



SUMMARY

**CCOP-GSJ/AIST-CGS Meeting & Training on Groundwater Project in 2006
25 - 27 September 2006, Beijing, China**



CCOP Technical Secretariat,
Thai CC Tower, 24th Floor, Suite 244-245,
889 Sathorn Tai Road, Bangkok 10120, Thailand
Tel: (66-2) 672 3080 to 81, Fax: (66-2) 672 3082

September 2006

PROGRAMME

24 September 2006 (Sun)

Arrival of all participants to Beijing

25 September 2006 (Mon)

- 08:00-09:00 Registration
09:00-09:30 Opening Ceremony
Speeches by:
Prof. Dr. Zhang Hongtao, Permanent Representative of China to CCOP, Deputy Director General, China Geological Survey
Mr. Chen Shick Pei, Director, CCOP Technical Secretariat
Dr. Atsunao Marui, CCOP Groundwater Project Leader, Senior researcher, Geological Survey of Japan, National Institute of Advanced Industrial Science and Technology
09:30-10:00 Group Photo / Coffee Break
10:00-10:30 Keynote - Introduction by Project Leader
10:30-11:00 Sub-projects group meeting for progress report
11:00-12:00 Presentation from 3 sub-project group meeting
12:00-13:00 Lunch
13:00-14:00 Discussion of Sub-Projects interim report
14:00-15:00 Training Course on Analysis and Evaluation of Groundwater Data (Lecture by China)
"Groundwater and Land Subsidence Monitoring in China",
by Dr. He Qingcheng, CIGEM
15:00-15:30 Coffee Break
15:30-17:00 Cont'd Training Course
"Groundwater and environments: case study in China",
by Dr. Prof. Wen Dongguang, CGS
17:00 End of the day
18:00 Welcome dinner (hosted by GSJ/AIST)

26 September 2006 (Tue)

- 08:30-10:00 Training Course (Lecture by Japan & Korea)
"Groundwater Simulation"
by Dr. Adrian Gallardo, Hytec Corp
10:00-10:30 Coffee Break
10:30-12:00 Cont'd Training Course
"Acquisition and Analyze of Field Data for Construction of Groundwater Database"
by Dr. Youhei Uchida and Dr. Isao Machida, GSJ/AIST
12:00-13:00 Lunch
13:00-15:00 Cont'd Training Course
"Establishing a standard methodology for development of groundwater flow models in Korea"

by Dr. Yongje Kim, KIGAM
15:00-15:30 Coffee break
15:30-17:00 Cont'd Training Course
"Groundwater quality management and pollution remediation in Korea"
by Dr. Joo-Sung Ahn, KIGAM
17:00 End of the day
18:00 Dinner (hosted by KIGAM)

27 September 2006 (Wed)

1-day Excursion to The Great Wall and Land Subsidence Monitoring station
Farewell lunch (hosted by CGS)

28 September 2006 (Thu)

Departure of all participants

**CCOP-GSJ/AIST-CGS Meeting and Training on Groundwater Project in 2006
25 - 27 September 2006, Beijing, China**






DISTINGUISHED GUESTS






Name	Position / Address
<p>1) Prof. Dr. Zhang Hongtao</p> 	<p>Permanent Representative of China to CCOP Deputy Director-General China Geological Survey (CGS) 24 Huangsi Dajie, Xicheng District Beijing 100011, People's Republic of China Tel: (86-10) 5163 2806 (DL) (86-10) 5163 2963, 5163 2906 Fax: (86-10) 5163 2907 E-mail: zhongtao@mail.cgs.gov.cn, Website: http://www.cgs.gov.cn</p>
<p>2) Mr. Ma Yongzheng</p> 	<p>Deputy Permanent Representative of China to CCOP Division Director Department of International Cooperation, Science and Technology Ministry of Land and Resources (MLR) No. 64, Funei Street, Xicheng District Beijing 100812, People's Republic of China Tel: (86-10) 6655 8407 Fax: (86-10) 6612 7247, 6655 7932 E-mail: yzma@mail.mlr.gov.cn, ma_yzh@yahoo.com</p>
<p>3) Mr. Hou Jinwu</p> 	<p>Director-General of CIGEM China Institute for Geo-environmental Monitoring (CIGEM) No. 20, Dahuisi Road, Haidian District, Beijing 100081, People's Republic of China</p>

LIST OF PARTICIPANTS

Name	Position / Address
CAMBODIA:	
<p>1) Mr. Choup Sokuntheara</p>	<p>Chief of Cooperation Office Department of Geology General Department of Mineral Resources Ministry of Industry, Mines and Energy No. 13, Street 307, Sangkat Boengkak II</p>

	<p>Khan Toul Kork, Phnom Penh, Cambodia Tel: (855-23) 882 419, Mobile: (855-11) 851 381 Fax: (855-23) 824 263 E-mail: geodept@online.com.kh ; choup_sokuntheara@yahoo.com</p>
<p>2) Mr. Sok Sophorn</p> 	<p>Staff of Mapping Office Department of Geology General Department of Mineral Resources Ministry of Industry, Mines and Energy No. 13, Street 307, Sangkat Boengkak II Khan Toul Kork, Phnom Penh, Cambodia Tel: (855-23) 882 419, Mobile: (855-92) 285 182 Fax: (855-23) 210 811 E-mail: geodept@online.com.kh</p>
<p>CHINA:</p>	
<p>3) Dr. He Qingcheng</p> 	<p>China Institute for Geo-environmental Monitoring (CIGEM) No. 20, Dahuisi Road, Haidian District, Beijing 100081, People's Republic of China Tel: (86-10) 6217 1221 Fax: (86-10) 6217 3426 E-mail: Heqc@mail.cigem.gov.cn</p>
<p>4) Dr. Prof. Wen Dongguang</p> 	<p>Director of Hydrogeology Division, Department of Hydrogeology and Environmental Geology China Geological Survey (CGS) Building 22, No.24 Huangsidajie, Xicheng District, Beijing 100011, People's Republic of China Tel: (86-10) 5163 2897 Fax: (86-10) 5163 2897 E-mail: wdongguang@cgs.gov.cn</p>
<p>INDONESIA:</p>	
<p>5) Mr. Agung Pribadi</p> 	<p>Researcher Secretary to Geological Agency Geological Agency Ministry of Energy and Mineral Resources Jl. Diponegoro No. 57, Bandung 40122, Indonesia Tel: (62-22) 720 6515 Fax: (62-22) 721 8154 E-mail: tusbg@yahoo.com</p>
<p>6) Mr. Wahyudin</p>	<p>Researcher (Hydrogeology) Groundwater Research Group Environmental Geology Research Center Geological Agency Ministry of Energy and Mineral Resources (MEMR)</p>

	<p>Jl. Diponegoro No. 57, Bandung 40122, Indonesia Tel: (62-22) 727 4677 Fax: (62-22) 720 6167 E-mail: whydn2000@yahoo.com wahyudin@dgdl.esdm.go.id</p>
<p>JAPAN:</p>	
<p>7) Dr. Atsunao Marui</p> 	<p>CCOP Groundwater Project Leader Senior Researcher Geological Survey of Japan National Institute of Advanced Industrial Science and Technology (AIST) Cyuh # 7, 1-1-1 Higashi, Tsukuba, Ibaraki, 305-8567, Japan Tel: (81-29) 861 3684, Mobile: (81-29) 861 2382 Fax: (81-29) 861 3684 E-mail: marui.01@aist.go.jp</p>
<p>8) Dr. Youhei Uchida</p> 	<p>Senior Researcher Groundwater Research Group Geological Survey of Japan National Institute of Advanced Industrial Science and Technology (AIST) Cyuh # 7, 1-1-1 Higashi, Tsukuba, Ibaraki, 305-8567, Japan Tel: (81-29) 861 3683 Fax: (81-29) 861 3692 E-mail: uchida-y@aist.go.jp</p>
<p>9) Dr. Isao Machida</p> 	<p>Researcher, Water Environment Research Group Geological Survey of Japan National Institute of Advanced Industrial Science and Technology (AIST) Cyuh # 7, 1-1-1 Higashi, Tsukuba, Ibaraki, 305-8567, Japan Tel: (81-29) 861 3692 Fax: (81-29) 861 3691 E-mail: i-machida@aist.go.jp</p>
<p>10) Ms. Kyoko Nakayama</p> 	<p>Secretary, Geo-Barrier Team Geological Survey of Japan National Institute of Advanced Industrial Science and Technology (AIST) Cyuh # 7, 1-1-1 Higashi, Tsukuba, Ibaraki 305-8567, Japan Tel: (81-29) 861 3684 Fax: (81-29) 861 3684 E-mail: kyoko-nakayama@aist.go.jp</p>
<p>11) Dr. Adrian Gallardo</p>	<p>Researcher Hytec Corp. Japan Tsukuba-shi, Kasuga 2-24-1</p>

	<p>Excellent Kasuga 105, 305-0821, Japan Tel: (81-29) 861 3684 Fax: (81-29) 861 3684 E-mail: ad.gallardo@aist.go.jp</p>
<p>KOREA:</p>	
<p>12) Dr. Joo-Sung Ahn</p> 	<p>Senior Researcher Groundwater & Geothermal Resources Division Korea Institute of Geoscience and Mineral Resources (KIGAM) 30 Gajeong-dong, Yuseong-gu, Daejeon 305-350, Korea Tel: (82-42) 868 3227 Fax: (82-42) 863 9404 E-mail: jsahn@kigam.re.kr</p>
<p>13) Dr. Yongje Kim</p> 	<p>Senior Researcher Groundwater & Geothermal Resources Division Korea Institute of Geoscience and Mineral Resources (KIGAM) 30 Gajeong-dong, Yuseong-gu, Daejeon 305-350, Korea Tel: (82-42) 868 3378 Fax: (82-42) 863 9404 E-mail: yjkim@kigam.re.kr</p>
<p>MALAYSIA:</p>	
<p>14) Mr. Setebin @ Roslan Bin Rajali</p> 	<p>Hydrogeologist Minerals and Geoscience Department, Malaysia P.O. Box 560, Jalan Wan Abdul Rahman, Kenyalang Park , 93712 Kuching, Sarawak, Malaysia Tel: (6-82) 244 666, Mobile: (6-19) 836 0620 Fax: (6-82) 415 3390 E-mail: roslanra@jmg.gov.my</p>
<p>15) Mr. Shari Bin Ismail</p> 	<p>Hydrogeologist Minerals and Geoscience Department, Malaysia Tingkat 3, Wisma Persekutuan, Jalan Bayam, 15658 Kota Bharu, Kelantan, Malaysia Tel: (6-09) 748 2037 Fax: (6-09) 748 5153 E-mail: shari@jmg.gov.my</p>
<p>PAPUA NEW GUINEA:</p>	
<p>16) Mr. Simon Egara</p>	<p>Hydrogeologist Geological Survey of PNG Department of Mining Private Mail Bag, Port Moresby Post Office National Capital District, Papua New Guinea Tel: (675) 321 5888</p>

	<p>Fax: (675) 321 5961 E-mail: simon_egara@mineral.gov.pg</p>
<p>PHILIPPINES:</p>	
<p>17) Mr. Efren S. Penaflor</p> 	<p>Chief Geologist Mines and Geosciences Bureau Regional Office 1 San Fernando City, La Union, Philippines Tel: (63-2) 242 2686, 242 2778 Mob: (63-9) 175641035 Fax: (63-72) 242 2777 E-mail: penaflor_efren@yahoo.com</p>
<p>18) Mr. Lutgardo S. Laraño</p> 	<p>Senior Science Research Specialist Department of Environment and Natural Resources Mines and Geosciences Bureau North Ave. Diliman, Quezon City, Philippines Tel: (63-2) 920 9121 Mob: (63) 0920-2392910 Fax: (63-2) 928 8544 E-mail: lslarano@yahoo.com</p>
<p>THAILAND:</p>	
<p>19) Mr. Adisai Charuratna</p> 	<p>Senior Hydrogeologist and Chief of Groundwater Monitoring Section Department of Groundwater Resources Bureau of Groundwater Conservation and Restoration 40 Soi 30, Rama VI Road, Ratchathewi, Bangkok 10400, Thailand Tel: (66-2) 202 3789 Fax: (66-2) 354 3509 E-mail: adisai54@hotmail.com</p>
<p>20) Dr. Oranuj Lorphensri</p> 	<p>Senior Hydrogeologist Department of Groundwater Resources Bureau of Groundwater Conservation and Restoration 40 Soi 30, Rama VI Road, Ratchathewi, Bangkok 10400, Thailand Tel: (66-2) 202 3730 Fax: (66-2) 354 3509 E-mail: oranujl@hotmail.com</p>
<p>VIETNAM:</p>	
<p>21) Dr. Do Tien Hung</p>	<p>Deputy Director General Department of Geology and Minerals of Vietnam 6 Pham Ngu Lao Street, Hanoi, Vietnam</p>

	<p>Tel: (84-4) 933 3192, Mobile: (84-90) 392 6819 Fax: (84-4) 825 4734 E-mail: dotienhung@dgmv.gov.vn</p>
<p>22) Mr. Bach Ngoc Quang</p> 	<p>Deputy Manager of Geological Division Department of Geology and Minerals of Vietnam 6 Pham Ngu Lao Street, Hanoi, Vietnam Tel: (84-4) 826 7501 Fax: (84-4) 825 4734 E-mail: quangbn@dgmv.gov.vn</p>
<p>Local Organizing Team</p>	
<p>1) Ms. Li Cai</p> 	<p>E-mail: lic@mail.cigem.gov.cn</p>
<p>2) Mr. Li Zhiming</p> 	<p>Tel: (86-10) 6217 7677 E-mail: lizm@mail.cigem.gov.cn</p>
<p>3) Ms. Ren Fang</p> 	<p>E-mail: rf61124@sina.com</p>
<p>4) Mr. Liu Wenbo</p> 	<p>China Institute for Geo-environmental Monitoring (CIGEM) No. 20, Dahuisi Road, Haidian District, Beijing 100081, People's Republic of China Tel: (86-10) 6217 1221 Fax: (86-10) 6217 3426</p>

CCOP Technical Secretariat:	
<p>1) Mr. Chen Shick Pei</p> 	<p>Director E-mail: spchen@ccop.or.th</p>
<p>2) Mr. Niran Chaimanee</p> 	<p>Regional Expert E-mail: niranch@ccop.or.th</p>
<p>3) Ms. Sansanee Wudhiwanich</p> 	<p>Secretary to Director E-mail: yui@ccop.or.th</p>
<p>4) Ms. Vareerat Unwerawattana</p> 	<p>Assistant to Technical Division E-mail: may@ccop.or.th</p> <p>CCOP Technical Secretariat 24th Fl., Suite 244 – 245, Thai CC Tower 889 Sathorn Tai Road., Sathorn, Bangkok 10120, Thailand Tel: (66-2) 672 3080-81 Fax: (66-2) 672 3082 E-mail: ccopts@ccop.or.th Website: www.ccop.or.th</p>

Opening Address
MEETING AND TRAINING COURSE ON GROUNDWATER PROJECT

25-27 September 2006
Beijing, China

Prof Dr Zhang Hongtao, Permanent Representative of China to CCOP, Deputy Director General, China Geological Survey

Mr Ma Yongzheng, Deputy Permanent Representative of China to CCOP, Deputy Director, International Cooperation Science and Technology, Ministry of Land and Resources

Dr Jiang Shijin, Director, International Cooperation Division, China Geological Survey

Dr Atsunao Marui, GSJ/AIST

Distinguished experts and participants

Ladies and Gentlemen

First of all, on behalf of CCOP, I would like to extend a very warm welcome to Prof Dr Zhang Hongtao and to thank him for taking his valuable time, despite his heavy work schedule and many commitments, to be here with us in this morning's opening session for the Meeting and Training Course for the Groundwater Project and do us the honour of officiating the ceremony and to deliver the opening speech. I would also like to warmly welcome all the resource persons, and CCOP Member Countries' coordinators, experts and participants to this Meeting. On behalf of CCOP, I would also like to say a big thank you to our colleagues and friends Marui San GSJ/AIST, Dr He Qingcheng of CGS and Dr Joo Sung Ahn of KIGAM and their colleagues for their strong interest and the generous support, which has made this meeting and training programme for the groundwater project in Beijing possible.

I am pleased to see that many of you who are here today have already taken part in the previous two gatherings under the project: the kick-off meeting held on 1-2 March 2005 in Bangkok, the first Training Programme held on 31 October to 4 November 2005 also in Bangkok. During the kick-off meeting, the implementation planning for the project for the next 3 years was carried out by Member Countries' scientists with project experts from Japan, China and Korea. In the second meeting and training programme, many important topics in groundwater, including groundwater resources, groundwater quality, effects and impacts of groundwater use, as well as the monitoring, simulation and mapping of groundwater aquifers were covered.

I am pleased to say that for this training course, the experts of Japan, China and Korea have selected very important and useful topics: groundwater data analysis and evaluation and database construction, groundwater simulation and flow models, groundwater quality management, pollution remediation and land subsidence monitoring.

As you are probably aware, the Groundwater Project is being implemented under 3 sub-projects;

- 1) Groundwater Environment and Management in the Urban Coastal Area
- 2) Groundwater and Land Subsidence Monitoring
- 3) Groundwater Evaluation Using Monitoring System

In this meeting, you will have an opportunity to discuss the progress and issues under them.

Groundwater is of immense importance. In the request for assistance submitted to the CCOP Technical Secretariat by the Member Countries in the previous year, the following geoscientific aspects have been identified:

- i) Assessment and development of groundwater resources
- ii) Environmental problems associated with uncontrolled or unmanaged groundwater extraction
- iii) Groundwater development, management and issues of small islands, and remote areas with poor infrastructures and low level of socio-economic development
- iv) Application of geophysics in groundwater exploration, software for groundwater modeling
- v) Aquifer recharge, water flow study by isotope and origin of the groundwater
- vi) Salt water intrusion

You would probably have noticed that the training course conducted in October-November 2005 and the content of this training course are addressing many of the important aspects considered as important to the Member Countries. We hope that you can benefit from these training courses and the knowledge you bring back will help you in dealing with groundwater issues in your country.

Before I conclude, I would like to record our deepest appreciation to Dr He Qingcheng and the China Geological Survey for having responded so quickly and generously to host this meeting and training course after we were unable to organize it at the earlier agreed venue due to unforeseen circumstance. I would like to take this opportunity to once again thank GSJ/AIST, CGS and KIGAM for the support of this groundwater activity of CCOP. We also like to thank Member Countries for their support of the project and to the participants for coming to this Meeting to share your experience and expert knowledge of groundwater in your country.

Finally, I would like once again to thank Prof Dr Zhang Hongtao for joining us this morning in this opening session of the Meeting. Many thanks also go to Dr He Qingcheng, Marui San and Dr Joo Sung Ahn and their staff and the Technical Secretariat staff for their hard and efficient work and the smooth arrangement for this Meeting.

I wish you a successful and fruitful meeting and training and a pleasant stay in this wonderful city Beijing, China.

Shie Shie and Thank you

Opening Speech: CCOP-GSJ/AIST-CGS meeting and training course on Groundwater project in 2006

By Prof. Dr. Zhang Hongtao

Ladies and Gentlemen,

Good morning!

As a Permanent Representative of China to CCOP and on behalf of China Geological Survey as the host, I sincerely welcome all of you, distinguished delegates from the Member Countries of CCOP, to Beijing to participate in today's CCOP-GSJ/AIST-CGS meeting and training course on Groundwater program.

It is known that the principal aim of CCOP is to facilitate and coordinate the implementation of applied geo-science programs to boost economic development and improve quality of life in CCOP region. China has been benefited a lot from that by joining hundreds of projects from CCOP since 1979 when it officially became one of members in CCOP. These projects are involved with assessment of oil/gas reserves, geo-physical investigation, sand mine investigation on offshore, regional mapping, construction of strata database, global mineral resource assessment, groundwater assessment and control, management of coastal zone in Asia, and geo-hazards assessment. These projects helped us import more advanced technology in applied geo-science to China and cultivate great numbers of professionals in related fields.

Groundwater plays a very important role in water supply for agriculture, industry, domestic life in China, especially in north of China. Compared with developed countries with efficient management of groundwater, China still needs much more efforts to realize such management. International cooperation and projects on groundwater from CCOP offered an excellent opportunity to us to improve the capability of groundwater prospecting, resource assessing, groundwater monitoring, data managing, information processing, and groundwater-concerned legislation. In 2004 and 2005, projects on groundwater we joined covered groundwater and land subsidence monitoring, construction of groundwater database, deep water resource assessment. These projects improved bilateral cooperation and technical exchanges between China and other member countries in CCOP.

I wish today's meeting and training course a friendly platform for all delegates from CCOP region to exchange and learn from each other. As it is best season in Beijing, I also wish all of you a wonderful stay here.

Finally, I would deeply thank those who organized, prepared, and arranged this meeting. Again, I congratulate the successful opening of today's meeting. Good beginning is half way to success. I wish it whole success 3 days later.

Thank you.

**The Minutes of the CCOP-GSJ/AIST-CGS Meeting and Training Program
on the Groundwater Project in 2006**
Groundwater Assessment and Control in the CCOP Region
25 – 27 Sept., Beijing, China

The CCOP-GSJ/AIST-CGS Meeting and Training Program on the Groundwater Project, “Groundwater Assessment and Control in the CCOP Region” was held on 25th to 27th September 2006 in Beijing, China. It was attended by a total of twenty-nine distinguished guests from China, participants from Cambodia, China, Indonesia, Japan, Korea, Malaysia, Papua New Guinea, Philippines, Thailand, Vietnam, and the CCOP Technical Secretariat.

The Meeting was officially opened by Dr. Zhang Hongtao, Permanent Representative of China to CCOP, Deputy Director-General, China Geological Survey, Mr. Chen Shick Pei, Director of the CCOP Technical Secretariat and Dr. Atsunao Marui, Project Leader of the Geological Survey of Japan, AIST welcomed the participants to the Meeting and Training Program.

In the morning of the first day, Project meeting was carried out. Dr. Marui made a explanation about the outline of meeting as a keynote presentation. Sub-group meetings were carried out in the morning. Results of discussions and progress situation were reported by each sub-group project leader.

Dr. Marui and Dr. Uchida from GSJ/AIST introduced the situation of sub-project “Groundwater Environment and Management in the urban coastal area”, and reported that the goal of the sub-project will be achieved in the target year. Dr. He from CIGEM represented about sub-project “Groundwater and Land Subsidence Monitoring”, and introduced the observation system shown in the excursion. The sub-project is progressing favorably. Dr. Ahn from KIGAM made a presentation of “Groundwater Evaluation Using Monitoring System” and the problems of groundwater which should be solved, and progress of the groundwater monitoring system were shown, simultaneously. The summary of three sub-group projects is shown in a table attached in the bottom.

In the end of the meeting, the followings are confirmed:

- 1) Sub-group project will be finished in 2007, and a result of sub-group project also will be published in the timing. Every member country selects a corresponding participant (at least one person for one sub-group project) to accomplish a responsibility of publishing the results products in the last year of the sub-group project.
- 2) The final product of this total project is expected to be a combination of the sub-group projects. We will have a workshop in the final year (2008) meeting.
- 3) Next year (2007) meeting will be held in Japan or Korea. We expect the meeting will be the final meeting to complete each sub-group project in 2007.

Training course was carried out after the project meeting. A total of six lectures were made by resource persons from China, Japan and Korea during the one and a half day training. The first day, two professors from China gave lectures. In the Second day, four lectures was held by Korea and Japan, the lecturer and title of the program is as follows:

Prof. Dr. He (CIGEM): “Groundwater and Land Subsidence Monitoring in China”

Prof. Dr. Wen (CGS): “Groundwater monitoring and resources in China”

Dr. Uchida and Dr. Machida (GSJ): “Acquisition and Analyze of Field Data for Construction of Groundwater Database”

Dr. Gallardo (GSJ): “Modeling of Groundwater Flow and Pollution”

Dr. Ahn (KIGAM): “Groundwater Quality Management and Pollution Remediation in Korea”

Dr. Kim (KIGAM): “Establishing a Standard Methodology for Development of Groundwater Flow Models in Korea”

To facilitate the complete the project, the tasks, target dates and final products for each sub-group project are summarized in the table shown in Appendix below:

Appendix Table: Outline of the Sub-group project

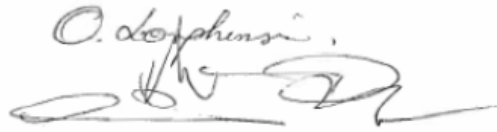
Sub-project	Member	Activity	Input data	Dead line	Expecting outputs
Groundwater Environment and Management in the urban coastal area	Japan Indonesia Philippines PNG	*Understanding the present law condition and focus the future needs *Research the potential of gw resources in each capital basin	*Laws and regulations about groundwater *Hydro-geo map, water-balance data	Spring 2007	*Structural map of gw law in CCOP region *Gw resource volume of major basin in each country
Groundwater Evaluation Using Monitoring System	Korea Cambodia Malaysia PNG* Thailand* Vietnam*	*Collecting and interpretation of monitoring data for Malaysia, Thailand and Cambodia. *Establishing a conceptual monitoring network *Arsenic issues in gw of Cambodia	*Gw monitoring data of a certain basin or country in Malaysia, Thailand and Cambodia	Summer 2007	*Conceptual monitoring network system *Methodology document for constructing monitoring system
Groundwater and Land Subsidence Monitoring	China Thailand Vietnam Cambodia*	*Establish the monitoring system for land subsidence (LS) and gw in North China Plane (NCP) *Process in all collected data to evaluate the situation of LS *Research the potential of LS in case study country	*Map of LS in NCP *LS data of Thailand and Vietnam	Spring 2007	*Synthetic understandins of LS in NCP *Phenomena, natural and social back-ground and political countermeasure about LS

* sub-member

This Minutes is adopted as signed.



Cambodia



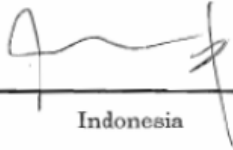
Thailand



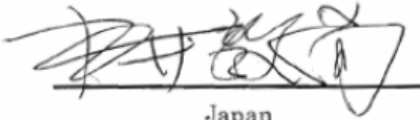
China



Vietnam



Indonesia



Japan



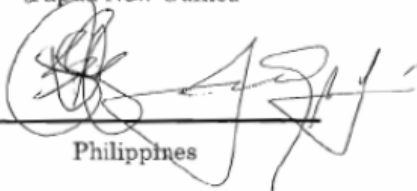
Korea



Malaysia



Papua New Guinea



Philippines