

EMECS

NEWSLETTER

No. 28

8th International Conference on the Environmental Management of Enclosed Coastal Seas October 27-30, Shanghai, China

Message from Professor Yiyu Chen

Honorary Chairman of EMECS 8 Conference
(President, National Natural Science Foundation of China
Academician and director of Division of
Life Sciences and Medicine, CAS)

Dear Honored Participants, Ladies and Gentlemen:

As the host of EMECS 8 conference, it is my privilege, on behalf of the conference organizing committee, to sincerely invite all of you - respected VIPs and professionals - to attend this great event being held in Shanghai, China from October 27 to 30, 2008.

As you know, the EMECS concept was initiated in the early 1990s in Japan and is aimed chiefly at the environmental preservation and management of enclosed seas. Industrial development, and pollution contaminants and loads discharging into the seas have dramatically changed our living environments and human society in general. Degradation of water quality caused by changes in land-use, deforestation, reductions in vegetation coverage, coastal reclamation and reservoir construction, etc. will possibly affect our life styles to some degree, and delay our economic development as a result. The challenges we are facing are obviously severe now, especially under the effect of the global warming we have witnessed in recent years.

The rise in temperature on a global and regional scale seems critical for environmental and societal adaptation. Extreme weather events, as represented by floods and droughts, have tended to occur more frequently than ever before. Shortages of freshwater resources and an uneven distribution of precipita-

tion have been serious obstacles that are harmful to sustainable societal development. Furthermore, a sound concept of environmental conservation for our human society is not yet well established. This has presented a great challenge to how our human communities will deal with such problems using our wisdom and integrated strength.

The EMECS 8 conference proposes a New Theme: Harmonizing Catchment and Estuary (in enclosed coastal seas), which is extending landward from the enclosed coastal seas to the catchments. As we know, earlier human civilization was initiated from river catchment towards the coast, and there have been abundant natural resources that nourished our agriculture and industry that have brought about our modern society. However, unhealthy exploration of the catchment and associated administration in land-use is taking its revenge on us. We are having to pay more than what we have earned.

The theme of EMECS 8 is also proposed on the basis of the rapidly growing Asian economy that inevitably gives rise to intensifying modifications between river catchments and estuaries. This example can also apply to any analogue of the world, where the theme of the EMECS 8 conference should be used for ecosystem protection. Like all other conferences, EMECS 8 will provide a forum for all participants, including natural and social scientists, administrators, government officials and younger students, to interact with each other to work out a better understanding of how to minimize the potential of environmental risk. We are pursuing a harmonization of society, from a global concept of environmental conservation.

October is the "Golden Season" in Shanghai, China. A mild climate and green scenery await your arrival - something for you all to share. Once again, I extend a 'Warm and Sincere Welcome' to the conference and look forward to your invaluable contributions.

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Preparations for the 8th International Conference on the Environmental Management of Enclosed Coastal Seas (EMECS 8) [2]

The previous issue of the EMECS Newsletter covered the events from May 2006 (when the venue for EMECS 8 was announced at EMECS 7) to December 2007 (when the 2nd circular, which included a call for abstracts, was issued). In this issue, we will cover the subsequent preparations for the conference.

In February 2008, the Scientific & Policy Committee of the International EMECS Center met in Kobe for a progress report (presented by Zhongyuan Chen, professor at East China Normal University and the EMECS 8 conference secretary general) and an exchange of views. A number of important matters were finalized at this meeting: the number of invited speakers, the estimated number of participants, the approach to the opening and closing ceremonies, the themes of and speakers for the keynote address and the plenary session, and the content of individual sessions.

March 15 was the deadline for the submission of abstracts and the submission of applications for financial aid by researchers from developing countries. It was also the last day to receive the early application discount for the attendance and registration fee. Although a certain number of presentation abstracts had been submitted by this date, it appeared that the anticipated submission of abstracts from some institutions had been delayed, so the deadline was extended to May 30. Financial aid to cover part of the cost of attending the conference was granted to 34 researchers from developing countries.

On May 16, an International EMECS Center seminar entitled "Environmental Conservation and Ecological System Restoration in Coastal Areas in China" was held in Kobe as a pre-conference event for EMECS 8 in Japan. Although this was only a few days after a major earthquake had occurred in Sichuan Province (on May 12), the seminar was able to be held on schedule, and at the beginning of the seminar all attendees observed a moment of silence to mourn the loss of the victims. All four of the presenters at the seminar

were involved with the EMECS 8 conference, and so detailed discussions were held before and after the seminar with regard to logistics (conference rooms, hotels etc.) in order to move ahead with preparations for EMECS 8.

The EMECS conference originated in Japan and is characterized by a large number of participants from Japan. For this reason, the conference organizers have worked together with travel agencies to create package tours in order to make it easy to attend EMECS conferences from Japan. For EMECS 8 as well, an EMECS 8 Japan Committee tour and a Hyogo Environmental Advancement Association tour were organized, and conference attendees were invited to join these tours.

In August, the EMECS secretariat met Prof. Chen in Shanghai to discuss details and check the conference venues. Afterwards, conference programs of ceremonies, plenary, and sessions was elaborated. The conference has just come around the corner.



EMECS 8 website (<http://www.emecs-8.ecnu.edu.cn/>)

Introduction of EMECS 8 Organizer (2) Chinese Research Academy of Environmental Sciences (CRAES)

Professor. Binhui ZHENG Chinese Research Academy of Environmental Sciences (CRAES)

Affiliated to the Ministry of Environmental Protection, the Chinese Research Academy of Environmental Sciences (CRAES) was established on December 31, 1978. As a national non-profit academic institution for environmental protection, CRAES carries out innovative and basic scientific research on environmental protection, complying with a national strategy for sustainable development. Further, CRAES is also dedicated to providing strategic, forward-looking and systematic technological support to national environmental management and decision-making, meeting the demands of technical engineering and consultation regarding major environmental issues that arise during social and economic development. As such, CRAES plays an irreplaceable role in enhancing the capability of scientific decision-making for China's environmental protection.

Under the concept of "Naturalness, Harmony, Accumulation and Development", CRAES has attained a series of great achievements in the field of basic theory of environmental sciences and applied basic theory, as well as research and development of advanced technology. Such work has made important contributions to China in dealing with major environmental problems, establishing environmental management institutions, formulating technical regulations and standards on environmental protection, developing pollution prevention and control technology, proposing countermeasures on ecological protection, as well as promoting economic development

and building an environmentally-friendly society.

Through the implementation of the "Talent Strategy, Scientific and Technological Innovative Strategy and Environmental Standard Strategy", CRAES has formed its innovative system of environmental science, consisting mainly of Atmospheric Environment; Aquatic Environment; Ecology; Environmental Engineering Technology; Environmental Safety; Cleaner Production and Circular Economy. There are a total of 18 research directions and 3 ministerial laboratories, including four institutes, two research centers, five technical support agencies and two technical service departments. The scientific research team includes three academicians, 44 professors, and over 100 Ph.Ds. Currently, there are five majors granting M.S. degrees, one collaborative Ph.D. degree station and one post-doctor mobile station at CRAES.

The River and Coastal Environment Research Center is one of the departments affiliated to the Chinese Research Academy of



Environmental Sciences (CRAES). This center places its academic focus on four fields: (1) numerical modeling of water environment systems, (2) biogeochemical processes in coastal areas, (3) environment planning and management, (4) integrated river basin and coastal zone management. There is a research group of more than 20 members, among whom three are researchers, twelve have received

Ph.D. degrees and five have received Master's degrees. In recent years, the center has completed more than 40 national research projects, and has garnered Technology Advanced Awards at the national and provincial levels more than ten times. The center has been providing extensive support in the decision making and management to both local and central government.

◆ EMECS International Seminar ◆ - Marine Environmental Education and International Exchange -

International EMECS Center held two EMECS International seminars in February and May 2008 as a part of the related projects for the G8 Environment Ministers' Meeting in May, 2008.

The first seminar was held on February 13 with its theme "Marine Environmental Education and International Exchange", with a view to explore a direction of our future environmental education through obtaining the up-to-date information on marine environmental education conducted in the Chesapeake Bay which is the typical enclosed coastal sea of the U.S.A. and exchanging opinions of knowhow,

problems, and measures by introduction of practical cases in each country: China, France, Japan, and Thailand.

Many people who are engaged in as well as who are interested in environmental education participated.

In the seminar, a keynote lecture on environmental education programs in the Chesapeake Bay and exchange of information and opinions in the form of a panel discussion on activities from different parts of the world were conducted intently.

Seminar report

Environmental education (EE) is changing. As noted in introductory remarks by Mr. Akira Hasegawa, Executive Director of the International EMECS Center, its original purpose was to use knowledge to increase environmental awareness in young people under the belief that action would follow. Key words such as "conserve" and "restore" focused attention on the plight of ecological communities. But environmental education today is becoming a social obligation - an attempt to reverse a trend away from outdoor experiences that threatens the ability of young people to connect with the environment. New key words such as "preserve" and "sustain" apply to an expanded focus that views human communities as part of the system. This seminar addressed the changing face of environmental education across a wide range of institutional and governmental perspectives.

Keynote speaker was Mr. Gary Heath, an EE specialist recently retired as Assistant State Superintendent of the Maryland State Department of Education (MSDE), USA, who now co-chairs the Chesapeake Bay Trust EE grants program. He reiterated the challenge of conveying environmental knowledge to young people who are spending less and less time outdoors. He then cited a study showing that the environment provided a context for teaching that enhanced student learning in science and non-science disciplines. The original assumption that action would automatically follow environmental awareness has not proven correct; in addition to knowledge, students need authentic outdoor experiences to increase sensitivity, enhanced problem solving skills to understand complex issues, and a stronger basis for believing that their actions can indeed make a difference. MSDE has adopted an EE Bylaw that requires each local school system to provide a comprehensive EE program at least once in elementary, middle, and high school years. Mr. Heath views recent education reforms, such as the federal No Child Left Behind act, as providing new opportunities for integrating environmental education even deeper into school curricula. He clearly views schools as being central to the delivery of



Dr. Wayne BELL Senior Associate, Washington College, U.S.A

comprehensive, cross-disciplinary EE programs. But he also recognizes that school programs are most effective when conducted in partnership with EE centers and NGO's that offer opportunities for students to have authentic environmental field experiences in the context of what they are learning in the classroom. Mr. Heath's ideas were supported by the seminar's panelists. Zhang Qi from the Environmental Education Center of East China Normal University, Shanghai, showed how EE was being embedded into Chinese formal education in several disciplines. She noted that the process is necessarily a slow one because most non-EE educators are not familiar with EE topics. Further, the traditional delivery of knowledge by lecture rather than hands-on experience needs to be adjusted in order to better connect students to natural systems. Even so, the change is a promising one because the curriculum emphasizes local environmental matters that are more familiar to the students.

■ Program ■

<Keynote Lecture>

Mr. Gary HEATH Co-chair of the Chesapeake Bay Trust (U.S.A.)
"Chesapeake Bay Environmental Education: A Maryland PreK-12th Grade Work in Progress"

<Panel Discussion>

Chair: Dr. Wayne H. BELL
Senior Associate, Washington College (U.S.A.)

Panelist: Dr. Qi ZHANG
Environmental Education Center, East China Normal University (China)
"Environmental Education -- truly make a difference?"

Prof. Hiroshi KAWAI
Kobe University Research Center for Inland Seas (Japan)
"Environmental Educational Programs in Osaka Bay area, with special reference to the seaweed biodiversity and the restoration of coastal ecosystems"

Prof. Piamsak MENASVETA
Vice president, The Royal Institute (Thailand)
"Marine Environmental Education in Thailand"

Prof. Jean-Paul DUCROTOY
Professor Emeritus, The University of Hull [U.K.] (France)
"Environmental Education in North Western Europe - the UK and France Experiences -"

Dr. Hiroshi Kawai, Professor of Marine Biology at Kobe University, Japan, gave his perspective as an academic researcher who is attempting to contribute environmental understanding to young people.

In his experience, most people who live in communities near the coast do not see themselves as a part of the coastal system and therefore do not relate their daily activities to such consequences as declining water quality decreased biodiversity. Dr. Kawai uses seaweeds as a context for teaching about the relationship between people and the environment through hands-on field activities that reveal the effects of water pollution on coastal algae populations.

These experiences are making a stronger conceptual connection between people and the coast and a better understanding of how the health of coastal ecosystems relates to the health of coastal communities.

Dr. Piamsak Menasveta, Professor on the Faculty of Science at Chulalongkorn University, Thailand, shared experiences similar to those of Dr. Kawai. In particular, he noted that several Thai universities as well as NGO's were assisting primary and secondary schools in improving EE through teacher training, curricular materials, and knowledge centers where students can visit for authentic environmental experiences. "Awareness" is an important key word in each of these programs.

Finally, Dr. Jean-Paul Ducrotoy, Reader Emeritus from the University of Hull, U.K., placed much of what had been presented by the other panelists in the perspective of the EMECS 7 conference in Caen, France. He drew special attention to the EMECS 7 Students and Schools Partnership session and the Student Conference Declaration which challenged our assumption about the success of traditional EE programs. He concluded that formal (school-based) and informal



(center- or NGO-based) programs must be interrelated, and that program content should increase student understanding and awareness of the local environment at least as well as global issues. In addition, EE should not just be about local communities - it should also reach out to those communities by actively involving them in the education process. These are the people who can make a difference in the quality of their local environment and EE should empower them with the confidence to do so. Dr. Ducrotoy ended by noting that the Internet provides an unprecedented means of sharing ideas, information, and examples toward a more effective EE program that can be broadly available across jurisdictional and even national boundaries.

An interesting Q/A discussion with the audience followed, moderated by Dr. Wayne Bell of Washington College, Maryland USA. Two major conclusions emerged: 1) There is no substitute for outdoor experiences in getting young people and adults alike more familiar with their local environment. 2) We must avoid presenting environmental issues as threats, because the resulting "ecophobia" can create hostility toward the environment rather than promote corrective action. When not taught with local solutions, global issues often make students feel powerless to make a difference. One last question arose: "Where are the parents?" All agreed that without parental support and involvement the goal of sustainability would never be achieved.

As parents ourselves, it is our responsibility that the next generation receive the knowledge, tools, and commitment, not just to restore and conserve the environment we have created for them, but to sustain it as an asset for future generations. The environment must not be left as a burden for our children and grandchildren. This is the ultimate goal of EE today.

◆ Pre-EMECS 8 International Seminar ◆

- Environmental Conservation and Ecological System Restoration in Coastal Zones in China -

On Friday, May 16, the International EMECS Center held an international seminar in Kobe as a preliminary event for the 8th International Conference on the Environmental Management of Enclosed Coastal Seas (EMECS 8) to be held in October in Shanghai, China. The theme of the seminar was "Environmental Conservation and Ecological System Restoration in Coastal Zones in China."

The seminar marks the second EMECS 8 preliminary event, following the international workshop held last November in Tianjin, China. The theme of that event was "International Workshop for Building Integrated Management of Catchment and Coastal Areas of the Yellow and the East China Seas." The seminar is in a series of symposiums held to commemorate the G8 Environment Ministers Meeting that was held in May in Kobe.

The seminar focused on problems and issues on the marine environment in China, the venue for EMECS 8. The presentations

focused on such intriguing topics as the current status of conservation of marine environments in China, the pollutant load from the Yangtze River (which it is feared will affect not only the Yellow Sea and the East China Sea but the seas close to Japan as well) and projects to restore the ecological system of Chongming Island in the Yangtze estuary. The presentations were followed by a panel discussion that featured a spirited exchange of views between presenters and attendees. For more information about the seminar, see the following report.



Seminar report

This seminar was a preliminary event for the 8th International Conference on the Environmental Management of Enclosed Coastal Seas (EMECS 8) to be held in October in Shanghai, China. It marked the second EMECS 8 preliminary event, following the international workshop held last November in Tianjin, China. The focus of this seminar was on the Yangtze River, the largest river in China and the third largest in the world. Reports dealt with the estuary ecosystem and the current status of the pollutant load from the Yangtze River. The seminar featured presentations on four topics, followed by a panel discussion among the presenters.

Professor Lida Weng, secretary general of the Changjiang Technology & Economy Society and member of the Changjiang Water Resources Commission, gave a presentation entitled "The Ecology and Environment of the Yangtze Estuary." In his presentation, Professor Weng pointed out that the water quality of the Yangtze River, into which more than 40% of domestic wastewater flows, has been declining each year due to economic and social development in recent years, and that the impact of pollution and the construction of dams, floodgates and so on are threatening the habitat environments that support biodiversity. As symbolic example of the ecological crisis,

Professor Weng reported that the beluga whale (*Delphinapterus leucas*), which has been called "the panda of the ocean," is now almost extinct. With regard to the river mouth as well, he reported that although the water quality in the central part was still good, pollution was progressing near the riverbank, and he gave examples of environmental problems in the estuary including frequent "red tides" caused by eutrophication as well as decreased river flow and salt water intrusion resulting from increased water use stemming from the construction of the Three Gorges Dam.

Professor Binghui Zheng, Director of the Institute of Water Environment Research in the Chinese Research Academy of Environmental Sciences, was scheduled to give a presentation entitled "The State of Land-based Pollution Measures Conducted as part of Efforts to Preserve Marine Environments in China." As Professor Zheng was suddenly unable to come to Japan, the address was presented by Dr. Kai-Qin Xu, senior researcher at the National Institute for Environmental Studies (NIES). The presentation focused on the marine environment of China that comprises the ocean regions extending through the Bo Hai sea, the Yellow Sea, the East China Sea and the South China Sea, covering a total area of 4.7 million km², and the coastline that stretches for a total length of 18,000 km. The presentation reported on the current pollution status such as water quality, bottom sediment pollution, impact of high tide and "red tides," COD from rivers, nutrients, heavy metals and other pollutants, as well as the status of environmental monitoring activities. The presentation also explained the legal system for dealing with these problems (the Marine Environment Protection Law of the People's Republic of China, etc.). Action plans to preserve marine environments were also introduced, such as placing restrictions on industrial pollutant sources and mobile pollutant sources, restricting pollution from the aquaculture industry, restricting pollution accompanying oil and gas resource development, preserving coastal / wetland and seaside tourism resources and so on. The presentation also emphasized the importance of controlling total pollutant loads and environmental education.

Professor Masataka Watanabe of the Faculty of Environment and Information Studies at Keio University gave a presentation entitled "Impact of the Pollutant Load from the Yangtze River on the Marine Environment in the Estuary and the Yellow Sea and East China Sea." The presentation highlighted the environmental problems in the Yangtze River as determined from site surveys and the results of simulation analyses. First, Professor Watanabe used numerous satellite images to elucidate the current status of soil erosion in the Yangtze River basin. Next, he presented the results of an analysis on the effect of conversion of developed agricultural fields back into forestland, which is the measure implemented by the Chinese government to deal with this problem. The analysis

concluded that this measure could be expected to be effective in preventing soil erosion to a certain extent. Professor Watanabe pointed out that, based on the analysis of nitrogen and phosphorus fertilizing and dissolved silica concentrations, there has been a change in the phytoplankton species in the river and the coastal areas of the East China Sea, giving rise to the possibility of increased "red tides" of dinoflagellates and blue-green algae. He also pointed out that the changes in the Yangtze River estuary and the coastal zones of the East China Sea would spread to the seas near Japan.

Professor Zhongyuan Chen of the Department of Geography at East China Normal University gave a presentation entitled "Chongming Island Ecological System Restoration Project." The presentation focused on Chongming Island, an island formed in the Yangtze river-mouth delta that measures 100 km east to west and 30 - 40 km north to south and has a population of approximately 700,000. Professor Chen talked about the natural and human history of the island and the environmental stresses caused by human activity. He discussed these environmental stresses using specific data on the reduction of sedimentation due to the construction of the Three Gorges Dam and the pollutant load from Shanghai. With regard to the efforts to restore the ecological system of the island, he reported on the Chongming Island National Geopark Plan and the plans to make the island a major center for environmental education for children as one part of the UNESCO world park project.

The second half of the seminar was a panel discussion on the role of EMECS 8 as the venue for specific discussion and information exchange. The topic of this panel discussion was "Future Development of International Exchanges Relating to the Environmental Conservation of Coastal Zones in China." The discussion was coordinated by Dr. Kai-Qin Xu.

Professor Weng noted that the environmental problems of the Yangtze River estuary were inseparable from those of the Yangtze River as a whole, and that he wanted to learn from the example of the Seto Inland Sea and conduct interchange in an effort to find solutions to these problems. Professor Watanabe said that he hoped that EMECS 8 could show that the problems of the Yangtze River were common problems faced by both China and Japan. He also said that it was clear that the discharge from the Yangtze River affects the environment of coastal zones in Japan, and that it was important to deal with this problem in a coordinated manner on the national level. Professor Chen, secretary general of the EMECS 8 secretariat, said he expected 400 - 500 attendees from 30 nations at the conference, and that authorities from each level in China would also attend, providing a good opportunity for a substantial exchange of views. He also pointed out the need for cooperation among industry, government and academia in problem-solving and said he hoped that many people would attend.

There were many questions from seminar attendees. At the conclusion of the seminar, Dr. Xu said that he hoped that there would be a discussion of the issues raised in the seminar at EMECS 8, and that the ideas that came out in the course of the discussion could be shared. In this manner, the seminar ended on a high note.

This seminar served to highlight once again the fact that the problems of marine pollution in China and pollution in the Yangtze River are problems that do not affect China alone, and that an international cooperative organization that includes Japan and other nations is indispensable for their resolution.



■ Program ■

<Presentation>

- Prof. Lida WENG Changjiang Water Resources Commission
"Ecology and Environment of Yangtze Estuary"
- Prof. Binghui ZHENG Institute of Water Environment, CRAES
Presenter : Dr. Kaiqin XU National Institute for Environmental Studies
"Protection of marine environment from land-based activities in China"
- Prof. Masataka WATANABE Keio University
"Impact of pollution load of Changjiang River on estuary/marine environment of the yellow sea and East China Sea"
- Prof. Zhongyuan CHEN East China Normal University
"Chongming Island Ecological System Restoration Project"

<Discussion>

- Theme:
"Future Development of International Exchanges concerning the Environmental Conservation of Enclosed Coastal Seas"
- Coordinator : Dr. Kaiqin XU

Frozen in Time: The Island of Barang Lompo

Professor Tetsuo YANAGI,
Research Institute for Applied Mechanics, Kyushu University, Japan

In the middle of December 2007, I visited Makassar University to participate in discussions regarding a joint research project. Formerly known as Ujung Pandang, Makassar is a city in the southwestern portion of Sulawesi, which is the second-largest of the Indonesian islands (the largest of which is Kalimantan). Ujung Pandang was a new name given to the city of Makassar in the 1600s by the sultan who ruled the area. Both names are currently in use.

I was surprised by something when I landed at Makassar Airport. It was the beginning of the rainy season and a fierce squall had hit the area. Young boys holding umbrellas were standing at the exit of the airport waiting room. As I wondered what they were doing there, the associate professor of Makassar University who had come to meet me designated two of these boys as if it was the most natural thing in the world to do. One of the boys offered me his umbrella, and the other did the same for the professor, and as the four of us began walking side by side to the parking lot, the two boys immediately handed the umbrellas over us and began following us, skipping along and laughing and playing in the rain as they did so. They were "umbrella holders" whose job to shield us from the rain on the way from the airport exit to our car in the parking lot. When we reached the professor's car and we returned the umbrellas, the professor gave them each 100 rupees (approximately 1.5 yen). Looking very happy, the boys thanked us and returned to the airport waiting room exit. I imagine that when I was a child, young boys did this kind of part-time work in Japan as well.

The following day, I gave a special lecture at the university. On the third day of my stay, we hired a fishing boat and traveled for some 40 minutes from the Port of Makassar to the island of Barang Lompo off the coast. We had come to see a Makassar University marine laboratory that was located there. Barang Lompo is a tiny island with a circumference of 2 km, and its elevation is a mere 1m above sea level. However, it is rich in vegetation and has abundant ground water, and so since ancient times the island has been inhabited by many people who engage in fishing and trade. Currently 4,000 persons making up 800 households live on the island. The islanders live a life of abundance, and their houses are sturdily constructed. As I understand it, the lumber used to construct their houses is brought there from the island of Kalimantan across the way.

After viewing the marine laboratory, as we strolled around the island, I became quite nostalgic. I heard the happy voices of many children and the sound of splitting firewood and other sounds of

daily life. When I was a child in Japan, too, the village where I lived was filled with the voices of children and the sounds of daily life. I suddenly felt as if time had stood still and that day had been preserved up to now.

Whether in the daytime or at night, there are almost no sounds in the residential areas in modern-day Japan. Children stay shut in their houses, and except for the sound of people beating the futon bedding that is hung outside in the sun, there are almost no sounds of the daily activities conducted in the individual residences.

We strolled down the main street of the island and stopped at a small restaurant. The Makassar University associate professor who had assisted me during my visit said that when he was a student, he had boarded in this house during his summer training at the marine laboratory. At the time, the accommodation facilities now provided at the university marine laboratory did not exist, so students boarded with individual families on the island during the summer. The master of the house, now around 70, heard that I was visiting from Japan, and he greeted me in broken Japanese ("Konichi wa" "Arigato"). As soon as he had finished shaking my hand, in a loud voice he began to sing the national anthem of Japan. He sang it almost perfectly, all the way to the end. I burst into spontaneous applause. I heard that when he was in the early grades of elementary school, Japanese soldiers had come to the island and were in control of it for more than two years, and during that period the residents of the island were taught Japanese and learned Japanese songs. Still, I found it amazing that someone on a remote Indonesian island where Japanese people almost never come would remember perfectly a song in a foreign language that he had learned more than 60 years ago. Even now, I can still sing my elementary school song, but I cannot remember any other songs from that time.

I felt that there is something positively eerie about war and armies when you think that, during the Second World War, Japanese troops came to tiny islands such as this and interacted with the local people in such a way that, even though it was more than 60 years ago, they still remember the Japanese national anthem.

To oceanographers, the name "Makassar" is very familiar because of the Makassar Strait, through which the Indonesian Throughflow flows from the Pacific Ocean to the Indian Ocean. The city of Makassar serves as the southern outlet for the Makassar Strait that leads from the Celebes Sea to the Java Sea. The Indonesian Throughflow is driven by the difference in the level of the sea between the warm Pacific northwestern equatorial waters and the



Barang Lompo

cold Indian Ocean northeast equatorial waters.

The Indonesian Throughflow is greatly affected by climate change that occurs on a global scale. During an El Nino event, the warm water in the western Pacific equatorial region is carried to the east, causing the sea level to drop, with the result that the Indonesian Throughflow is weakened. Conversely, during a La Nina event, the warm water in the eastern Pacific equatorial region is carried to the western Pacific, with the result that the sea level rises and the Indonesian Throughflow becomes stronger. The question is what will happen to the Indonesian Throughflow if global warming progresses. No one yet knows the answer to this question.

If the worst comes to the world regarding the scenario for greenhouse gas emissions and the forecasts of the IPCC (Intergovernmental Panel of Climate Change) are correct, then by the year 2100 the average sea level worldwide will rise by nearly a meter, and the island of Barang Lompo will disappear. The question for me personally is: What can I do to prevent this from happening? Or to put it another way: What must I do?



Children of Barang Lompo playing with a cow



Main street of Barang Lompo

Science and Policy Trends (2)

Restoration of the Environment in Tokyo Bay and the Role of Private Citizens

**Dr. Yasushi HOSOKAWA Senior Executive Director,
Waterfront Vitalization and Environment Research Center (WAVE)**

A study on restoring the environment in Tokyo Bay is being pursued by the Tokyo Bay Renaissance Promotion Conference. This Conference was first held in February 2002 through an alliance between the national government and local government organizations in the Tokyo Bay area. The Action Plan for the Restoration of Tokyo Bay was established in March 2003, listing common objectives and collecting up measures on the part of individual administrative agencies. The three major pillars of this plan are the reduction of load from land area, measures to improve marine environments, and environmental monitoring.

In March 2007, an interim evaluation was conducted regarding the efforts made during the three years of the Action Plan. Further efforts and new efforts will be conducted as well. Currently both the national government and local governments are struggling under the burden of financial difficulties, and local economies are also not doing well. For these reasons, the pace of deployment of improvement and restoration projects has tended to be slow, and it has even been difficult to secure the funding for routine environmental monitoring.

As long as the overall plan is sound, there are sure to be no problems with conducting environmental restoration and regeneration slowly but surely "in accordance with the response time of nature." However, I am concerned that an adaptive response approach -- for example, planning methods in which common objectives are established and each agency makes independent efforts for improvement, and in which progress is managed in accordance with the overall restoration amount that has been converted into numerical guidelines, or approaches in which the effectiveness of improvement is monitored and the overall plan is revised -- may result in cutbacks in a climate of financial difficulties. My fear is an escalation in those voices that are calling for each individual project to have a single objective ("With our compartmentalized administrative system, individual agencies should only efficiently implement the projects that they administer; they shouldn't make gratuitous expenditures for environmental

considerations and so on.") and those calling for the abandonment of comprehensive environmental management ("We should use legal enforcement means to put the burden on private citizens and companies alone. Don't spend tax money!").

So what should be done? The interim evaluation recommended that new efforts be conducted in a number of areas, such as:

- 1) cooperation and collaboration with various entities,
- 2) citizen involvement with regard to key areas and promotion items and
- 3) experimental efforts.

It also contained specific proposals for such aspects as actively supporting the establishment of new organizations to conduct private initiatives. If these proposals are thought of as an effort to spark awareness of the connection between daily activities by private citizens and companies and the environment of Tokyo Bay, and an effort to get people to play a leading role in improving the environment of Tokyo Bay based on a recognition of this connection, they can be read as proposals for Tokyo Bay area management governance.

Against this backdrop, the Waterfront Vitalization and Environment Research Center (WAVE) (<http://www.wave.or.jp/>), the foundation with which I am affiliated, is actively working to help set up and run "Action Groups to Improve the Environment of Tokyo Bay" led by citizens. From the belief that the age-old wisdom of the coastal areas of Asia should be used for cooperative management of coastal resources, we should also note that the second Partnership Council Meeting of the Partnerships in Environmental Management for the Seas of East Asia (PEMSEA), an international organization that has a record of locally-based management achievement in coastal regions of East Asia, was held in Tokyo in July. Both of these efforts are related to the local community-forming embodied in the so-called "Sato-Umi" concept. We are beginning to see the appearance of citizen-based social participation activities that are based on a partnership with government.

Participation in the Partnerships in Environmental Management for the Seas of East Asia (PEMSEA)

In July 2008, the International EMECS Center signed a cooperative agreement with the Resource Facility of the Partnerships in Environmental Management for the Seas of East Asia (PEMSEA), making the Center a nongovernmental partner in PEMSEA. The Center will implement projects aimed at achieving sustainability in the Seas of East Asia.

PEMSEA was established in 1994 by the United Nations Development Programme (UNDP). It is a sustainable development framework, whose goal is to achieve a balance between ocean development and preservation of marine environments in East and Southeast Asia. The Resource Facility, which also serves as the PEMSEA secretariat, is located in Manila in the Philippines. In 2006, the cooperation mechanism organization became separate from the project coordination organization. The participants comprise 11 governmental partners (the nations of Cambodia, China, North Korea, Indonesia, Japan, Laos, the Philippines, Korea, Singapore, East Timor and Vietnam) as well as 16 non-governmental partners.

At the East Asian Seas (EAS) Congress 2009 scheduled for November 23 - 27, 2009 in Manila, a wide array of activities are being considered, including an international conference on sustainable coastal zones and ocean development, a ministerial meeting, a youth forum and a technology trade fair. The International EMECS Center also plans to participate. There will also be a photo contest for amateur photographers; photos should be submitted by the end of December 2008. For more information, see the EAS Congress 2009 website (<http://www.pemsea.org/eascongress>).



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

T h e m e : Harmonizing River Catchment and Estuary

O r g a n i z e r : East China Normal University, Chinese Research Academy of Environmental Sciences (CRAES),
International EMECS Center

D a t e : October 27(Mon) ~ 30 (Thu)

V e n u e : Shanghai, China

Shanghai Everbright International Hotel, East China Normal University (Closing session/Farewell party)

S e s s i o n : Session 1 : Catchment-Coastal Environmental Vulnerability under Global Warming Setting
Session 2 : Policies to Address Ecological and Social Risks in an Integrated Coastal Management Framework
Session 3 : Large River Dialogs - Water Quality, Total Load Controls and Management
Session 4 : Regional Seas - Total Loads Control
Session 5 : Institutional Models for Regional Collaboration in Coastal Science and Management (LOICZ related)
Session 6 : Megadeltas Landform Changes and Coastal Hazards Assessment (APN/IGCP475 Special session, Closed)
Session 7 : New Concept that Increases Biological Productivity and Biodiversity (Sato-Umi session)
Session 8 : Students and Schools Partnership - Teaching and Learning about the Environment to Benefit People and Nature -
Special Event: Water Environment Restoration Technology in Chugoku Region, Japan

P r o g r a m :

	Morning	Afternoon	Evening
October 27 (Mon)	Opening Ceremony / Keynote Speech	Plenary Session / Session 6 (Closed)	Welcome Dinner
October 28 (Tue)	Session 1 (Oral presentation) Session 2 (Oral presentation) Session 6 (Closed) Session 8 (Oral/Poster presentation)	Session 1 (Oral/Poster presentation) Session 2 (Oral/Poster presentation) Session 6 (Closed) Session 8 (Oral/Poster presentation) Special Event	
October 29 (Wed)	Session 3 (Oral presentation) Session 4 (Oral presentation) Session 5 (Oral presentation) Session 8 (Field trip)	Session 3 (Oral/Poster presentation) Session 4 (Oral/Poster presentation) Session 5 (Oral/Poster presentation) Session 7 (Oral/Poster presentation) Session 8 (Field trip)	
October 30 (Thu)	Session 3 (Oral presentation) Session 4 (Oral presentation)	Closing Ceremony	Farewell Party

Call for Articles

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

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