE NETHERLANDS:

Dr. Jos L.J. de Sonnevile  
 Director, International Cooperation  
 Netherlands Institute of Applied Geoscience  
 TNO - National Geological Survey  
 Princetonland 6  
 P.O.Box 80015, 3508 TA Utrecht  
 The Netherlands

## NORWAY:

Mr. Øystein Kristiansen  
 Representative of Norway to CCOP  
 Project Director, International Cooperation  
 The Norwegian Petroleum Directorate (NPD)  
 Prof. Olav Hanssensvei 10  
 P.O. Box 600, N-4001 Stavanger Norway

## RUSSIAN FEDERATION:

Dr. Elena A. Konstantinovskaia  
 Representative of Russian Federation to CCOP  
 Senior Researcher, Geological Institute  
 Russian Academy of Sciences  
 7, Pyzhevsky Per. 119017 Moscow  
 Russian Federation

## SWEDEN:

Dr. Naz Ahmed Shaikh  
 Representative of Sweden to CCOP  
 Director  
 Geological Survey of Sweden  
 P.O. Box 670, SE-75128  
 Uppsala, Sweden

## SWITZERLAND:

--

## UNITED KINGDOM:

Mr. David C. Ovadia  
 Representative of the United Kingdom to CCOP  
 Head of International Division  
 British Geological Survey  
 Keyworth, Nottingham NG12 5GG United Kingdom

## UNITED STATES OF AMERICA:

Dr. Jack H. Medlin  
 Representative of United States to CCOP  
 Chief, Asian and Pacific Programs  
 Office of International Geology  
 U.S. Geological Survey  
 945 National Center  
 Reston, Virginia 20191 U.S.A.

# CCOP COOPERATING ORGANIZATIONS AND REPRESENTATIVES (14)

## ASCOPE:

Mr. Zainal Matassan  
 ASCOPE Secretary-in-Charge  
 Petroliam Nasional Berhad (PETRONAS)  
 Level 45, Tower 1, Petronas Twin Towers  
 Kuala Lumpur City Centre, 50088 Kuala Lumpur  
 Malaysia

## CIFEG:

Mr. Jacques Giri  
 President  
 International Center for Training and Exchanges in  
 the Geosciences (CIFEG)  
 3 avenue Claude Guillemin B.P. 6517, 45065 Orleans cedex 2  
 France

## CPC:

Dr. J.A. Reinemund (until December 2002)  
 Executive Director  
 Circum Pacific Council  
 945 Oakwod LN  
 Myrtle Beach SC 29572-5749  
 USA

## EUROGEOSURVEYS:

Dr. Emile F.M Elewaut  
 Secretary General  
 The Association of Geological Surveys of the European Union  
 Rue Breydel 40, B-1040 Brussels Belgium

## GETECH:

Dr. J. Derek Fairhead  
 Managing Director  
 Geophysical Exploration Technology  
 c/o School of Earth Sciences  
 University of Leeds, Leeds LS2 9JT, United Kingdom

## IOC:

Dr. Patricio A. Bernal  
 Executive Secretary  
 Intergovernmental Oceanographic Commission  
 1 rue Miollis, Paris 75732 France

## IOC/WESTPAC:

Dr. Shigeki Mitsumoto (until July 2003)  
 Programme Specialist for Marine Sciences and Coastal Areas  
 UNESCO/IOC Regional Secretariat for WESTPAC  
 C/o NRCT  
 196, Phaholyothin Rd, Chatujak Bangkok 10900, Thailand

## IOMAC

Dr. Hiran W. Jayawardene  
 Secretary-General  
 Indian Ocean Marine Affairs Co-operation  
 IOMAC Conference Secretariat  
 Suite 4-212, Bandaranaike Memorial  
 International Conference Hall (B.M.I.C.H)  
 Bauddhaloka Mawatha, Colombo 7, Sri Lanka

## IUGS

Dr Ed F.J. de Mulder  
 Senior Advisor TNO-NITG  
 Professor Subsurface Management TU Delft  
 President International Union of Geological Sciences(IUGS)  
 Theme Coordinator Delft Cluster Subsurface Management  
 Van Dortstraat 52, 2023 JP Haarlem  
 The Netherlands

## PETRAD

Dr. Oystein Berg  
 Managing Director  
 c/o Norwegian Petroleum Directorate  
 Prof Olav Hanssensvei 10, PO Box 600,  
 N-4003 Stavanger, Norway

## UNEP:

Mr. Nirmal Andrews  
 Regional Director and Representative for Asia and the Pacific  
 United Nations Environment Programme (UNEP)  
 10th Fl., United Nations Building  
 Rajdamnern Nok Avenue, Bangkok 10200, Thailand

## UN-ESCAP

Dr. Hak Su Kim  
 Executive Secretary  
 The United Nations Building., Rajdamnern Avenue  
 Bangkok 10200, Thailand

## UNESCO:

Dr. F. Wolfgang Eder  
 Director, Division of Earth Sciences  
 United Nations Educational, Scientific and Cultural  
 Organization (UNESCO)  
 1, rue Miollis 75732 Paris - Cedex 15, France

## WORLD BANK:

Mr. Gotthard Walser  
 Senior Mining Specialist Industry and Mining Division  
 Finance & Private Sector Development  
 The World Bank  
 1818 H. Street, N.W., Washington, DC 20433  
 U.S.A.

# CCOP HONORARY ADVISERS (17)

## China :

Mr. Wang Daxiong  
C/o China Geological Survey (CGS)  
#37, Guanyingyuan Xiqu  
Xicheng District, Beijing 100035  
People's Republic of China

Mr. Wang Xionglin  
C/o China Geological Survey (CGS)  
#37, Guanyingyuan Xiqu  
Xicheng District, Beijing 100035  
People's Republic of China

Prof. He Qixiang  
Director, Research Center for Coastal Geology  
China Geological Survey (CGS)  
No. 62, Fuzhou Road, Qingdao 266071  
People's Republic of China

## Indonesia :

Prof. Dr. John Katili  
c/o Dr. Amanda Katili  
Bandung, Indonesia

Mr. Anai Johannas  
Jl. Titiran No. 1, Bandung 40133  
Indonesia

Prof. Dr. Adjat Sudradjat  
c/o Directorate General of Geology and  
Mineral Resources (DGGMR)  
Department of Energy and Mineral Resources  
Jl. Prof. Dr. Supomo, S.H.No.10  
Jakarta 12870, Indonesia

## Japan :

Prof. Dr. Masami Hayakawa  
Furuichiba 1-53, Saiwai-ku  
Kawasaki-shi, Kanagawa-ken  
Japan 211

Dr. Yoshihiko Shimazaki  
Nikko Exploration and Development Co., Ltd.  
Toranomom New Fashion Bldg.  
7-10 Toranomom, 2-Chome Minato-ku  
Tokyo 105-0001, Japan

## Malaysia :

Mr. Fateh Chand  
465 Jalan Desa Utama, Taman Desa  
58100 Kuala Lumpur  
Malaysia

## The Philippines :

Dr. Guillermo R. Balce  
Executive Director  
Asean Centre for Energy (ACE)  
Jl.H.R. Rasuna Said, Blok X-2, Kav. 07 & 08  
Kuningan, Jakarta 12950  
Indonesia

## The Netherlands :

Dr. E. Oele  
Kagerdreef 188  
2172 HR Sassenheim  
The Netherlands

Dr. Henk J.W.G. Schalke  
Starkenborglaan 10  
2341 BM Oegstgeest  
The Netherlands

## Thailand :

Mr. Sermakdi Kulvanich  
Sermakdi K. Co., Ltd.  
76 Petkasem Road, Tambol Noppring  
Moo 4, Amphur Muang  
Phang-Nga 82000, Thailand

Dr. Charan Achalabhuti  
708 Sriyan Soi 1  
Nakornchaisri Road  
Bangkok 10300

## United Kingdom :

Dr. Anthony Reedman  
15 Malvern Road, Mapperley  
Nottingham NG3 5GZ  
United Kingdom

## U.S.A. :

Dr. Maurice J. Terman  
616 Poplar Dr.  
Falls Church, VA 22046  
U.S.A.

Dr. David B. Prior  
Chairman, CCOP Advisory Group  
Interim Executive Vice President and Provost  
Texas A&M University  
1248 TAMU, College Station  
Texas 77843-1248, U.S.A.

# GEOSCIENCE for a SUSTAINABLE FUTURE

The Coordinating Committee for Geoscience Programmes in East and Southeast Asia (CCOP) is an intergovernmental organization whose mission is to facilitate and co-ordinate 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.

To this end, CCOP promotes capacity building, technology transfer, exchange of information and institutional linkages for sustainable resource development, management of geoinformation, geohazard mitigation and protection of the environment.

## Member Countries :

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

## Co-operating Countries :

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

## Co-operating Organizations :

ASCOPE, CIFEG, CPC, UN-ESCAP, EUROGEOSURVEYS, GETECH, IOC, IOC/WESTPAC, IOMAC, IUGS, PETRAD, UNEP, UNESCO, THE WORLD BANK



**CCOP Technical Secretariat**

24<sup>th</sup> Floor, Suite 244-245, Thai CC Tower  
889 Sathorn Tai Road, Sathorn,  
Bangkok 10120, Thailand  
Tel : 66-2-672 3080 Fax : 66-2-672 3082  
Email : [ccopts@ccop.or.th](mailto:ccopts@ccop.or.th)  
Website : <http://www.ccop.or.th>