

EMECS

No. 29

NEWSLETTER

Conference Report of 8th International Conference on Environmental Management of Enclosed Coastal Seas (EMECS 8)



EMECS 8 was held under the theme of "Harmonizing River Catchment and Estuary" for 4 days from October 27 to October 30, 2008 in Shanghai, China, which is located in the Yangtze estuary and is in significant economic growth. The conference was co-organized by the East China Normal University, the Chinese Research Academy of Environmental Sciences (CRAES), and the International EMECS Center. Approximately 470 people from 35 different countries participated and presented their researches /activities in either oral or poster form in the conference.

The first day, following the opening ceremony, the keynote speech and the plenary session were conducted. From the second day up to the morning on the last day, eight sessions and one special event were held. The participants exchanged their information and opinions actively all over the place. At the closing ceremony on the last day, two best poster awards and one special award selected among presented posters were announced by the Chairperson of the Poster Award Selection Committee, followed by the session summaries and the concluding report. Then, the EMECS 8 conference declaration (called "The Shanghai Declaration") was announced by the Chairperson of the Declaration Drafting Committee, and "The Students and Schools Partnership Session Declaration" was announced by two Chinese student representatives. Both declarations were adopted unanimously.

At the end of the conference, Baltimore, Maryland, U.S.A. was approved by the participants as the venue for the next EMECS Conference (EMECS 9) in 2011.

Conference Program

	October 27 (Mon)	October 28 (Tue)	October 29 (Wed)	October 30 (Thu)
AM	Opening Ceremony Keynote Speech	Session 1 (Oral Presentation) Session 2 (Oral Presentation) Session 6 Session 8 (Oral/Poster Presentation)	Session 3 (Oral Presentation) Session 4 (Oral Presentation) Session 5 (Oral Presentation) Session 8 (Field Trip)	Session 3 (Oral Presentation) Session 4 (Oral Presentation)
PM	Plenary Session 1 Session 6	Session 1 (Oral/Poster Presentation) Session 2 (Oral/Poster Presentation) Session 6 Session 8 (Oral/Poster Presentation) Special Event	Session 3 (Oral/Poster Presentation) Session 4 (Oral/Poster Presentation) Session 5 (Oral/Poster Presentation) Session 7 (Oral/Poster Presentation) Session 8 (Field Trip) Plenary Session 2	Closing Ceremony • Session Summary Report • Best Poster Awards • Adoption of Declaration • Next Conference Venue
Evening	Welcome Dinner			Farewell Party

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EMECS 8 : An Overview from Opening to Closing Ceremonies

▣ Opening Ceremony

EMECS 8 opened with words of welcome from Prof. Lizhong Yu, President of East China Normal University and Chair of EMECS 8, and Dr. Yoichi Kaya, President of the International EMECS Center and Vice Chair of EMECS 8. Mr. Wenqing Shen, Vice Director of the National Natural Science Foundation of China, welcomed the delegates on behalf of Prof. Yiyu Chen, Honorary Chairman of EMECS 8 and Director of the National Natural Science Foundation of China. Commemorative addresses were presented by Mr. John Spotila, Chairman and President of the Global Cause Foundation, Dr. Wei Meng, Director of the Chinese Research Academy of Environmental Science (CRAES) and Vice Chair of EMECS 8, and Mr. Toshizo Ido, Governor of Hyogo Prefecture and Chair of the Board of Directors of the International EMECS Center. Words of welcome were also presented by Mr. Yungeng Liu, Chairman of the Shanghai Municipal People's Congress.



Chair of the International EMECS Center Board of Directors, Mr. Ido, expressed his desire to promote international cooperation and play a leading role in the policy arena by working to ensure biodiversity, promoting environmental education to children and so on. Based on Japan's abundant experience in efforts to preserve and create environments in the Seto Inland Sea, he pointed out, environmental problems in enclosed coastal seas involve total systems ranging from upstream areas to estuaries, in which the system is a complex network of intertwining relationships extending from local regions to the global region. He expressed his hope that EMECS 8 would provide the venue for analysis from such perspectives, the formation of new collaborative relationships, and exchanges of views regarding the best approaches to solving these problems, and that the conference would foster valuable discussion regarding environmental problems in enclosed coastal seas.

▣ Keynote Speeches

Prof. Masataka Watanabe, Keio University Professor and Chair of the EMECS 8 Program Committee served as Chair for keynote speeches by three scholars. The names of the speakers and the content of their addresses are as follows.

■ Keynote Speakers and Overview of Keynote Speeches

- **Vladimir Mamaev** (United Nations Development Program, Global Environment Facility) (UNDP/GEF)
"Global Action on Reversing Degradation of River Catchments and Adjacent Large Marine Ecosystems through GEF and UNDP Partnerships"

Thanks to assistance from the UNDP and GEF during the past 15 years in the region of the Danube River and the Black Sea, reductions of 20% in the quantity of nutrient salts and approximately 50% in the quantity of phosphorus discharged from agricultural, domestic and industrial wastewater have been achieved, resulting in a significant restoration of water quality. The assistance program for this large marine ecosystem (LME) was implemented in the East Asian region with the involvement of Partnerships in Environmental Management for the Seas of East Asia (PEMSEA). The presentation also discussed efforts to create ecosystem restoration programs for the Yellow Sea and the Haihe River basin.

- **Jilan Su** (Second Institute of Oceanography, State Oceanic Administration, China)
"Ecoregion Delineation in Shallow Seas"

Rather than establishing closed-season periods that are not ecosystem-based, fishery management should be conducted by delineating ecoregions in shallow seas and then managing those seas. This presentation covered specific techniques for delineating ecoregions in shallow seas near China, and also noted the effectiveness of bathymetry maps and information on large river plumes, tidal currents, the color of ocean regions and nutrient salt levels.

- **Biliana Cicin-Sain** (Professor, University of Delaware)
"Advancing the Global Oceans Agenda to 2016"



This presentation discussed the World Summit on Sustainable Development, Johannesburg and the United Nations Millennium Development Goals as well as the importance of the impact of climate change on the oceans, and emphasized the importance of ecosystem-based ocean management. In evaluating the objectives of the Johannesburg Summit, the presentation noted that ecosystem-based approaches and integrated coastal zone management are being promoted, that large marine ecosystem efforts are being conducted in many regions through the assistance of the GEF, that reform of Regional Fishery Management Organizations and efforts to promote integrated water resource management are underway and so on. Finally, the speaker pointed out that dealing with climate change problems in developing countries will be a decisive means of dealing with the destructive impact of climate change that is likely to occur in the future.

■ Plenary Session

The plenary session was chaired by Dr. Erdal Özhan, Chair of the MEDCOAST Foundation, and Dr. Wei Meng, Director of CRAES China. The session featured presentations from various parts of the world on environmental changes in coastal zone ecosystems and countermeasures from the standpoints of science and policy.

■ Overview of speakers and papers presented

- **Wei Meng** (Director, CRAES)

"Several Scientific Issues on the Health of Estuarine Ecosystem"

From now on, research must be pursued by viewing things from the level of the river basin and establishing index systems that consider comprehensiveness, comparability and so on, and making renewed efforts to deal with pollution from new organic chemical substances as well.

- **Masataka Watanabe** (Professor, Keio University)

"The Impacts of Rapid Economical Development on the Ecosystem in the Changjiang Estuary and in the East China Sea"

The construction of the Three Gorges Dam, the use of fertilizers in agricultural activities and so on in the Changjiang River catchment affect not only the environment of the Changjiang estuary but the ecosystems of the Yellow Sea and the East China Sea as well. Intrusion by salt water into the Changjiang River due to climate change is also a concern.

- **Jing Zhang** (Professor, East China Normal University)

"Biogeochemistry on the Continuum from Watersheds to the Continental Margin: Case Studies from China"

The distribution of dissolved elements concentrations in watersheds and isotope analysis and the like make it possible to determine empirically the correlation between drainage basin activities and the marine environment of the continental shelf.

- **Robert Richmond** (Professor, University of Hawaii)

"Watersheds and Coral Reefs: Conservation Science, Policy and Implementation"

Coral reefs in Palau, Guam and Pompei are greatly affected by runoff and sediment inflow accompanying land development. Local communities are initiating activities to restore coral reefs.

- **Andrew Plater** (Professor, University of Liverpool)

"Estuary Response to Environmental Change: Managing the Future with Reference to the Past"

A study of geometry changes during the past 10,000 years due to climate change and human activity, conducted using the optically stimulated luminescence measurement, reveals that ecosystem-based management has been conducted. The environment has the capability to conduct dynamic and long-term restoration, but this ability has been reduced as a result of human activity.

- **Susan Kilham** (Professor, Drexel University)

"The Delaware Estuary: Tracking Changes to Assess Human Impacts and the Effects of Climate Change"

The status report "State of the Estuary 2008" published recently by the Partnership for the Delaware Estuary, Inc. shows changes over time for a variety of indicators and includes an analysis of trends. Dramatic changes occur when the ecosystem exceeds critical threshold values. What we can do is to conduct ecosystem-based monitoring activities and so on.



- **Jean-Paul Ducrottoy** (Professor Emeritus, University of Hull)

"North-western European Seas: Towards Restoration of Damaged Coastal Marine Habitats"

Habitats that have suffered temporary damage can be restored through improvement. If the habitat has sustained permanent damage, however, comprehensive efforts are needed. Ecosystems are dynamic and steps are needed to enable species to adapt to new biophysical environments.

- **Erdal Özhan** (Chair, MEDCOAST Foundation)

"Coastal Management in the Mediterranean"

Since the early 1990s, integrated coastal management has been conducted in the coastal regions of the Mediterranean. Today extremely dedicated efforts that include policy formation, projects and so forth are being conducted, due, in part, to European Union support and NGO initiatives. These efforts led to the signing of Protocol on ICZM for Mediterranean in April 2008.

- **Xiao-Hai Yan** (Professor, University of Delaware)
"Recent Results of Ocean Remote Sensing Research for Global Climate Change"

The development of new sensor and data processing technologies have provided highly precise data on ocean surface levels, ocean surface temperatures, phytoplankton pigment concentrations and so on, making it possible to analyze a variety of phenomena on a global scale. Researchers are now working to integrate satellite remote sensing with on-site observation and make three-dimensional deductions about the general circulation of the ocean.

- **Olli Varis** (Professor, Helsinki University of Technology)
"Ten Major River Basins in Monsoon Asia-Pacific: The quadrangle of Social, Economic, Environmental and Governance Challenges"

One-fourth of the world's population lives in 10 major river basins in the Asia-Pacific monsoon region. These river basins have experienced dramatic economic growth, but they are also regions in which poverty, malnutrition and uncontrolled urbanization are serious problems. Analyses using various types of geospatial databases have revealed a trend toward increasing fragility in the northeastern to western sectors of these river basins.

▣ Sessions

For two and a half days from October 28 through the morning of October 30, eight sessions and one special event were held.

Session 1: Catchment-Coastal Environmental Vulnerability under Global Warming Setting

This session featured presentations on flood risk evaluations, geomorphic changes in beaches, droughts, saltwater intrusion, natural disaster assessment, the restoration of mangroves as a means of carbon absorption and so on. The presentations provided a deeper understanding of climate change and provided the venue for a discussion of the importance of adopting appropriate measures.

Session 2: Policies to Address Ecological and Social Risks in an Integrated Coastal Management Framework

This session featured presentations on integrated coastal zone management efforts in Japan, Thailand, Cambodia and Iran, an overview of ecohydrology, the relationship between cholera and other infectious diseases and environmental changes, the socioeconomic impact of dam construction in Egypt and China and so on.

Session 3: Large River Dialogs - Water Quality, Total Load Controls and Management

This session featured presentations on the interaction between large river basins such as those of the Mississippi and Changjiang and coastal zones in terms of the behavior of hazardous substances and sediment, COD and the load distribution of nitrogen and phosphorus, numerical models, remote sensing and so on. The second day featured a general discussion regarding the importance of mutual communication between various academic fields, future cooperative relationships between participants and so on.



Session 4: Regional Seas - Total Loads Control

This session featured reports (primarily from researchers and government officials from Japan, China and Korea) on research findings and policy relating to total pollutant load controls on nitrogen, phosphorus and other water pollutants. It was pointed out that marine litter, sediment, organochlorine compounds and other pollution extends over a wide area, and that cooperation is needed with regard to total pollutant load control systems and other efforts in individual countries. At the close of the session, a discussion was held on global warming and issues relating to model studies. This discussion served to confirm the importance of the exchange of views by persons from various specialist fields.

Session 5: Institutional Models for Regional Collaboration in Coastal Science and Management (LOICZ-related)

This session was held in connection with the international research project Land-Ocean Interactions in the Coastal Zone (LOICZ). It featured presentations on integrated coastal zone management in the Mediterranean, the Northwestern Pacific and East Asia, as well as sediment inflow into the Changjiang and Nile estuaries and so on. The discussion focused on the need for researchers to send a clear message to policymakers and the tendency for policymakers to opt for short-term results and so on.



Session 6: Megadeltas Landform Changes and Coastal Hazardous Assessment

This special session was sponsored by the Asia-Pacific Network for Global Change Research (APN) and the International Geoscience Correlation Programme (IGCP) 475 Project. The session featured presentations on long-term geomorphic change (evolution) in estuaries and coastal zones, etc.

Session 7: Sato-Umi - New Concept that Increases Biological Productivity and Biodiversity

The objective of this session was to gather information through presentations on similar efforts being conducted in Asia, Europe and the United States, in order to ensure that the "Sato-Umi" concept is utilized throughout the world. The session served to deepen understanding of the similarities and differences between these approaches (For more information, see Pg. 7.)

Session 8: Students and Schools Partnership Session**- Teaching and Learning about the Environment to Benefit People and Nature**

In this session, students from various countries were brought together to give and view presentations on environmental conservation efforts, and to conduct exchanges of views and interchange. The students also participated in a field trip to Chongming Island and conducted hands-on activities to foster an awareness of the importance of finding solutions to environmental problems. The student participants also collaborated on the text of the Students and Schools Partnership Session Declaration. (For more information, see Pg. 8.)

Special Event: Water Environment Restoration Technology in Chugoku Region, JAPAN

This session was sponsored by the Chugoku Bureau of Economy, Trade and Industry (in the Ministry of Economy, Trade and Industry of Japan) and was chaired by Professor Hideki Ueshima of Hiroshima Institute of Technology. Designed primarily for government officials and company representatives from China, the session focused on introductions of technologies on environmental conservation by medium-size companies within the jurisdiction of the Chugoku Bureau of Economy, Trade and Industry as well as business negotiations.

Poster Session

EMECS 8 also featured poster presentations based on the themes of the individual sessions. The posters were exhibited from the morning of the 28th to the evening of the 29th, and conference attendees were able to exchange views with the presenters at the poster session venue during the period of each session.

Approximately 60 posters from all of the sessions, with the exception of Session 6, were considered for the Best Poster Award. A five-person EMECS 8 Best Poster Award Selection Committee chaired by Dr. Osamu Matsuda (Professor Emeritus of Hiroshima University) evaluated the posters from the standpoint of message content and quality, presentation, applicability to conference theme and so on. The following three posters were chosen to receive awards.



<Best Poster Awards>

- Mr. Daizo Imai (Fuyo Ocean Development & Engineering Co., Ltd, Japan)
"Monitoring of Macrobenthos and Bivalve for Biologically Productive Artificial Tidal Flats, Ago Bay, Japan"
- Dr. Baocheng Zhao (East China Normal University, China)
"Marine Sediment Records and Relative Sea Level Change During Late Pleistocene in the Changjiang Delta Area and Adjacent Continental Shelf"

<Special Award for Social Activities>

- Dr. Jonathan G. Kramer (Maryland Sea Grant College, USA)
"New Foundations for Restoration and Adaptive Management in the Chesapeake Bay Watershed"

Closing Ceremony

For the closing ceremony, the venue was changed to Huashen Academic Exchange Center at East China Normal University. Closing addresses were presented by Prof. Qun Chen, Vice President of ECNU, and Mr. Yoshiro Takai, Chief Executive Officer for Environment in the Hyogo Prefectural Government. These were followed by reports from the chairs of each session and a concluding report on the achievements of EMECS 8 by Dr. Erdal Özhan of EMECS 8 Program Committee.

Dr. Osamu Matsuda, Chair of the EMECS 8 Best Poster Award Selection Committee, reported on the Best Poster selection process and presented the Best Poster Awards and Special Award to the above three individuals.

Dr. Wayne Bell, Chair of the EMECS 8 Declaration Drafting Committee, read the Shanghai Declaration submitted as the conference declaration, and two Shanghai high school students representing the students in the Students and Schools Partnership Session read the Students and Schools Partnership Session Declaration. Both declarations were adopted to unanimous applause.

Regarding the venue for the next EMECS Conference (EMECS 9), Dr. Robert Summers, Deputy Secretary of the Maryland Department of the Environment, representing the Maryland state government, presented an invitation to hold the conference in 2011 in Baltimore, Maryland. This proposal, too, was adopted to unanimous applause.

Lastly, Dr. Nobuo Kumamoto, Chair of the Scientific and Policy Committee of the International EMECS Center, and Prof. Zhongyuan Chen, EMECS 8 conference secretary general, expressed their appreciation to all who had helped to make EMECS 8 a resounding success. With these addresses, the conference officially came to a close.



THE SHANGHAI DECLARATION

~Staying the Course in Troubled Waters~

<Excerpt>

We applaud the fact that restoration, conservation, and management programs are underway on most of the world's coastal seas.

Nevertheless, we recognize that we are navigating seriously troubled waters today.

We simply must not allow governments to neglect our coastal seas regardless of their economic condition. We have learned through experience that restoration of degraded coastal seas is far more expensive than the cost of implementing programs to prevent that degradation in the first place. Finally, coastal seas, like other ecosystems, are dynamic and changing. They require monitoring and adaptive management programs that are only possible through continued vigilance.

We encourage understanding and adoption of a perspective that correctly includes people as an integral part of the system of coastal sea after coastal sea around the world, in every country and within every political context.

- * Coastal seas and their river catchments must be understood to be components of a single system.
- * The economics, cultural, and creative activities of coastal communities must be understood and harmonized as integral components of that same coastal system.

Past EMECS conference declarations introduced the term "working landscape" to indicate the relationship between land, water, and human activity. At EMECS 8 we learned an informative new concept, Sato-umi, which signifies "high productivity and biodiversity of a coastal sea as a result of, and in harmony with, human activity."

We must act on the principle that land, water, and people are integral components of the world's coastal seas. Economy and environment are intertwined with art and nature. All are bound together by education. This is the lesson of Sato-umi. This will help us keep our course on today's troubled waters. This is what we wish to pass to the next and future generations. This is our commitment. This is our promise.

*Shanghai, China
October 30, 2008*

The Students and Schools Partnership Declaration

<Excerpt>

We wish to expand on the theme of the previous EMECS-7 conference, "Our shared responsibility." Responsibility to us is a state of mind, but it is not enough to address the needs of the environment. We want to go a step further to "Our shared action."

Scientists, you must take action to involve the community in your research.

Students, we must also take action, utilizing youth power, the talents and energy that this generation has in order to have an effect.

Teachers, you can take action by being the bridge between students and scientists. You need to educate students what consequences their actions will have on the environment.

It is easy to feel powerless about how one can make a difference in the environment. If we take action and involve community members in the work that we are so passionate about, we believe governments will slowly begin to listen to our concerns.

We all have a 'green mind,' but in order to make a difference we must take action and share this mindset with others. In this way, we believe we can all create a truly sustainable future for our coastal seas, as well as change the world.

*Shanghai, China
October 30, 2008*



Presenters



Drafting meeting on Students and Schools Partnership Declaration

For detailed information, please visit the homepage;





Session 7 "*Sato-Umi* Workshop"

The *Sato-Umi* workshop, Session 7, was a half-day session held on October 29, 2008 attended by some 80 participants, with eight invited speakers, six general oral presenters and twelve poster presentations.

"Sato" means "village" and "Umi" is "sea" in Japanese, so "*Sato-Umi*" refers to the sea near a village. However, you will not find "*Sato-Umi*" in any Japanese dictionary, as it is an expression that was created by Prof. Tetsuo Yanagi of Kyushu University in 1998.

Prof. Yanagi defined *Sato-Umi* as a coastal sea with high biological productivity and high biodiversity due to harmonized human activities. The workshop was convened to compare the present situation of integrated coastal management worldwide, based on the concept of *Sato-Umi*.

The workshop started off with Prof. Yanagi explaining his definition of *Sato-Umi*.

From Japan, there were many presentations based on the creation of *Sato-Umi*. Mr. Muneshumi Shinoda of the Ministry of the Environment (MOE) announced that the creation of *Sato-Umi* has become official Japanese policy now.

Prof. Jianguang Fang from China discussed a very interesting and successful example of IMTA - Integrated Multi Tropical Aquaculture, which refers to fishermen cultivating fishes, sea urchins and sea cucumbers in the coastal sea of China. All the materials are assembled in the culture ground and there is no emission. This is a very interesting and useful method that can be used worldwide.

Dr. Won-Keun Chang from Korea spoke of the problem of total pollution control in Masan Bay. He pointed out the importance of cooperation between science and policy.

Dr. Putth Songsangjinda from Thailand gave a presentation on a similar example to IMTA, but which extends from the land to the sea. He refers to this as 'Mangrove Aquaculture' - a system whereby both mangrove and shrimp are cultivated. He provided a demonstration of large and small scale Mangrove Aquaculture ponds and showed how a study of the nitrogen budget suggests that mud crab and shrimp are highly suited to the system.

By way of illustration, Dr. Jack Greer from the USA then introduced a situation in which people are suffering from a poor oyster harvest. Due to such a decrease in the catch, there is a fundamental conflict between fishermen and environmentalists. He proposed that the new paradigm of *Sato-Umi* is very useful in solving such a problem and to bring about a more balanced use of the area.

Dr. Jacobus Mosse from Indonesia introduced the SASI system. "SASI" is a local Indonesian expression that means "prohibition". Once community leaders announce a SASI, all public actions are prohibited for some time in certain areas. People want to conserve resources - not only fisheries but also ground resources. He also pointed out the basic similarity between the SASI and the *Sato-Umi* concept.

Prof. Jean-Paul Ducrotoy from Europe described a different situation - an approach to the restoration of the ecosystem in the coastal sea. He pointed out that the *Sato-Umi* concept is similar to ecosystem-based management. We look forward to learning many things from the ecosystem-based balanced management carried out in Europe.

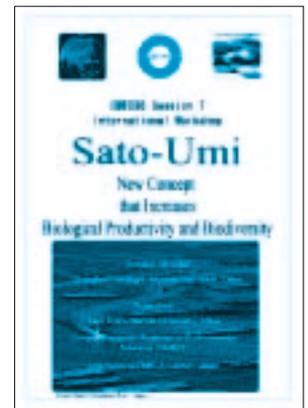
Other topics included:

- restoration of tidal flats by benthic micro algae through evaluation of numerical model
- cooperative management for the restoration of tidal flats by cooperation between citizens, government and researchers
- seasonal retention and release of phosphorus in tidal flats
- seasonal variations in food for gastropods
- the use of ash from paper sludge in the treatment of contaminated dredged sediment
- methods for restoring eelgrass beds, etc.

During the session, a questionnaire was distributed to the participants by the MOE of Japan, with the aim of promoting international cooperation based on the creation of *Sato-Umi*. Responses to the questionnaire included the following:

- We want to know more about *Sato-Umi*.
- Education of fishermen and citizens is very important.
- *Sato-Umi* is very similar to SASI.
- Creation of *Sato-Umi* is a very impressive trial.
- Local wisdom is very important for the creation of *Sato-Umi*.

Following the oral presentations, a poster session was held at which participants enjoyed the opportunity to have a discussion with the



Oral Presentation

presenter in front of his/her poster. One of posters received the Best Poster Award of EMECS 8.

Prof. Yanagi summarized the workshop as follows:

- *Sato-Umi* refers to coastal seas that have high biological productivity and biodiversity as a result of harmonized human activity.
- *Sato-Umi* is not only a concept of the natural sciences but also a social and cultural concept similar to "working landscape" and "EBM (Ecosystem-Based Management)".
- *Sato-Umi* is a new paradigm for humanity's current lifestyle.
- *Sato-Umi* may prove to be one answer to the question of the best relationship between people and nature in the face of global warming.
- The concept of *Sato-Umi* should be improved on and developed so that it becomes a useful method in solving the problems of coastal sea areas worldwide.



Poster Presentation

This *Sato-Umi* workshop was organized by International EMECS Center with the financial assistance from the Japan Fund for Global Environment of the Environmental Restoration and Conservation Agency, and a report on the workshop has also been published separately by the Center.

Special Report 2 **Session 8 "Students and Schools Partnership Session"**

The Students and Schools Partnership Session was first held at EMECS 2003 (Bangkok, Thailand) in 2003. Here, specialists provide assistance as the young leaders of tomorrow present and listen to one another's presentations and exchange views on environmental conservation and environmental education activities. The sub-title of this third Students and Schools Partnership Session was "Teaching and Learning about the Environment to Benefit People and Nature." The Session was held over two days, October 28 (Tues.) and 29 (Wed.), and was convened by Dr. Wayne Bell (Senior Associate, Center for the Environment and Society, Washington College), Dr. Hiroshi Kawai (Professor, Kobe University), and Dr. Qi Zhang (Associate Professor, Environment Education Centre, East China Normal University).

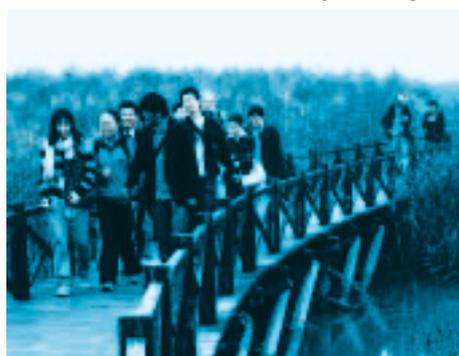
Oral presentations were held on the 28th with approximately 50 people in attendance. 18 presenters, comprising two university students from Japan, one university student from the United States, one high school student from Thailand (sponsored by the International EMECS Center), and junior high school, high school and university students and faculty members from China, gave a total of nine presentations on the state of environmental education in their respective countries, as well as a presentation by a teacher from Japan.



Presentation

Koichi Sugimatsu at Kyushu University gave a presentation entitled, "A numerical ocean model approach available for horizontal scales from piers through bays." A technical presentation on a numerical model that is able to recreate the detailed flow of seawater within Fukuoka Bay was followed by a discussion of the potential for and advantages of introducing such simulations into environmental education programs. Atsushi Matsui at Osaka Prefectural University, gave a presentation entitled, "A Study on Estimation of Seaweed Bed Restoration Using Deep Ocean Water." The presentation discussed the effectiveness of using water from deep ocean layers (low-temperature water high in nutrients) to resolve the problem of the denudation of seaweed beds along rocky shores, the result of high water temperatures and feeding damage caused by sea urchins and the like. He also presented a model for evaluating the effectiveness of this method and discussed the importance of monitoring coastal areas.

Students from Maryland, U. S. A. and Thailand reported on the current state of environmental education in their countries. Presentations from China focused on several junior high and high schools in Shanghai that are known as "Green Schools" for their active environmental



Field Trip

learning activities and emphasized the impressive progress in environmental education in the Shanghai region. The poster session also featured posters depicting the activities of Sanlie Middle School, Hengsha Junior High School (in Chongming County), No. 3 Women's Elementary and Junior High School, the Putuo District Youth Center and so on.

The general discussion that followed these presentations began with Dr. Bell speaking on the history and significance of the Students and Schools Partnership Session. Through the discussion, it was confirmed that this conference's Students and Schools Partnership Session Declaration should center on expanding the key phrase of the 7th EMECS Conference Declaration -- "Our Shared Responsibility" -- to "Our Shared Action." Even after the general discussion, the participating students held a spirited discussion regarding the declaration text. The resulting declaration was formally adopted as the Students and Schools Partnership Session

Declaration at the closing ceremony on October 30.

On the 29th, 22 participants, including the three conveners, went on a field trip to Chongming Island in the Changjiang River delta. At Sanlie Middle School, a famous National Green School, the participants observed a class devoted to the water resources on Chongming Island. They also learned about the natural environment of the Changjiang Delta at the Yangtze Delta Water Culture Museum in the Chongming Island National Geological Park, and strolled through the vast reed beds of the Xisha Marsh, which has applied for Geopark status. The field trip was an outstanding opportunity for the students to experience the precious natural beauty that has been preserved on Chongming Island.

Dr. Kumamoto Nobuo, Professor Emeritus of Hokkai-Gakuen University, who has assumed the great responsibility of being the chairman of Scientific & Policy Committee(SPC) since the incorporation of the International EMECS Center, expressed his intention to step down as chairman at the SPC meeting last October. It was extremely regrettable to the Committee but we understand that we should respect his own intention. Dr. Kumamoto has been giving significant guidance on establishment and activities of the Center, demonstrating strong leadership for actually more than 20 years since the preparation of the first EMECS Conference. Dr. Kumamoto wrote an article of reminiscence below reminiscing the past although it may be not enough to convey all his feelings due to limited space. Thank you so much, Dr. Kumamoto and our best wishes to you for the future.

Originating at Chesapeake Bay

Dr. Nobuo Kumamoto
Chair, Scientific & Policy Committee, International EMECS Center
Professor emeritus and former President, Hokkaigakuen University

In substantive terms, it was in the 1980s that EMECS activities began, with the comprehensive research on Chesapeake Bay that was conducted primarily by Dr. Ian Morris, Director of the University of Maryland's Center for Environmental and Estuarine Studies in Cambridge, Maryland on the shores of the bay. For this project, researchers from many different countries were invited from the field of oceanography and other relevant fields as well, including law, economics and sociology, in order to grapple with issues in an integrated, which is not to say "general", manner. Site surveys were conducted in the Baltic, the North Sea and the Seto Inland Sea in Japan.

The enthusiastic response to the goals of this research on the part of former Governor Toshitami Kaihara of Hyogo Prefecture resulted in the holding of the first International Conference on the Environmental Management of Enclosed Coastal Seas, held in Kobe, Japan in 1990. This conference, which was based on the environmental research on the Seto Inland Sea that was underway at the time, also represented a continuation of the Chesapeake Bay research. In this sense, no discussion of EMECS activities is complete without a mention of the achievements of these two individuals.

The second EMECS Conference, held in Baltimore, Maryland in 1993, was organized so as to carry on the achievements of the Kobe conference, based on discussions between Hyogo Prefecture and the State of Maryland and it was here that the name "EMECS", standing for Environmental Management of Enclosed Coastal Seas, officially came into use. Subsequent EMECS conferences were held in Stockholm (Sweden), Antalya (Turkey), Kobe, Bangkok (Thailand), Caen (France), and last year in Shanghai (China), making a total of eight so far. The ninth EMECS Conference will be held in 2011, once again in the city of Baltimore, Maryland.

These conferences were held in cooperation with, and with the assistance of, relevant organizations in the respective countries, and each was a resounding success. While they achieved their basic objectives, however, many issues remain to be resolved.

The aim of EMECS Conferences is to protect the environments of enclosed coastal seas by sharing research achievements, proposing policies to be implemented, disseminating educational activities and so on. These ocean regions constitute a microcosm of the entire ocean, and the success of measures in these regions points to the potential for the improvement of the marine environment as a whole.

When one considers the EMECS Conference venues up to now, it may seem at first that the conference has now come full circle. However, there are many other regions in which there are issues that should be addressed: the Middle East, Africa, South

America, South Asia, Eastern Europe and so on.

In addition to localized issues, another question is the degree to which policies originating from the conferences up to now have actually been put into practice. The initial objective of the EMECS Conference was to provide a forum in which researchers, specialists in the areas of government policy, law, economics etc. private citizens, students and others would participate, in addition to policy planners and decisionmakers. There are questions as to the effectiveness of this approach and the degree to which it has been achieved. Although these questions of achievements at the conference and actualization in the real world are common to all international conferences, the discrepancy is particularly great in the case of environmental issues.

However, nothing comes from nothing; first there should be action. This is the reason that EMECS has promoted international conferences on the environmental management of enclosed coastal seas. Achievements up to now have dealt with the promotion of research and education, the sharing of knowledge, the formation of networks, the passing on of this mission to the younger generation and so on. At the same time, however, we must not disregard the importance of motivating and supporting people who are interested in finding solutions to these issues. The impact on people in developing countries and on the younger generation has been particularly great.

In this sense, it is time to study how the role and direction of EMECS should be viewed from now on. I have been the Chair of the EMECS Scientific & Policy Committee for a dozen or so years, counting the period of preparation for the Stockholm conference. Even considering the noble cause of ensuring that EMECS activities get off the ground, I have to admit that it seems like a long time to have held this type of chairmanship. New wine should be stored in new bottles. Therefore, it is appropriate for a new chairperson to be selected.

As I step down, I would like to say a few words of appreciation. Having overcome the difficulties encountered at the time of their establishment, EMECS activities have experienced tremendous growth. From the standpoint of one who endeavored to support these activities, I would like to recognize the major leadership contributions that were made by the first president, Dr. Jiro Kondo, Former President of Science Council of Japan and Professor Emeritus of the University of Tokyo, and by the former leaders of the Scientific & Program Committee: Dr. Takeshi Goda, Professor Emeritus of Kyoto University, and Dr. Tomotoshi Okaichi, Professor Emeritus and Former President of Kagawa University. In addition, Dr. Wayne Bell (U.S.), the late Professor Bengt-owe Jansson (Sweden), Professor Erdal Özhan (Turkey), Professor Piamsak Menasveta (Thailand), Professor Jean-Paul Ducrotoy (France) and Professor Zhongyuan Chen (China) dedicated themselves to the extremely difficult role of inviting and hosting the EMECS conferences. I would also like to express my appreciation to Dr. Tetsuo Yanagi, Professor of Kyushu University (Japan) and Dr. Masataka Watanabe, Former Director of Water & Soil Environment Division of National Institute for Environment Studies and Professor of Keio University (Japan) and the other committee members in Japan and in other countries who handled the entire process of selecting of the papers to be presented at each conference. Without each and every one of these individuals, the present-day EMECS would not exist.

Finally, I would like to note that the enthusiastic contributions of the EMECS Secretariat have continued to maintain and expand EMECS activities. Although it is not possible to name everyone who has made a contribution, one person who particularly stands out in my memory is Mr. Masaaki Fujii, Director of the Water Quality Division in the Environment Department of the Hyogo Prefectural Government. At the behest of the prefectural governor, Mr. Fujii visited my research office in Sapporo to discuss the possibility of holding an international conference in Hyogo with the research group of Dr. Ian Morris, who had come to Japan the previous year, 1987, to conduct research on the Seto Inland Sea, and he asked me to contribute to this effort. Mr. Fujii managed to solicit and obtain the cooperation of Dr. Morris and his group. These actions could be called the "headwaters" that eventually became the torrent of EMECS activities. I also remember clearly the many meetings he and Executive Director Jiro Nagata had with Professor Malin Falkenmark of the Stockholm International Water Institute, both in Kobe and in Sweden, regarding the holding of the EMECS Conference in conjunction with the Stockholm Water Symposium.

I look forward to the further development of EMECS in the future.



Scientific & Policy Committee meeting in 2008
With members and secretariat (Front center)

Science and Policy Trends (3)**A LANDMARK YEAR FOR THE MEDITERRANEAN SEA**

**Mr. Ivica TRUMBIC, Director
United Nations Environment Programme
Mediterranean Action Plan
Priority Actions Programme Regional Activity Centre (PAP/RAC)**

In 2008 two events had a major impact on environmental management of the Mediterranean Sea: the adoption of the Protocol on Integrated Coastal Zone Management (ICZM), and the approval of the multi million dollar project "GEF Strategic Partnership for the Mediterranean Large Marine Ecosystem". Both events were the result of several years of negotiations among the Contracting Parties to the Barcelona Convention as well as other stakeholders including the major international financial institutions.

Fourteen Contracting Parties to the Barcelona Convention signed the ICZM Protocol at the Conference held in Madrid on 21 January 2008. It has become the seventh protocol in the framework of the Barcelona Convention and represents a crucial milestone in the history of Mediterranean Action Plan (MAP). It will allow the Mediterranean countries to better manage and protect their coastal zones, as well as to deal with the emerging coastal environmental challenges, such as the climate change. The Protocol should ensure sustainable development of the coastal zone; sustainable use of natural resources and integrity of coastal ecosystems, landscapes and geomorphology; prevent the effects of natural hazards; and help achieve coherence between public and private initiatives. The Protocol is composed of 7 parts and 40 articles. It is too early to evaluate the implementation of the Protocol, but an early assessment of its impact shows that is bold (the first international legal instrument that provides a clear definition of the coastal zone and requires the definition of a minimum 100m of the coastal setback); innovative (tackles a number of issues for the first time ever in the field of ICZM legislation, namely: islands; cultural heritage; land policy; economic, financial and fiscal instruments; natural hazards; and coastal erosion); forward-looking and proactive (aims at preventing and not only reacting to coastal problems); comprehensive (covers a number of new issues that are considered as crucial for coastal environment and its protection in this century); and integrated (ensures institutional coordination, coordination of national, regional and local authorities, involvement of non-governmental organisations and other competent organisations, as well as the integrity of sea and land areas).

Challenges, eventually hindering its implementation, are several. The initial enthusiasm for such an innovative instrument can fade. Some countries may adopt and ratify it, but may not provide adequate resources and show not enough political will to implement it. Since Protocol is a complex legal document, its ratification has to be followed by relevant national legislation putting adequate implementation instruments in place, which in some countries may not happen at all, or not fast enough. There may be a growing opposition to the application of some of the "sensitive" articles, such as one on defining the coastal setback. Finally, the recent economic and financial crisis may slow down the desire to implement the Protocol.

The approval of the GEF Strategic Partnership for the Mediterranean LME is the second major event of the year. The project responds directly to priorities of the countries of the Mediterranean Sea basin as identified in the Transboundary Diagnostic Analysis (TDA), and agreed interventions as outlined in the two Strategic Action Plans, SAP-BIO and SAP-MED. The Mediterranean countries recognized that there is a need for a coordinated and innovative approach for the implementation of policy reforms, priority interventions and investments that address Tran boundary pollution and biodiversity conservation priorities identified in the two SAPs as well as relevant National Action Plans (NAPs). The Strategic Partnership is led by UNEP/Mediterranean Action Plan (MAP) and the World Bank, and co-funded by the GEF, MAP and the World Bank. It involves other relevant agencies (UNESCO, UNIDO, FAO and other), as well as a number of bilateral and multilateral donors. The Partnership will serve as a catalyst in leveraging policy, legal and institutional reforms, as well as additional investments for reversing degradation of the Mediterranean Sea Basin, with its coastal habitats and marine living resources. The Strategic Partnership, following the model of the GEF Black Sea Basin Strategic Partnership for Nutrient Reduction, consists of two complementary components:

- a Regional Component: "Implementation of agreed actions for the protection of the environmental resources of the Mediterranean Sea and its coastal areas" led by UNEP; and
- the "Investment Fund for the Mediterranean Sea Large Marine Ecosystem Partnership" led by the World Bank.

EMECS Homepage Renewal

~ Join to be our E-mail magazine readers! ~

With the completion of an overall renewal of our homepage (<http://www.emecs.or.jp>), we began to issue E-mail magazines this March. From now on we will be delivering our information timely to you by E-mail as well as continue our efforts to enrich the content of our homepage. In other words, with the issue of our E-mail magazines, you are requested to read the newsletters on our homepage which used to be sent to you by post.

Therefore, we would like your kind cooperation to register to be our E-mail magazine readers. The registration screen is supposed to appear when you click the button "E-mail magazine registration" which is at the lower right of the top page of the Center, please fill in your mail address etc. to register. It's also possible to update your e-mail address or cancel your registration here.

Moreover, we will be increasing the contents of our newsletters in the future, providing various information including information from our Scientific & Policy Committee members, information on integrated coastal zone management, global warming countermeasures, decarbonizing society, information from JICA training course participants and so forth. We hope that our homepage will be enriched as a platform for information exchange. Your kind cooperation will be very much appreciated.



For Previous News Letters, please see our Homepage, Newsletter & Publication → Newsletter



Call for Articles

Contributions from readers (reports on research on enclosed coastal seas, conference information, etc) would be greatly appreciated.

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