



Fifth International Conference on Asian Marine Geology

January 13–18, 2004, Bangkok, Thailand



**Call for Abstracts
Registration, hotel request, excursion application form**

Organizer

Department of Geology, Chulalongkorn University, Thailand

Co-organizers

Department of Minerals Resources, Thailand

Department of Groundwater Resources, Thailand

Department of Mineral Fuel, Thailand

CCOP (Coordinating Committee for Geoscience Programmes)

IOC (Intergovernmental Oceanographic Commission)/WESTPAC

IGCP-475: Deltas in the Monsoon Asia-Pacific region (DeltaMAP)

IGCP-476: Monsoon Evolution and Tectonics-Climate Linkage in Asia

APN Project: The Mega-Deltas of Asia: A Conceptual Model and its Application to Future Delta
Vulnerability

Background

The 1st International Conference on Asian Marine Geology (ICAMG) was held in Shanghai, China, in 1988, and it has been held every four years since. The 2nd meeting was in Tokyo in 1992; the 3rd in Cheju, Korea, in 1996; and the 4th in Qingdao, China, in 1999.

These conferences have given researchers good opportunities to exchange ideas and new information and to plan for future collaboration. The 5th conference, which will be held January 13–18, 2004, in Bangkok, Thailand, will be the first to take place in Southeast Asia and will provide a wonderful opportunity to disseminate up-to-date scientific knowledge of Asian marine geology. We sincerely invite you to participate in this conference by bringing your ideas and your research to share with others.

Scientific Programme

The scientific programme of ICAMG-V consists mainly of 11 topical sessions, and the joint session and field excursion with the DeltaMAP project (IGCP-475) and MegaDelta project (APN). Other regular sessions on marine geology are also welcome. Scientific sessions consist of plenary session, two parallel oral sessions, poster session. Some of keynote speeches are planned.

Conference Sessions

- Future direction of Asian Marine Geology
- Ocean drilling at Asian Continental Margins
- Geology and Tectonics of the Asian Seas
- Himalaya and Tibetan Plateau Uplift and Monsoon Climate
- Evolution of the Marginal Seas
- Gateway between the Pacific and Indian Oceans
- Land-Sea Interaction and Paleoceanography in Marginal Seas
- Climate and the Ocean Environment
- Sediment Source to Sink and Marine Sediment Dynamics
- Oil, Gas, and Gas-Hydrate in SE Asian Seas
- Human Impacts on the Coastal Zone and Sustainable Development
- Asian Deltas: Evolution and Recent Changes (IGCP/APN joint session)

Local Organizing Committee

Honorary Advisors: Sawai SUNDHAROVAT

Nopadon MANTAJIT

Pachon CHAROENSRI

Somsak POTISAT

Chairman: Veerote DAORERK

Vice-Chairman: Samai CHIEMCHINDARATANA

Sompop VEDCHAKANCHANA

Members:

Pongsak PONGPRAYOON, Malai LEANCHAROEN, Thiva SUPRAJANYA, Narong THIRAMONGKOL, Wasan PONGSAPICH, Chaiyudh, KHANTAPARB, Suparp POOBRASERT, Nopadon MUANGNOICHAROEN, Somchai NAKAPADUNGRAT, Visut PISUTHA-ARNOND, Punya CHARUSIRI, Sombat YUMUANG, Malatee TAIYAQUPT, Yoshio SATO, Michio HASHIZUME, Sin SINSAKUL, Niran CHAIMANEE, Pol CHAODUMRONG, Sunya SARAPIROME

Secretariat:

Thanawat JARUPHONGSAKUL (*Secretary-general*)

Chakkaphan SUTTHIRAT (*Vice Secretary-general*)

Montri CHOOWONG (*Vice Secretary-general*)

Program and Publication:

Chakkaphan SUTTHIRAT

Exhibitions/Publicity:

Titima CHAROENTITIRAT

Reception and Conference Affairs:

Boossarasiri THANA

Field Excursion:

Montri CHOOWONG, Yoshio SATO, and Niran CHAIMANEE,

International Scientific Committee

Chairman: Pinxian WANG (Tongji University, China)

Members: Asahiko TAIRA (JAMSTEC, Japan), Yoshiki SAITO (GSJ/AIST, Japan), Hisatake OKADA (Hokkaido University, Japan), Ryuji TADA (University of Tokyo, Japan), Yunshan QIN (Institute of Oceanology, CAS, China), Shu GAO (Nanjing University, China), Zhongyuan CHEN (East China Normal University, China), Kuo-yen WEI (Taiwan University, Taiwan), Byong-Kwon PARK (KORDI, Korea), Yong Ahn PARK (Seoul National University, Korea), Veerote DAORERK (Chulalongkorn University, Thailand), Shick Pei CHEN (CCOP, Thailand), Alexander KHANCHUK (Far-East Institute of Geology, RAS, Russia), Patrick DeDECKKER (Australian National University, Australia), Bilal HAQ (National Science Foundation, USA), Peter CLIFT (Woods Hole Oceanographic Institution, USA), John D. MILLIMAN (Virginia Institute of Marine Science, USA), Michael SARNTHEIN (University of Kiel, Germany), Karl STATTEGGER (University of Kiel, Germany), and Serge BERNE (IFREMER, France)

Venue and Dates

The Miracle Grand Convention Hotel has been selected as the ICAMG-V venue. The hotel has 270 rooms with facilities that include restaurants, a banquet hall, a swimming pool, massage and fitness rooms, and a sauna/steam bath. It is located on Vibhavadi Rangsit Road, just a 10-minute drive from Bangkok International Airport and adjacent to the expressway for fast and easy access to the Bangkok Central District.

Bangkok is a city of about 10 million people located about 35 kilometers from the Gulf of Thailand in the heart of the Central Plain. The weather in Bangkok in January is normally mild; the average temperature during the daytime is 20–23 °C.

Schedule at a glance

Activities	January, 2004								Venue
	13	14	15	16	17	18	19	20	
ICAMG-V									
Registration & Ice Breaker	←→								The Miracle Grand Convention Hotel, Bangkok
Registration		←→							The Miracle Grand Convention Hotel, BKK
Scientific sessions		←→							The Miracle Grand Convention Hotel, BKK
Welcome party		←→							The Miracle Grand Convention Hotel, BKK
Farewell party					→				Boat Restaurant on the Chao Phraya River, BKK
Field trip ICAMG-V/IGCP475/APN					←→	←→			The Chao Phraya Delta and stay in Ayutthaya
IGCP-475/APN Joint meeting									
Registration			→						The Miracle Grand Convention Hotel, Bangkok
Scientific session			←→						The Miracle Grand Convention Hotel, BKK
Welcome party			→						Boat Restaurant on the Chao Phraya River, BKK
Field trip ICAMG-V/IGCP-475/APN					←→	←→			The Chao Phraya delta and stay in Ayutthaya
Scientific sessions						←→	←→		The Krungsri River Hotel, Ayutthaya
Business meeting							←→		The Krungsri River Hotel, Ayutthaya
Farewell dinner								→	The Krungsri River Hotel, Ayutthaya

Official Language

English will be the official language of the conference.

Call for Abstracts:

Abstracts should be e-mailed or arrive by post at the conference secretariat by **November 1, 2003**. Abstract format: MS Word file; title, authors, affiliation(s), e-mail address of corresponding author, main text (A4, 1 page including figures, less than 500 words). The organizing committee reserves the right to accept or refuse a contribution on the basis of the submitted abstract and to decide whether the contribution will be presented orally or as a poster. However, the committee will take the author's preference for oral or poster presentation into consideration. Oral and poster presentations are expected to be of equal quality. All abstracts will be published in an abstract volume that will be distributed to all participants.

Field Excursion

A two-day, post-conference field trip has been planned jointly with IGCP-475 (DeltaMAP) and APN MegaDelta projects: Take a long-tail boat tour to view coastal erosion in the Chao Phraya River delta, including wonderful outcrops in an open pit (20–30 m below the present sea level!) showing the whole Holocene deltaic sequence. The tour will also include a visit to an oyster pagoda temple, and a one-night stay in the old capital of Thailand, Ayutthaya.

The deadline for receipt of your application for the field trip is November 1, 2003. As the number of field trip participants is limited to 40, except for participants in IGCP-475 and MegaDelta meeting, acceptance will be in the order of arrival of the completed applications.

Detailed information on the field trip will be given in the third circular, and a Field Trip Guide will be available at the conference.

Health Requirements:

It is recommended, but not required by Thailand, that travelers to Thailand be immunized against cholera. Please consult travel agents in your own country to obtain up-to-date information on recommended immunizations and other health precautions.

Travel Arrangements

Bangkok is a hub for air traffic in Southeast Asia, and most major airlines fly either directly to Bangkok or connect to Bangkok through Tokyo, Hong Kong, or Singapore. The Miracle Grand Hotel bus service between the airport and hotel is available to transport participants .

All participants are expected to make their own arrangements for transportation to Bangkok and for accommodations in Bangkok. However, if requested, the organizing committee will assist participants in securing hotel accommodations.

Visa

Participants must possess a valid passport and obtain an entry visa for Thailand, available from any Thai diplomatic or consular mission. Particulars regarding visa requirements are also available from the

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airlines by which participants intend to travel. Passport holders from 39 countries do not require a visa when entering Thailand for tourism purposes if their stay in the Kingdom does not exceed 30 days. Please visit the web site: <http://www.mfa.go.th/web/12.php#General>

Accommodations

The accommodations at the Miracle Grand Convention Hotel are recommended. Special discount prices of 1600 Bt (ca. US \$40, superior single) or 1800 Bt (ca. US \$45, superior double/twin beds) are available to conference participants. These rates are available only if you book through the conference secretariats. Special conference rate can not be guarantee for late registrats. January is normally high season for tourism in Thailand and hotels are fully booked. Therefore, reservation for hotel is strongly recommended.

In order to confirm your accommodation booking, a deposit of 50 US\$ must be returned with your registration form, no later than November 1, 2003. Any reservation made after the mentioned dated will be accepted upon the room availability. If you wish to share a room, please indicate it on the application form. Your hotel request should be sent to the secretariat by November 1, 2003. (please see the hotel request section of the application)

The 1st Annual meeting of IGCP475 DeltaMAP and APN MegaDelta January 16-20, 2003, Bangkok and Ayutthaya

The meeting starts as a session on *Asian Deltas: their evolution and recent changes* of ICAMG-V in Bangkok on January 16, followed by two day excursion on January 17-18, and two day scientific meeting in Ayutthaya on January 19-20. The hotel in Bangkok on January 15-16 is Miracle Grand Convention Hotel, and the Krungsri River Hotel on January 17-20 for excursion and scientific meeting in Ayutthaya.

The registration fee of IGCP-475 and APN Mega-Deltas includes excursion, accommodation in Ayutthaya, and all meals from lunch on January 17 to breakfast on January 21, not includes the accommodation and meals in Bangkok. If you are interested in participating in this meeting, please indicate your participation in the Registration Form of ICAMG-V and also contact Dr. Yoshiki Saito (e-mail: yoshiki.saito@aist.go.jp).

Registration fee

Registration is compulsory for participants in each scientific programs; for the ICAMG-V Conference, the IGCP475/APN meeting, and field excursion. The conference organizers have attempted to keep the cost low for all participants rather than to support some individuals. Please contact the secretariats for more information.

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Registration fees for each scientific program

Convention Option	Scientific Programs	Pre-Registration Fee, US\$	On-site Registration Fee	Remark
Module 1	ICAMG	70	100	January 13-16, Includes abstract volume, 3 lunches, welcome and farewell parties
Module 2	ICAMG + Excursion	170 (150)*	200 (180)*	January 13-18, Includes abstract volume, welcome and farewell parties + excursion guidebook, 5 lunches, 1 dinner, and 1 night's accommodation in Ayutthaya
Module 3	ICAMG+ Excursion + IGCP/APN Meeting	310 (250)*	Not	January 16-20, Includes abstract volume, welcome party + excursion guidebook, 5 lunches, 4 dinners, and 4 nights' accommodation in Ayutthaya
Module 4	ICAMG + Excursion + IGCP/APN Meeting	350 (290)*	Not	January 13-20, Includes abstract volume, welcome and farewell parties + excursion guidebook, 7 lunches, 4 dinners, and 4 nights' accommodation in Ayutthaya

*Registration fees in parenthesis: share a room

Module 1 and 2 are for those participating only in ICAMG-V

Advanced Payments/Deposits

All price & quoted are in US dollars. Payment should be made by overseas bankdraft payable to “ICAMG-V, Department of Geology, Chulalongkorn University”, or by internet merchant (at <http://www.geocities.com/geology5th/> or <http://www.geo.sc.chula.ac.th/icamg5/index.htm>) to arrive by November 1, 2003. Pre-registration will not be processed without payment.

Correspondence/Symposium Website

Delegates and interested persons, either presenting a paper or participating in the conference, are requested to complete and return the registration form to the secretariats not later than November 1, 2003. Please see more information about this meeting at:<http://www.geocities.com/geology5th/> or <http://www.geo.sc.chula.ac.th/icamg5/index.htm>

All correspondence and special requests should be directed to:

Secretariats of ICAMG-V

Department of Geology

Faculty of Science

Chulalongkorn University

Bangkok 10330, Thailand.

E-mail: thanawat@sc.chula.ac.th ; chakkaphan@chula.com; mchoowong@chula.com

Fax: +66-(0)2-2185464 or 5; Tel: +66-(0)2-2185442 or 3

Key date: November 1, 2003; Abstract submission, Pre-registration, hotel request, field excursion reservation (only 40 places, by order of arrival of the application)

(FROM B)

Advanced Payment Form

PAYMENT

Hotel Reservation (US\$)
Pre-registration fees for:
Module 1 (US\$).....
Module 2 (US\$).....
Module 3 (US\$).....
Module 4 (US\$).....
Total of Payment (US\$).....

PLEASE CHARGE MY:

Maestro Credit Card No.....
 Visa Credit Card No.....
 Master Credit Card No.....
 JCB Credit Card No.....
Valid until (m)... .. /(y).....
 I enclose my US\$ Bank Drefit No.....
Name of the Bank.....
Payable to: ICAMG-V, Department of Geology
Chulalongkorn University

Name..... Date.....
Address (Home address if using Credit Card facilities).....
.....
Signature.....

Deadline: November 1, 2003 (firm)

IGCP-475 (2003-2007)

Deltas in the Monsoon Asia-Pacific Region (DeltaMAP): Late Quaternary Development and Recent Changes Due to Natural and Human Influences

INTRODUCTION

River deltas are among the most significant settings on Earth, in terms of their human population, infrastructure, and resources such as agriculture, fisheries, hydrocarbons, and wildlife. Such importance has fueled decades of research on Western Hemisphere river deltas, such as the Mississippi, Rhine, and Nile. In contrast, research on the many river deltas of South, Southeast, and East Asian region began in earnest only last 20 years. The recent studies of these Asian systems reveal that they are distinct from existing models because of regional factors such as (1) a monsoon-dominated climate, (2) young, mountainous catchment geology, (3) high-energy coastal settings, (4) large water and sediment discharges and (5) tectonic activity. In addition, these Asian river deltas including Oceania region also serve as major gateways for chemical and particulate fluxes to the global ocean, including >75% of worldwide sediment discharge.

Moreover, the developing nations of these Asian region have long suffered from numerous river delta-related hazards. These countries would benefit from a better understanding of the controls and responses of their fluvial delta systems. Over the course of the next 5 years, this project seeks to significantly improve our understanding of Asian river deltas by (1) synthesizing abundant recent research results, (2) bridging the traditional gaps between terrestrial, coastal, and marine research, and (3) identifying the major needs and goals of future research. Furthermore, in pursuing these goals we expect significant advances in the fundamental research of monsoon-driven sediment dispersal systems.

OBJECTIVES

The project's overall aim is to assemble a collective knowledge of river-delta systems in the monsoon Asia-Pacific region, with the intent for capacity building and advancing basic research in developing nations. Climate, tectonic, and coastal regimes in this region are very dynamic and drive many large, active river-delta systems. These systems also support an immense human population and comprise an important part of regional economies through agriculture, fisheries, shipping, infrastructure, and natural resources. To address the broad-range of interests for the proposed DeltaMAP project, from basic to applied research, the following key issues have been identified:

- Sediment Transport Patterns and Processes
- River Discharge and Sediment Load
- Sequence Stratigraphy and Reservoir Geometry
- Coastal Plain Development
- Alluvial Valleys
- Climate, Paleomonsoons, and Paleohydrology
- Earthquake History and Impacts

- Early and Modern Human Impacts
- Tropical Storms, Surges, and Tsunamis
- Comprehensive Delta Models for MAP Region

WORK PLAN

To address the broad interests of the project, the study will involve five working sub-groups that will each focus on a specific aspect. These working groups will also have a team leader who will oversee research and project activities. The working groups will include the following:

- Late Quaternary Delta Stratigraphy and Correlation
- River-Delta Processes and Controls
- Human Impacts, Sustainable Development, and Geohazard Mitigation
- Quantitative Modeling of Delta Process, Response, and Stratigraphy

In addition to the above working groups, the DeltaMAP project will also have regional coordinators who will organize multidisciplinary efforts for individual delta systems within their area. The major areas include South (Pakistan to Bangladesh), Southeast (Myanmar to Hong Kong), East (east China to Korea and Japan), and Oceania (Indonesia to Papua New Guinea).

Based on the working groups and regional divisions, the project committee will consist of nine group/regional directors and two general executive officers. Although this number of leaders will require greater effort and organization, we feel that the benefits are significant. The project will have greater impact if participants are directly involved and have more ownership of the study. This approach will also allow us to involve more members of developing nations and support capacity building and professional development.

LOCATION OF MAJOR FIELD ACTIVITIES

China – Huanghe (Yellow River) delta, Changjiang (Yangtze) delta, Zhujiang (Pearl River) delta, deltas of Bohai Sea, others

Vietnam – Song Hong (Red River) delta, Mekong River delta

Thailand – Chao Phraya river delta

Indonesia – Mahakam River delta, Digul River delta, Kapuas River delta, others

Malaysia – Baram River delta, Rajang River delta, others

Papua New Guinea – Fly River delta, Markam River delta, others

Myanmar – Irrawaddy River delta, Salween River delta

Bangladesh – Ganges-Brahmaputra River delta

India – Ganges River delta, Krishna River delta, Godavari River delta, Cauveri River delta, Narmada River delta, Mahanadi delta, others

Pakistan – Indus delta

Japan – Kurobe river delta, others

Korea – Keum river delta, Han river delta, others

APN project #2003-12

(April 2003 to March 2005)

The Mega-Deltas of Asia: Conceptual Model and its Application to Future Delta Vulnerability

Background

The Asian coast supports many large and distinct river deltas, comprising abundant natural resources and an immense human population. These deltas are located in seven different APN nations, and include the Huanghe (Yellow), Changjiang (Yangtze), Pearl, Red, Mekong, Chao Phraya, Irrawaddy, Ganges-Brahmaputra, and Indus river deltas. The world community has become increasingly aware that these deltaic environments are vulnerable to numerous and frequent geo-hazards, resulting from storms, floods, droughts, and sea-level rise. In another respect, humans are also degrading the coastal environment through engineering projects (e.g., river dykes and dams), urbanization, and the over-utilization of natural resources (e.g., groundwater, coastal forests).

Recently, major efforts have been put forth to assess the potential impacts that global change may have on these delta systems. *However, most such assessments have been based on a gross over-simplification of delta behavior, as well as a limited database for Asian deltas.* Although some background information can be based on delta research from other parts of the world, recent findings from the Asian mega deltas reveal that these systems are fundamentally distinct from existing models. Notably, the following characteristics of Asian deltas contribute to their unique behavior: 1) monsoon control, 2) high sediment loads, 3) high, strongly seasonal water discharge, 4) large coastal tide ranges, and 5) silt-sand dominated sediment texture, and 6) tectonic activity (only in a few systems).

Thus, we propose a 2-year study that will focus on: 1) establishing a comprehensive conceptual model for Asian mega deltas, where unique geologic conditions play a critical role for delta response to various natural and anthropogenic forcings; 2) an improved understanding of the dynamic processes of Asian mega deltas in order to provide useful information for future coastal vulnerability assessments; and 3) the significance of #1-2 above for the sustainable development of this densely-populated region.

Deltaic systems are very complex and involve significant feedbacks among climate, catchment, deltaic depocenter and continental-margin controls. This truth is not appreciated by many researchers who are trying to predict the impact of future changes on Asian deltas. Furthermore, understanding the response of deltas to environmental change becomes more complicated when anthropogenic modifications are considered. These complexities must be taken into account to yield valid vulnerability assessments for deltaic systems. In fact, the scientists involved in the proposed study represent almost all Asian mega deltas (appendix I, II) and have done extensive research in the region over the past decade. However, these relatively isolated works have not yet revealed their broader regional significance, which in association with risk assessment is a primary goal of the proposed project. Past failures in coastal planning suggest that the lack of a fundamental geological context for risk-assessment studies has harmed our socioeconomic and sustainable development, and this will continue in the future unless better information can be brought to regional planners and managers.

Primary Objectives

- A. To establish a comprehensive conceptual model for Asian mega deltas, based on the integration of large databases existing in various delta systems, including both the geological framework of the delta and the dynamic material fluxes from Himalayan/Tibetan plateau to the delta estuaries (e.g., sediment load, runoff, and nutrients);
- B. To synthesize the existing large database and previous research results from various Asian deltas, in order to upgrade the capability of geo-hazard assessment for all delta systems;
- C. To understand the role that geological processes and delta response play in the proper assessment of global-change and human-modification impacts, including: (a) sea-level rise associated with global warming, (b) land subsidence due to groundwater withdrawal, (c) flooding from both drainage-basin runoff and coastal storm surge, and (d) saltwater intrusion, river-channel dry-up and coastal erosion due to upstream damming and water diversion;
- D. To directly communicate the important issues and findings of the proposed study with our policy-makers for adjusting the currently oversimplified manner of hazard assessment, mitigation, and prevention. To establish an effective network system among our delta-coastal scientists, aiming at a long-term collaboration on the basis of information circulation」 †
- E. To set up a Website for circulating the information of the project, in order to call for more public awareness.

Workplan and Timeline

Synthesizing conceptual model

Key members of the project who have worked with different Asian mega-deltas will work on the synthesis of conceptual delta models, and the risk assessment of delta system during the year of 2003 and 2004, on the basis of large existing database. This will present a substantial output to all participants during the two workshops of 2004.

Expected Outcomes

- A long-term collaborative network among our delta scientists will be established to work together for delta key issues;
- A web-site for proposed project will be set up to circulate information and discuss key issues among our coastal scientists, as well as solicit public comments;
- Workshop proceedings and model results will be published to upgrade our academic values, emphasizing the needs for a geological framework for assessing impacts and hazards for representative delta systems;
- The criteria of hazard assessment will be standardized in terms of a series of tables and maps.