

EMECS

NEWSLETTER

No. 32

Conference Report of 9th International Conference on Environmental Management of Enclosed Coastal Seas (EMECS9)



EMECS 9 was held under the theme of "Ensuring Accountability and Effective Communication for Successful Integrated Management of Enclosed Coastal Seas". The Conference met for 4 days from Sunday, August 28 to Wednesday, August 31 at the Baltimore Marriott Waterfront Hotel, and other locations in Baltimore, Maryland, U.S.A. Approximately 300 people from 25 countries participated in the meeting and presented their research. Of these, around 100 were from Japan.

EMECS9 was affected by hurricane Irene on the first day, and as a result a number of participants were unfortunately unable to attend. The conference schedule was therefore rearranged and finally began from 3 p.m. on August 28. Although the schedule for some sessions was partially changed, most of the sessions were held as planned.

Conference Program					
	(Morning)		(Afternoon)		(Night)
August 28 (Sun)			Hazards Plenary	Concurrent Sessions	Welcome and Poster Reception
August 29 (Mon)	Plenary Session / Keynote Plenary Session	APN Session	Satoumi Session	Chesapeake Bay Plenary	Satoumi Session
		Concurrent Sessions	Concurrent Sessions		Concurrent Sessions
		Students and Schools Partnership Session (SSP)			
August 30 (Tue)	Concurrent Sessions		Concurrent Sessions	Climate Change Panel and Discussion	Closing Dinner Banquet
	Students and Schools Partnership Session (SSP)				
August 31 (Wed)	Concurrent Sessions	Closing Session •Poster Awards •Conference Declaration •Conference Review •Future EMECS Announcement	Field Trip (Option)		
	Students and Schools Partnership (SSP)				

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1 Keynote Plenary Session (August 29 8:30~11:00)

(1) Opening Address

At the Plenary Session, Dr. Robert Summers, Secretary of the Maryland Department of the Environment, served as moderator.

First, Maryland Governor Martin O'Malley welcomed the delegates on behalf of the local community and talked about Maryland's policy with respect to Chesapeake Bay. Following this, Mr. Toshizo Ido, Governor of Hyogo Prefecture, Japan, and Chair of the International EMECS Center, also welcomed the delegates. He expressed gratitude for the assistance Japan had received from countries around the world in the aftermath of the Great East Japan Earthquake, and talked about his hopes for progress in preserving the environments of enclosed coastal seas.



Mr. Bob Perciasepe, Deputy Administrator of the U.S. Environmental Protection Agency, then welcomed the attendees as a representative of the U.S. government and spoke about the national government's policy. The final opening address was given by Dr. Motoyuki Suzuki, who is currently President of Japan's Central Environment Council and who is also expected to become the next President of the International EMECS Center. He spoke about the changes in the world and the environment in the more than 20 years since the EMECS conferences began, and about his expectations for the role that EMECS will play in resolving the issue of how to maintain a sustainable relationship between human activities and the natural ecosystems of the oceans.

(2) Keynote Address

Dr. Patricia Majluf, director of the Center for Environmental Sustainability at the Universidad Peruana Cayetano Heredia (UPCH) in Lima, Peru, gave the keynote address on the topic of "My Quest to Transform the Largest Fishery on Earth Towards Sustainability."

The anchoveta fishing catch in Peru amounts to several million to 10 million tons annually. However, almost all of the anchoveta catch has been used for animal feed, as fishmeal for fish farming, or as raw material for producing fish oil. Bulk fishing has a tremendous impact on the ecosystem, and the use of the catch as feed for fish farming is also a problem from the standpoint of securing a stable food supply. Anchovetas are high in nutritional value and moderate in price, and they have been used as food since ancient times. For this reason, Dr. Majluf, who is a biologist, has promoted the Anchoveta Week Initiative in cooperation with a cook and a graphic designer, with the goal of expanding the use of anchovetas for food. Ultimately, the government also recently allocated a budget for the food use of anchovetas, and the results of increased consumption of anchovetas as food have begun to appear in a variety of settings, including increased production of fish products, expanded employment, improved nutrition of the general public, increased investment and increased exports. As a result of this effort, awareness of resources on the part of the general public in Peru has increased, and people are discovering the value of culture and biodiversity. Consumption of fish as food is expected to expand further to Asia, Africa and other parts of the world, and this method is also expected to be applied to other fish varieties that are not currently being used as food.



2 Special Sessions

Several special sessions were held on major issues that have recently come to affect the environments of enclosed coastal seas.

(1) Hazards Plenary (August 28 15:00~16:40)

A discussion on the situation and the response to the oil spill in the Gulf of Mexico that occurred in April 2010, and the earthquake and tsunami that occurred off the coast of the Tohoku region of Japan in March 2011, was held in order to share information and lessons learned and discuss issues relating to these two events.

In the report on the oil spill, it was noted that when the oil spill occurred in the Gulf of Mexico, all relevant governmental organizations worked together to deal with the disaster and controls were tightened on offshore oil facilities and improvements were made to long-term restoration efforts. Moreover, a study conducted by the National Commission on the BP Deepwater Horizon Oil Spill pointed out that this disaster had been both foreseeable and preventable, and the commission's recommendations called for improved safety, environmental protection, increased capacity to respond to oil spills, improved oil well-containment

capability, mitigation of impact and restoration of the Gulf of Mexico, securing of compensation, congressional engagement in ensuring responsible drilling and so on.

With regard to the tsunami in Japan, it was pointed out that a combination of both infrastructure and systems measures would be needed for recovery, and that, particularly with regard to systems, thorough discussions should be held in advance between the government and local residents regarding the response in the event of a disaster.

In the discussion, it was pointed out that energy issues must be handled in an integrated manner with all other issues, and that it is important for the general public, the government and specialists to have an understanding of risks when they deal with these issues.

(2) Chesapeake Bay Plenary (August 29 15:20~17:00)

The nutrient loads in Chesapeake Bay have been reduced, but the quality of the water environment is still poor, primarily due to the low dissolved oxygen concentration. The reports and discussion focused on restoration and the quest for new solutions.

Chesapeake Bay faces serious problems that include changes to the ecosystem resulting from increased population, climate change and so on. In an effort to restore the water quality of the bay, the establishment of total maximum daily load (TMDL) to reduce the nitrogen loads is being implemented as a clear framework that fulfills legal and financial accountability requirements. Clear messages in easy-to-understand language should be issued regarding scientific and political problems, and the active participation of local residents and the community is needed. Establishing clear and understandable short-term objectives is effective in resolving problems. It was also reported that, in both newly developed regions and older urban areas, it is important to get an overall picture of the goal before pursuing pollution prevention measures, smart urban regrowth and other efforts.

In the panel discussion, it was pointed out that problems in restoring the bay are not only economic and ecological problems but also social problems, and citizens must take an interest and continue to work toward their resolution. It was also pointed out that overall planning is effective in achieving a balance between growth and development on the one hand and environmental preservation on the other, and that the bay will need to be restored with limited financial resources at the same time that the population is increasing and development of new areas of the city is proceeding, and therefore this would require equity community involvement and a support structure.

(3) Climate Change Panel and Discussion (August 30 13:30~15:10)



The impact of climate change is increasing day by day and represents a global threat. Even if the most stringent mitigation measures feasible were to be devised, the impact of climate change is predicted to continue for the next few centuries. As a result, we need to prepare for the long-term impact of climate change, including degradation of ecosystem services in coastal zones, water scarcity, frequent floods, agricultural failures, food shortages, and accelerated loss of biodiversity. As adaptation measures for this type of climate change will be needed throughout the next few centuries, there are major obstacles to, and deep-rooted constraints on, the

implementation of adaptation measures, including insufficient scientific knowledge and technologies, a lack of funding and so on. Accordingly, this session provided information on the Global Climate Change Adaptation Network established by the United Nations Environment Programme (UNEP) and featured case study reports and discussion on topics such as the vulnerability of coastal zones, the regenerative power of nature, sustainability, adaptation measures and so on.

(4) Satoumi Session (August 29 12:20~15:00, 17:15~18:40)

Satoumi is attracting attention from the standpoint of preserving both fishery resources and the environment. Plans for its creation are being formulated, and information about Satoumi is being communicated in an effort to encourage its spread internationally as well. In the special session held at EMECS 8 (8th International Conference on the Environmental Management of Enclosed Coastal Seas), there was a common recognition that Satoumi can be an effective tool for coastal zone management in Asia. This session was held in a further effort to establish the concept of Satoumi internationally, as well as to share information on the status of Satoumi activities in Asia and coastal zone management activities in Europe and the United States, and to disseminate information about the Satoumi concept to the West.

The session consisted of three parts. Part 1 focused on Satoumi as seen from Japan and other parts of Asia. Mr. Toshizo Ido, governor of Japan's Hyogo Prefecture and chair of the International EMECS Center, first welcomed the attendees. This part of

the session discussed the framework for Satoumi at international conferences up to now, and the measures for Satoumi creation supported by the Japanese government. There were also reports on case studies from Ago Bay in Mie Prefecture, Japan and Indonesia.

The theme of Part 2 was Satoumi as seen from Western nations. Reports focused on the similarities between Satoumi and coastal zone management, etc. in the West and the issues involved, using case studies of efforts in Chesapeake Bay, the Mediterranean, the Black Sea and so on, as well as the role of Satoumi in preserving biodiversity.

Part 3 featured a summing-up of Parts 1 and 2 by the session chair.

(5) APN Session (August 29 11:20~12:15)

It is thought that sharing information on the risks and vulnerability due to climate change of the enclosed coastal seas that are home to Asian megacities (coastal zones that have become urbanized and have a population of 10 million or more) can lead to discovering measures to reduce the impact of socioeconomic risk and climate change risk to enclosed coastal seas. For this reason, the APN Session focused on case studies from two Asian megacities: Bangkok, Thailand, located on the Gulf of Thailand, and Tianjin, China, located on Bo Hai Bay. The presentations and discussion centered on coastal zone vulnerability, risk management and other issues.



(6) Students and Schools Partnership Session (SSP)

The first Students and Schools Partnership Session (SSP) was held at EMECS 6 in 2003. For this conference, the theme was "community-based environmental education" and the program not only featured participation by students, educators and so on but also was integrated with the sessions by researchers, etc. that related to environmental education. Participating in the main program excursions were some 30 persons, including 15 high school and college students from the United States, Peru and Japan, as well as educators and the administrative officers, etc. of environmental learning programs.

On the first day, Session 1E "Coastal Community-Based Initiatives to Conserve Coastal Resources" (August 28, 5:00 p.m. - 6:30 p.m.), featured presentations by high school and college students, etc. from the USA, Japan and Peru about their activities, together with an exchange of views. Two high school students from Japan gave presentations.



Katsuhiko Tozaki (Amagasaki Oda high school, Hyogo Prefecture, Japan)

Theme : Let's make the Sea of Amagasaki blue! - Restoring Water Quality of Amagasaki Port -

Saori Takahashi (SANYO Girls' High school, Okayama Prefecture, Japan)

Theme : An approach to reduce the garbage at the bottom of the Seto Inland Sea through two activities: Collecting garbage at the sea bed and raising public awareness of the consequences of inappropriate waste management



On the second day, the SSP Excursion I "Urban Community-based Environmental Education" (August 29, 1:30 p.m. - 5:00 p.m.) was held. Through teaching materials on the community's history and culture, the program, designed by the Living Classrooms Foundation, enabled the participants to experience a participatory learning effort that was designed to nurture the feeling of protecting the environment and the sense of responsibility to do so.

On the third day, the SSP Excursion II "A Colonial Coastal Town Sets Course for its Future" (August 30, 7:30 a.m. - 5:00 p.m.) was held. Its purpose was to enable participants to learn about the sustainability of the local environment and efforts to protect the ecosystem of the Chesapeake Bay coastal zone. As they traveled down the river to Chestertown aboard the research vessel of the Washington College Center for Environment and Society, the participants learned how knowledge of the history of Chesapeake Bay is being used to protect coastal zone ecosystems. They also learned about bird-watching and about the towns in the river basin, the lifestyles of the residents and their attitudes toward the environment and so on. In Chestertown, they learned about school education using geographic information systems (GIS) and assistance for the communities in the river basin, as well as about efforts by the Chesterton Town

Hall to promote sustainable development as a coastal zone community.

In addition, the high school and college students who participated in the SSP formed a committee to draft a declaration, and they held discussions and completed an SSP Declaration that was presented at the Closing Session.

The high school students from Japan who participated in the EMECS 9 SSP said that they wanted to use what they had experienced through their participation to further their own future growth.

3 Concurrent Sessions

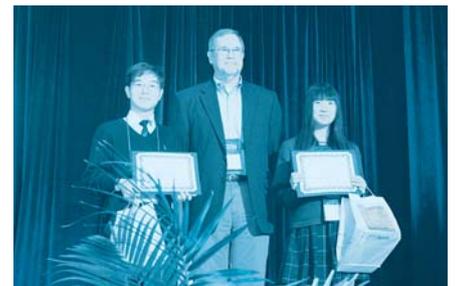
Due to the impact of Hurricane Irene, the schedule for the Concurrent Sessions was changed, and began from 5:00 p.m. on August 28 and continued until 10:00 a.m. on August 31. Each day featured enthusiastic presentations and spirited debate. The topics of the Concurrent Sessions featured keywords such as sustainability, accountability, partnership, citizen, basic science and financing. The Baltimore Harbor Session and the U. S. Army Corps of Engineers Special Session were also held as concurrent events. The Concurrent Sessions featured 124 speakers, including some presentations that were held as part of the SSP Session

4 Poster Presentation (August 28 19:00~20:30)

Some 20 posters had been entered as poster presentations. Due to the impact of Hurricane Irene and other factors, however, ultimately only 13 posters were submitted.

The Poster Session was held in the same venue as the Welcome Reception, and the people who attended the Welcome Reception also gathered at the Poster Session. Poster presenters and attendees exchanged views with one another and deepened exchanges.

The five-person Poster Selection Committee judged the posters and awarded prizes to the following posters. The awards were presented at the Closing Session.



Poster Award Winners

Saori Takahashi (SANYO Girls' High school, Okayama Prefecture, Japan)

Theme : An approach to Reduce the Garbage at the Bottom of the Seto Inland Sea

Katsuhiko Tozaki (Amagasaki Oda high school, Hyogo Prefecture, Japan)

Theme : Let's make the Sea of Amagasaki blue! - Restoring Water Quality of Amagasaki Port -

5 Closing Session (August 31 10:25~12:00)



Baltimore Declaration presentation
by Dr. Wayne Bell

The Closing Session was moderated by Mr. Dave Nemazie of the University of Maryland Center for Environmental Science.

Mr. David Carroll, Co-Chair of the EMECS 9 Steering Committee and Chair of the Poster Selection Committee, presented the award for best poster. Next, the students who had participated in the Students and Schools Partnership Session (SSP) read the SSP Declaration, and Dr. Wayne Bell, Chair of the Drafting Committee, proposed the Baltimore Declaration as the Conference Declaration. Both declarations were adopted by unanimous applause.

Dr. Masataka Watanabe, Chair of the Scientific and Policy Committee of the EMECS International Center, presented a report summarizing the conference. This

was followed by an expression of appreciation from Mr. Keitaro Sato, Chief Executive Officer of the Hyogo Prefecture Department of Environment, representing the Chair of the Board of Directors of the International EMECS Center.

Following on from this, Dr. Erdal Ozhan from Turkey, the venue for the next EMECS conference, made the announcement that the next EMECS conference will be a joint EMECS 10 - MEDCOAST 2013 conference, to be held in the fall of 2013 at a coastal location on the Aegean Sea in southern Turkey. Finally, the moderator, Mr. Dave Nemazie, presented closing remarks in which he expressed the gratitude of the local community. With this, the conference came to an end.



SSP Declaration presenters

THE BALTIMORE DECLARATION ~ Sustainability in a World of Change ~

This declaration has been adopted by the 300 participants from 25 countries who attended the 9th International Conference on Environmental Management of Enclosed Coastal Seas which took place in Baltimore, Maryland USA, on the shores of Chesapeake Bay.

Baltimore was also the location of the 2nd EMECS conference in 1993. We are very glad to learn that the Chesapeake Bay Program and other coastal seas initiatives represented at that conference have made progress in fisheries management and in controlling nutrient pollution. Across those years EMECS has maintained its role as a forum for exchange of ideas and information between government officials, environmental and resource managers, research scientists, non-governmental organizations and citizen stakeholders, and educators and students. But the world has changed since our first visit to the Chesapeake with accelerating advances in technology, communications, scientific knowledge, and public awareness. The world has also confronted us with an unexpected series of emergencies - oil spills, earthquakes and tsunamis, and coastal storms - that challenge the advances we have made. We must be prepared to manage sustainably our enclosed coastal seas and their resources despite such a world of change.

EMECS 9 began as Hurricane Irene struck the USA East Coast, passing within 100 miles of the conference location. This was the latest in a series of coastal environmental emergencies that occurred within months of the conference. Those emergencies included the Deepwater Horizon oil spill (April 2010) in the Gulf of Mexico and a magnitude 9.0 earthquake and resulting tsunami (March 2011) that devastated the northeastern coast of Japan. We are deeply saddened by the loss of life and economic disruption caused by such disasters and we certainly encourage attempts to predict and prevent them in the future. But we also recognize that human accidents, even if shown to have been preventable, and natural disasters are hazards that are difficult to predict. Reliance on technology alone to eliminate such hazards places our coastal communities at even greater risk when that technology fails in an unexpected emergency that we must face unprepared. We need new policy perspectives that encourage us to adapt to regional environmental conditions so that recurrent hazards can be dealt with as anticipated emergencies no matter how infrequent they may be. Surely the locating and building of structures that are susceptible to serious damage by a tsunami or coastal storm surge can constitute an unacceptable risk in the face of such potential hazards.

The adapting of our activities to regional environmental conditions is tacit acceptance that we are integral components of coastal ecosystems. We strongly believe that this recognition is long overdue throughout history mankind has modified the ecology of enclosed coastal seas for better or for worse, and they have in turn influenced the economy, culture, and prosperity of coastal communities. The innovative concept Sato-umi, high productivity and biodiversity in the coastal sea with human interaction, is an example of this perspective. We encourage policy makers to adopt the point of view that, by taking actions to benefit our enclosed coastal seas, we are also benefiting ourselves.

Communication changes, especially those involving the Internet and social media, have created exciting opportunities for disseminating information and catalyzing citizen involvement in deeply held causes. Students now have access to real-time monitoring data along with an unprecedented wealth of information which educators can assist them to interpret. The potential for advancing environmental education and establishing a better informed citizenry is unprecedented and will continue to grow. We are wary, however, because these advances may separate learning from the cultural and environmental context of the places where our coastal seas are located. We applaud initiatives that are designed to connect or even re-connect young people with their local environment and coastal culture through activities outside of the classroom - activities for which electronic media can enrich the content but not substitute for the experience itself. We believe that the integral relationship between mankind and the coast is difficult to understand and appreciate if experienced through electronic media alone.

World economy is also changing, creating austere times that challenge us to accomplish more with considerably less available funding. There is no question that maintaining the economic vitality of our coastal seas is likely to require a

continuing and costly investment of increasingly limited financial resources that other priorities seek to obtain. We encourage entities that are dependent on each coastal sea to form partnerships to implement shared programs and to achieve shared goals. These partnerships may take place at or between levels ranging from two or more local communities to cities, states, and national jurisdictions. Willing partnerships can increase program efficiency as well as spread the costs across more active participants. Coastal seas are indeed our shared responsibility. In this era of economic austerity, we must take that responsibility to heart.

The need for innovative science has never been greater. In addition to the ecology and habitat requirements of the living resources we would preserve and harvest, we also need to understand the eco-services our coastal seas provide and how changes in those services affect us as integral members of these systems. While we accept the possibility that crossing certain environmental thresholds can lead to rapid and irreversible environmental change, we have little knowledge of the nature of the thresholds themselves and of their magnitude. What is the thermal tipping point where the gradual heating of surface waters under global warming alters ocean circulation patterns and produces global climate change? To answer such questions we need better knowledge of our coastal systems today, and better models to predict future scenarios under different choices available to us now.

And so we come full circle. The changing world is mirrored by our coastal seas and our coastal societies through a dynamic, mutual relationship between each other. This integral relationship has existed throughout human history; we have modified coastal seas, and they in turn have altered us. We are not outsiders; we are not intruders. It is no more possible to restore our coastal waters to some pristine state than it is to undo the societies and the cultural identities that have developed on their shores. Our goal should be to apply ourselves to maximize and maintain the productivity and biodiversity of our coastal seas. Only when our coastal resources and coastal communities mutually benefit from the behaviors of each other will our ability to manage our coastal seas be truly sustainable in a world of change.

Environmental Management of Enclosed Coastal Seas
EMECS 9 August 31, 2011

THE STUDENTS AND SCHOOLS PARTNERSHIP DECLARATION ~Embracing an Uncertain Future~

This declaration is made by the more than 15 students, teachers, and environmental scientists from Japan, Peru, Ireland, and the USA who have participated in the fourth Students and Schools Partnership program at the EMECS 9 conference in Baltimore, Maryland. EMECS has brought us together and provided us with an outstanding learning experience. We are deeply grateful.

This is a changing world. Electronic media now enables us to experience this almost in real time in our personal lives, in our homes, and in our classrooms. And we have experienced it again through the sessions and excursions that took place under the EMECS Students and Schools Partnership. This changing world is exciting to us, but it also brings uncertainty. As observers today who will inherit the future you leave to us, we do not believe that scientists, policy makers, and even educators are comfortable with that uncertainty. We feel it is more of an inconvenience to you, something that you would reduce to a set of facts and truths for us accept as blueprints for our future. To us, uncertainty is opportunity. We should be involved in shaping the future, but too often we find that opportunities to participate are inaccessible to us. The so-called generation gap is more like a window with reduced transparency. What passes through in either direction is useful and informative, but it is also selective.

We hunger for greater collaboration and communication among scientists, policy makers and public officials, educators, coastal communities, and youth. It is our strong opinion that these efforts will result in the needed knowledge, tools, and,

additionally, a deeper commitment to improve our coastal systems.

We hunger for scientists to share their excitement of discovery with us rather than just making information more available on the Internet and in publications. Too often the findings are negative - this fishery is declining, this pollutant is increasing, this coastal sea has received a low grade. What are your successes? Share them with each other and with us. Come to our classrooms, lead us into the field, and advocate for more opportunities for us to work with you.

We hunger for policy makers and public officials who are honest with us, who will tell us the real causes of a failing program or oil spill disaster rather than attributing them to the uncertainty of prediction. We would rather hear of leadership that brings people together to collaborate not only to address coastal seas problems, but all environmental issues. And we would love to participate.

We hunger for educators who have opportunities to teach us more than facts. Uncertainty requires that we are also taught skills that will help us to teach ourselves to make sense out of a growing sea of information. Show us how to navigate the waters and find the answers.

We hunger for coastal communities that recognize that they are part of the sea on which they are located. So often they act as if they were separate from nature and able to use technology to solve all their environmental problems. To us, they are raising the risk that an uncertain event will result in a disaster. Thank you, but we would prefer not to live in such communities and we will work not only to change them but to ensure that change is lasting.

We hunger for young people who are more responsible and involved, who can have constructive discourse with their parents, peers, and neighbors who want to participate more in community affairs, and who strive to make a positive difference in the world they will inherit. We must continue to work together to realize the opportunities that uncertainty provides us. We must realize our responsibility to be part of the solution.

We will continue explore, propose, and implement solutions to the environmental problems in our coastal communities. We are grateful for the health, shelter, and protection that your hard work and loving care has given us. We ask that all of you together help us shatter the cloudy window between our generations. Reach through and take us by the hand. We will build upon your hard work as we embrace the uncertain future.

Thank you very much.

Environmental Management of Enclosed Coastal Seas EMECS 9 August 31, 2011

Call for Articles

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

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