

# EMECS

No. 30

N E W S L E T T E R

## Transition to a New Administration at the EMECS International Center Scientific and Policy Committee

At the 12th meeting of the Scientific and Policy Committee held in May 2009, Keio University Professor Masataka Watanabe was elected Chair of the committee. Professor Watanabe has served as a member of the Scientific and Policy Committee ever since the establishment of the International EMECS Center in 1994. Professor Nobuo Kumamoto, who up to now has been a leading force at EMECS in his position as Scientific and Policy Committee Chair, will continue to provide guidance as an advisor to the International EMECS Center.

In April 2009, three new members joined the Scientific and Policy Committee: Peter Soderbaum (Professor Emeritus, School of Sustainable Development, Mälardalen University, Sweden), Hisakazu Kato (Professor Emeritus, University of Nagoya, Japan) and Kaori Fujita (Professor, Department of Economics, Momoyama Gakuin University, Japan). Messages from new members are placed on 11 pages.

### On becoming Chair of the Scientific and Policy Committee

**Masataka Watanabe**  
Professor, Keio University

The first International Conference on the Environmental Management of Enclosed Coastal Seas (EMECS) was held in Kobe, Japan in 1990. Its goal was the preservation of enclosed coastal sea environments around the world, such as the Seto Inland Sea and Chesapeake Bay, where "red tides" had occurred and enormous losses had been sustained by the fishing industry as a result of severe eutrophication due to pollutant inflow into the enclosed coastal sea. In the years that followed, Professor Nobuo Kumamoto, former president of Hokkai Gakuen Daigaku, served as Chair of the Scientific and Policy Committee for some 20 years. When Professor Kumamoto stepped down from his post in May 2009, I was appointed to become his successor as the second Chair of the Scientific and Policy Committee.



The International EMECS Center has endeavored to create an "organic network of government officials, researchers, private citizens and other entities," and the unique efforts aimed at preserving enclosed coastal seas that have resulted now extend around the world. This, too, is primarily the result of the many years of guidance provided by Professor Kumamoto.

That first EMECS conference in Kobe led to seven more EMECS conferences, held in the cities of Baltimore (U. S. A.), Stockholm (Sweden), Antalya (Turkey), Bangkok (Thailand), Kobe and the island of Awaji (Japan), Caen (France) and Shanghai (China). I would like to express my deep respect and the gratitude that I feel toward Professor Kumamoto for the energy he spent on the holding of these eight EMECS conferences, as well as his tremendous efforts to ensure the further development of EMECS.

Efforts to reduce total pollutant loads are gradually starting to improve the problem of eutrophication. However, our efforts must not end with improving water quality. We need to restore vibrant enclosed coastal seas that are rich in fishery resources and provide habitats for a variety of marine organisms. EMECS must continue to play an important role in these efforts. Moreover, the rise in the level of the oceans resulting from global warming will not only increase the risk of high surf and tsunamis in coastal zones but may also have a major impact on the marine ecosystem. It will be necessary to tackle these and other new issues, and I will do my very best to meet these challenges.

In 2011, the 9th EMECS conference will be held, once again in the city of Baltimore, U. S. A. I hope I can count on your cooperation and support in the preparations for this next EMECS conference.

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## The theme of 9th International Conference on The Environmental Management of Enclosed Coastal Seas

**Time: 2011 Fall**

**Location: Baltimore, Maryland in the United States of America**

**The theme: Ensuring Accountability and Effective Communication for Successful Integrated Management of Enclosed Coastal Seas**

The 9th International Conference on the Environmental Management of Enclosed Coastal Seas will be held in Baltimore in Maryland USA, following the 8th International EMECS Conference, held in Shanghai 2008. The 1st Circulation for the conference will be announced soon and the detailed information should be reached in the EMECS website etc, after it is officially decided.

Following is the preliminary information from the Dr. Summers, Deputy Secretary, Maryland Department of the Environment.

### The Restoration of Chesapeake Bay and EMECS9 in Baltimore, Maryland, USA

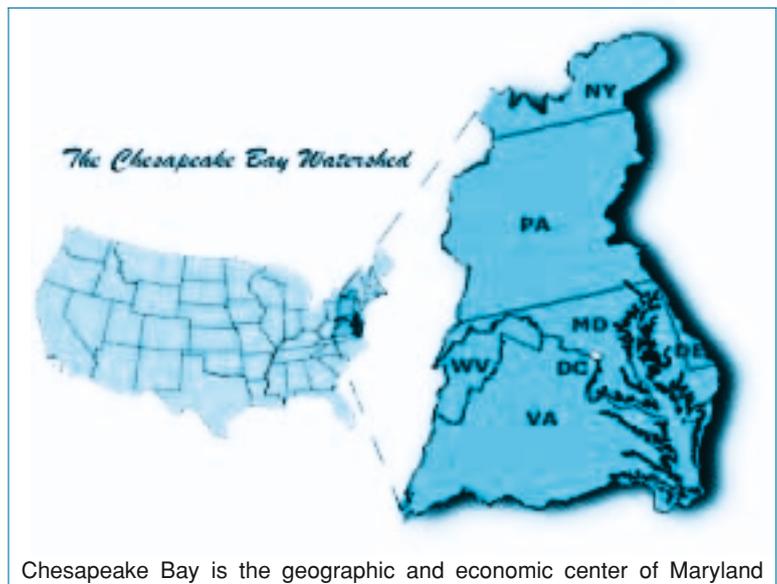
**Robert M. Summers, Ph.D., Deputy Secretary,  
Maryland Department of the Environment**

The Chesapeake Bay is the largest enclosed coastal sea in the United States. Located on the East Coast of North America, the Bay watershed covers 64,000 square miles and parts of 6 states and the District of Columbia (Washington, D.C.). (see [www.chesapeakebay.net](http://www.chesapeakebay.net)) The ecosystem of Chesapeake Bay is severely stressed by the impacts of population growth and development, resulting in a large "dead zone" where dissolved oxygen levels are too low to support healthy fish and shellfish populations.

In 1983, the States of Maryland, Virginia, Pennsylvania, the District of Columbia and the federal government, represented by the U.S. Environmental Protection Agency signed the first Chesapeake Bay Agreement. That agreement has led to the development of a comprehensive, integrated restoration effort with five broad goals : protecting and restoring living resources, vital habitats, and water quality, promoting and achieving sound land use and stewardship and community engagement.

Together the federal and state governments have spent over \$3.7 billion since 1995 in direct funding on these efforts, the majority of which (47

%) has been spent on water quality protection and restoration, including forest and wetland protection and restoration, agricultural nutrient management and land management improvements, waste water treatment plant upgrades, urban/suburban stormwater management, air pollution emission reduction and other measures. All of this effort has resulted in some improvement in the health of Chesapeake Bay, but that improvement has been offset by continued population growth and development in the watershed. The latest (2008) science-based assessm-



Chesapeake Bay is the geographic and economic center of Maryland

ent of the Bay restoration effort found that although cumulative progress on restoration activities had achieved approximately 61% of stated goals, Bay health indicators for habitat, water quality and living resources had achieved only approximately 38% of those goals.

In response to growing public concerns regarding delayed progress on restoration, in May, 2009 the Chesapeake Bay Executive Council (governors of all watershed States, Mayor of the District of Columbia, Administrator of U.S. Environmental Protection Agency and Chair of the Chesapeake Bay Commission ) committed to accelerate the rate of progress on the restoration efforts and established aggressive 2-year milestones to measure progress and hold governments, businesses and citizens accountable for meeting restoration goals. The accelerated restoration effort is being closely tracked and reported online through Governor Martin O'Malley's BayStat Program. (see <http://www.baystat.maryland.gov/>). The first of these restoration Milestones must be achieved by the end of 2011.

In the Fall of 2011, Maryland will be hosting the 9th International Conference on the Ecological Management of Enclosed Coastal Seas (EMECS9); returning to the site of the 2nd International EMECS Conference, held in Baltimore in the Fall 1993, nearly 17 years ago. During these years in the Chesapeake Bay area one of the key things we have learned is that restoration cannot be successful without tremendous effort by all parties, with strong support of all citizens. This requires clear communication of our goals to all citizens and unambiguous accounting for the progress (and failures) of all of the responsible parties. Hence, the theme of EMECS9 is: *"Ensuring Accountability and Effective Communication for Successful Integrated Management of Enclosed Coastal Seas"*.

Without accurate measurements, we lack adequate accountability and are unlikely to achieve our goals. Frequent and readily accessible (transparent) reporting of progress is key to understanding where and how progress has been made and where it has not. It informs the public and political leaders and gives them the information they need to hold responsible parties accountable for areas that still require critical improvement.

Much effort has been made to restore Chesapeake Bay and much success has been achieved, but overall, our goals have still not been achieved. From the North Sea and the English Channel, to the Mediterranean Sea, to the Baltic Sea in Europe to the Gulf of Thailand, to the Bo Hai in northern China and the Seto Inland Sea in Japan, we are all facing similar challenges due to impacts of human activities and we all have much to learn from each other. At EMECS9, we are looking forward to sharing what we have learned in the Chesapeake Bay and learning more about the successes and how these challenges are being addressed by restoration efforts in other parts of the world.



## Sato-umi Workshop in EAS Congress 2009

**Workshop Theme: Indigenous Approaches to Habitat Protection and Restoration:  
Experiences in Sato-umi and other Community Initiatives**

**Date:** November 24 2009 10:30~18:10

**Location:** Philippine International Convention Center in Manila



The 3rd East Asian Seas (EAS) Congress, held to discuss action strategies for sustainable development in the ocean regions of East Asia, was held November 23 - 27, 2009 at the Philippine International Convention Center in Manila. The Congress was sponsored by Partnerships in Environmental Management for the Seas of East Asia (PEMSEA).\* PEMSEA and the International EMECS Center jointly sponsored a Sato-umi Workshop at the Congress.

Sato-umi is a new concept in coastal management, one whose goal is the achievement of coexistence between human society and coastal zones. In the past, the International EMECS Center has sponsored or cosponsored several sessions and workshops on the Sato-umi concept. These included the 5th session at EMECS 7 (held in Caen, France in 2006), entitled "New Concepts and Innovative Experiences in Coastal Management.," a presentation entitled "Current Status and Future Prospects of Coastal Seas in East Asia" at the EMECS International Seminar (held in Kobe in 2007), and the 7th session at EMECS 8 (held in Shanghai, China in 2008), entitled "Sato-umi Workshop." In this way, the International EMECS Center has worked to provide a forum to encourage academic discussion and publicize the Sato-umi concept. This workshop was planned as a further step in that effort.

The Sato-umi Workshop was held on Tuesday, November 24, the second day of the Congress, from 10:30 a.m. to 6:10 p.m. The workshop was divided into three parts and was attended by approximately 100 persons. The overall moderator was Osamu Matsuda, Professor Emeritus of Hiroshima University.

Part 1 was chaired by Professor Tetsuo Yanagi of Kyushu University and featured seven presentations on the Sato-umi concept and examples of Sato-umi creation activities in Japan. Professor Yanagi once again emphasized the necessity for the creation of Sato-umi environments that achieve high biological productivity and biodiversity through the involvement of local residents in order to achieve the restoration of coastal waters. The case studies featured reports from Nanao Bay in Ishikawa Prefecture, the Fushino River estuary in Yamaguchi Prefecture, Ago Bay in Mie Prefecture, the Ako Coast in Hyogo Prefecture, Tokyo Bay and so on.

Part 2 was chaired by Ann McDonald, director of the Ishikawa/Kanazawa Operating Unit of the United Nations University Institute of Advanced Studies. This part featured nine presentations on case studies of coastal zone environmental management in East and Southeast Asia that are in keeping with the Sato-umi concept. The reports presented case studies from the Andaman Sea and Gulf of Thailand in Thailand, the island of Bali in Indonesia, the city of Danang in central Vietnam, the western coast of the Malay Peninsula in Malaysia, the Muan wetland on the west coast of South Korea, and three areas in the Philippines: the northern part of Mindanao, the island of Panay and the Batan Islands off the northern tip of the island of Luzon.

Part 3 featured a wrap-up panel discussion coordinated by Professor Matsuda on the Sato-umi concept and Sato-umi activities. The three panelists were Professor Yanagi, Director McDonald, and Professor Ferrer of the University of the Philippines. The speakers from Part 1 and Part 2 and the attendees also participated in a spirited exchange of views.

The wrap-up meeting concluded that there was agreement on the following points:

- (1) In order to preserve and manage organism habitat environments and ensure the sustainable use of coastal and marine resources, it is important to build a new model for management that combines various traditional techniques that have deep roots in the local community with modern science and technology, based on a partnership that includes the local community, researchers, private sector companies, local governments and so on.
- (2) To ensure the success of this type of integrated management, it must include comprehensive management of the material flow from mountain, field and river to the sea.
- (3) The Sato-umi concept is consistent with this approach.

\* A regional project of the Global Environment Facility established in 1994 with the aim of ensuring sustainable development in the ocean areas of East Asia. The project has shifted to the stage of implementation by the United Nations Development Programme (UNEP) and the International Maritime Organization (IMO). Currently 14 East and Southeast Asian nations including Japan are participating in the project, in addition to the International EMECS Center and other non-governmental international organizations.

## EAS Congress SATO-UMI WORKSHOP PROGRAMME

- Chair: Professor Osamu Matsuda  
Prof. Emeritus, Hiroshima University
- Co-Chair: Professor Tetsuo Yanagi  
Professor, Kyushu University
- Co-Chair: Director Anne McDonald  
United Nations University, Institute of Advanced Studies

### Part 1: The Sato-umi concept and its application in Japan: lessons and application

- Chair: Prof. Yanagi
- Co-chair: Prof. Matsuda
- P1-01 Concept and practices of Sato-umi in Japan and lessons learned (Tetsuo Yanagi)
- P1-02 Concept and practices of Satoyama Sato-umi Sub-Global Assessment in Japan (Anne McDonald)
- P1-03 Case of Fushino River Estuary Initiatives in Japan (Masao Ukita)
- P1-04 The Ago Bay Management Initiatives in Japan (Miyuki Maegawa)
- P1-05 Potential of urban wetland as a target of habitat restoration and management (Keita Furukawa)
- P1-06 Community-based sea grass bed restoration and management in Seto Inland Sea: Case of Akou Coast in Japan (Osamu Matsuda)
- P1-07 Supporting activities for the creation of Sato-umi in Japan (Yasuhiro Muroishi)

### Part 2: Indigenous knowledge and community based approaches in protecting, restoring and managing key habitats

- Chair: Director McDonald
- Co-chair: Prof. Yanagi

- P2-01 Implementing an ecosystem approach to coastal management through community based organizations: An example from the Andaman coast of Thailand (Somsak Soonthornawaphat)
- P2-02 Implementation of Tri Hita Karana, a local wisdom of Bali to maintain agricultural resources (Dewa Ngurah Suprpta)
- P2-03 Developing a mechanism of mobilization of various human and material resources in planting, taking care and protecting urban green trees in Danang city (Truong Cong Hai)
- P2-04 Community Involvement in Coral Reef Restoration Projects in the Gulf of Thailand (Thamasak Yeemin)
- P2-05 Evaluation on artificial reefs in West Coast, Peninsular Malaysia (Llilisyani Ismail)
- P2-06 Community-based management approach at work in the Muan Wetland Protection Area: Changing perception, changing practice and changing policy (Ji Young Jang)
- P2-07 When the cradle falls: A case of management failure in a community marine reserve in southern Philippines (Asuncion Bina-de Guzman)
- P2-08 Conceptual framework of organizing communities for effective mangrove management (Josephine P. Savaris)
- P2-09 Indigenous approaches to access, control and protection of coastal resources: A review of some Philippine Experiences (Elmer Ferrer)

### Part 3: Discussion panel:

Interactive session/wrap-up: Institutionalizing community-based efforts in habitat protection, restoration and management within an ICM framework

- Chair: Prof. Osamu Matsuda
- Panelists: Prof. Tetsuo Yanagi, Director Anne McDonald, Prof. Elmer Ferrer

Please see the details in EMECS home page.

Address <http://www.emecs.or.jp> → Publications

# EMECS - MEDCOAST Meeting Session

The International Conference on the Mediterranean Coastal Environment (Medcoast) is an international conference devoted to the environmental management of the Mediterranean Sea, the Black Sea and other enclosed coastal seas. Medcoast has been held since 1993, and Professor Erdal Özhan, a member of the Scientific and Policy Committee, played a central role in its establishment. In November 2009, the 9th Medcoast conference was held in Sochi, Russia. From the International EMECS Center, Professor Masataka Watanabe, Chair of the Scientific and Policy Committee, attended the conference and gave a presentation on the significance and future development of EMECS Conferences.

## At the Medcoast Conference in Sochi, Russia

**Masataka Watanabe**

**Chair, Scientific and Policy Committee, International EMECS Center**

November 11, 2009. We boarded a 12:05 p. m. flight from Narita International Airport and flew to Vienna, where we changed planes and flew to Sochi, Russia, a city on the Black Sea, where we arrived at a little after 3:30 a. m. on November 12. It was after 5 by the time we arrived at our hotel and tumbled into bed.

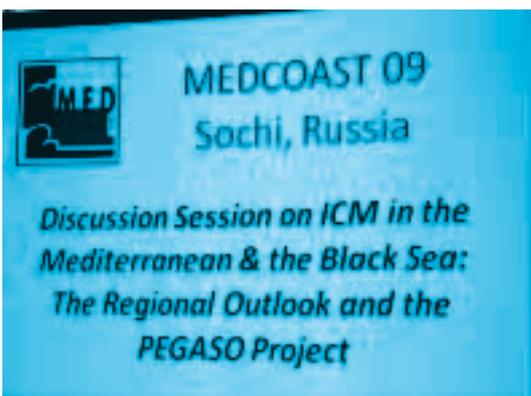
The hotel, the SPA Hotel Belarus, was also the venue for the Medcoast Conference. The spacious hotel complex included both accommodation and conference facilities and so forth. In Vienna, where we had changed planes, the temperature was a chilly 6 - 7° C, but in Sochi it was quite warm (17° C) and the view of the Black Sea stretching before us was spectacular.

There is a low-temperature sulfur hot spring in Sochi. That and the fact that it is warm even in winter has made Sochi famous since ancient times as a health resort, where people can escape both the heat of summer and the cold of winter. The city has many sanatoriums where famous historical figures in the communist leadership such as Stalin once stayed. Prime Minister Putin also has a villa nearby.

Sochi also has theaters and art museums and so on. It is a quiet town with abundant greenery and a relaxed atmosphere. There are steep mountains to the rear covered with good quality snow. Sochi has been selected as the site of the 2014 Winter Olympics, and the entire city is in the midst of a construction boom.

At the EMECS - MEDCOAST Meeting session that had been set for 5:30 to 6:30 p. m. on the 12th, I gave a PowerPoint presentation to primarily Medcoast-related personnel regarding past EMECS conferences, including details of the host countries, sponsoring organizations, number of participants, major themes and so on. I also announced that EMECS 9 will be held in Baltimore, U.S.A. However, the main reason that I was eager to attend the Medcoast Conference was to check out the venue as a candidate for the next EMECS conference to be held after EMECS 9 in Maryland in 2011. Inquiries regarding the desire to hold EMECS 10 have yielded proposals from three countries: Turkey (either in Istanbul or near Professor Özhan's university), Ukraine (in Odessa, the resort city that has a warm climate and is located on the Black Sea), and Russia (in St. Petersburg, the city founded by Peter the Great that has developed as Russia's premier city of culture). All of these locations are to be studied as candidate sites for future EMECS conferences. A dinner party was held following the closing ceremony on the 13th. It was a lively event that featured both old and new songs of Russia.

At 2 a. m. on the following day, the 14th, we headed for the airport. While we were waiting after finishing the check-in and embarkation procedures, there was apparently an incident in which Russian planes were scrambled in Russian airspace, and there was an announcement that foreign aircraft were grounded. Our Austrian Airlines flight was canceled, so we hastily began the procedures to switch to an Aeroflot flight. But only the domestic reservation system was operating, and checking in for international routes was so congested that it took the staff more than 30 minutes to complete the procedures for each passenger. There were more than 90 foreign passengers, and we had to wait in line for hours. But at last we were able to fly to Moscow, where we took a connecting flight back to Japan.



**JICA Training Report****for FY 2009: Enclosed Coastal Sea Water Environment Management Course**

In economically developing countries, progressive development and the concentration of population in coastal areas and so on are altering coastal zones. There is an urgent need to implement various policies in these countries to preserve the environment and ensure the appropriate use of enclosed coastal seas, which are particularly vulnerable to pollution. To help resolve these problems, the International EMECS Center has been commissioned by Japan International Cooperation Agency (JICA) to conduct training for midlevel government administrators from developing countries, and this training is being implemented as one of the Center's most important projects.

These training sessions have been conducted annually since 1990 and, as of 2009, had been attended by 135 administrators from 29 countries. In FY 2009, the training program was held from August 23 through October 31 for seven central and regional government administrators and engineering officials from Cote d'Ivoire (Ivory Coast) and Mexico.

The training focused on experiences and technologies relating to environmental improvement in the Seto Inland Sea, which in the past had sustained serious environmental pollution. At the end of the training program, the trainees used the knowledge they had gained to put together an action plan to resolve environmental problems in their own countries. In the future, the latest data on integrated coastal management and so on will be incorporated to provide even more valuable training.

Reports submitted by the trainees after they had returned to their countries are shown below.

**THE ACTUAL SITUATION OF ENCLOSED COASTAL SEAS OF MEXICO**

**Zoila Yolanda PEREZ PELAYO**

**State Attorney General for the Environmental Protection,  
The Environment Ministry for Sustainable Development**

Mexico is made up of 32 States 17 of them have front littoral. The coastal and marine atmosphere, with surface of 11,592.77km of the coast, continental platform of 394,595 km and one total extension of 2,946,885 km<sup>2</sup> of marine region, that forms an important base for the economy and national well-being. It presents a great variety of climatic and hydrologic regimes in the coastal region, diversity of ecosystems, with 130 coastal lagoons.

Mexico does not own enclosed seas like but littoral seas that they are isolate in the edge of the oceans, forming great recesses in the flanks of the continents. Their limits are defined by ends outposts of the earth surround them, and can be subdivided in areas characterized by the coastal accidents, like the Gulf of California, Gulf of Mexico and Banderas Bay. The behavior of these seas mainly resembles to the enclosed seas, the one of the Gulf of California, by the close communication that it has with the ocean, nevertheless, this behavior is not independent due it's determined by the one of the oceans, put under that them a perpetual servitude; they impose its tides, their calm and their furies to them. Also they are influenced by the Earth, sends storms to them, as well as the volume of the rivers.

The highest index of productivity in Mexico are those of the Gulf of California, with 67% of the national capture, one of the five marine ecosystems with greater productivity and biodiversity of the planet, provides enormous benefits to us and has a great economic and cultural importance for our country; with great variety of habitats of mangrove, swamps, coastal lagoons, rocky and coralline marshes, reefs, as well as thermal water chimneys, giving rise to a great number of endemic species (near 30%). It concentrates a 93% of the shrimp culture and a 95% of the farms shrimp fishers of the country; the fishing grounds of shrimp, sardine, tuna and squid produce 500 thousand tons at year. The fishing activity generates more than 50 thousand works, with 250 plants processors. The tourism of the region generates income by 2 billions of dollars, corresponding to 10% of the national total. The Gulf of Mexico contributes with 22% of fishing capture (Statistical yearbook of Fishing 1991-2001). In the case of the red tide most frequently appears during spring and summer in the Pacific Ocean and the Gulf of Mexico.

On the other hand, the mangrove ecosystem's in Mexico is distributed in both coasts of the country; in the coast of the Pacific and the coast of the Atlantic (Gulf of Mexico), the four species more common in Mexico are: *Rhizophora mangle*, *Laguncularia racemosa*, *Avicennia germinans* and *Conocarpus erectus*. Many areas of mangrove in this country have been deforested throughout the years to yield the passage to agriculture, the cattle, aquiculture, the urbanization and the tourist development. Source: The FAO

The environmental management of enclosed coastal seas training course, was complete with the subjects that were distributed and interesting, the opportunity to share ideas customs, traditions and to know a little bit of culture aspects as well as the technology that are used for investigation, and the interest that has for the development of different productive projects to benefit of the countries with low resources and the culture that Japanese people have, for the conservation of the environment, and the idea to develop projects completed the main task of the course.

**Hector VERGARA VILLAR**  
**Technical Analyst**

**General Directorate of Terrestrial Maritime and Coastal Environment,  
Secretariat of Environmental and Natural Resources**

Mexico has an estimated population of 111 million people, with an area of around of 1,964,375 km<sup>2</sup> of which 10,600 linear kilometres are of coastline.

In the last years, Mexico and many other countries have experience pollution problems caused by irrational exploitation of natural resources along their coastline, causing diseases affecting not only fauna and flora, but also the public health.

Due the characteristics of economic growth and demand of services to be provided, Mexico has faced the need to develop new policies of soil's use and enacted new laws to prevent pollution and reduce the negative effects, mainly , focused on land planning studies and environmental impacts assessments.

Efforts have been conducted by authorities and society to find solutions to reduce the problems linked with the main activities that are causing negative effects on the maritime ecosystems, such as, policies to protect and to preserve important and fragile ecosystems however no technical documents have been elaborated to manage the natural resources and keep them productive in a sustainable way.

Part of this efforts have been realized by society participants, such as universities, institutes, research centres and private companies which have studied the environmental characteristics of the natural resources along the coastal shore to understand the relationship between activities, conditions and mechanisms of pollution.

It is important to emphases that the studies being conducted have actually provided valuable information to establish conditions and standards that allow reducing impacts on the maritime ecosystems. The environmental management of enclosed coastal seas training program, coordinated by the EMECS Centre, is an example of the importance that the information obtained by the scientific research plays a key role in the design of strategies to solve the problems that affect natural resources in the coastal shore.

The training course is well structured, sessions, practice, contents and time are arranged in way that is easy to analyze the relationship between activities, factors, participants in Japan's experience dealing with environmental problems in enclosed coastal seas, particularly, in Seto Inland Sea.

Finally, the international cooperation offered by Japanese International Cooperation Agency (JICA) and the EMECS Centre is also a new approach to share experiences acquired facing the new challenges in solving the environmental issues nowadays it has been taking place all over the world.



## Report from Cote d'Ivoire

**Pouymon Marcellin FLAN**  
**Supervisor of Depollution Section,**  
**Central Laboratory of Environment,**  
**Cote d' Ivoire Antipollution Centre,**  
**Ministry of Environment, Waters and Forest**

Located in West Africa between Ghana and Liberia, and bordering right on the Atlantic Ocean, my country, Cote d'Ivoire, is a developing nation.

Today, we are confronted with significant demographic growth, which has resulted in heavy urbanization and industrial development. Our country now faces a serious problem regarding waste management, which is destroying its tourism industry, its public hygiene, and our national economy. Some canals are blocked, the surface water is becoming polluted, and there are real problems with solid waste management, air quality management, and forest resource management. At present, there are no fish in the Cocody Bay (Ebrie Lagoon) due to the production of sulfide from the bottom layer.



The Cocody Bay (Ebrie Lagoon)

In spite of the efforts made by the Ivorian government over the last ten years, there has been a lack of sustainable solutions. In view of this national problem, the government finally organized a meeting with a number of local and international experts and organizations on Wednesday, February 3, 2010 to find solutions to the problem of pollution in Ebrie Lagoon. After returning home, I handed my report to my director, in which I formulated some recommendations, and during this forum my organization submitted some proposals based on the training program we had undergone in Japan. We talked, for example, about the reinforcement of laws relating to standards; the treatment of wastewater from industries and households before flowing into the Ebrie Lagoon; environmental education; changing polluted bays into spaces of entertainment for tourism (e.g. for canoeing, kayaking, surfing). I hope very

much that the recommendations we made based on our Japan experience will be taken into consideration.

In order to help developing countries to reinforce the capacity of their workers with regard to sustainable development, Japan offers many training programs through the Japan International Cooperation Agency (JICA). This year for example, the program covered many fields such as health, computer sciences, and environmental management. The EMECS training course, The Environmental Management of Enclosed Coastal Seas, was elaborated on by experts in their field, such as our course leader, Dr. Osamu Matsuda, Professor Emeritus, Hiroshima University. This course is very effective. We are now able to write our own action plans to solve environmental problems by ourselves.

Both the Japan International Cooperation Center (JICE), who have been assigned as course coordinators by JICA, and EMECS coordinators are experienced, strict, yet very kind. The lecturers are excellent. The combination of lectures and sites visited is ingenious, as it allows us to see in reality just how broad Japanese experience in the environmental management of the Seto Inland Sea is. Perhaps the most important thing we learned was the environmental education given at primary school, which is the basis of sustainable development.

In conclusion, I think that if the whole of Africa learns from and follows the Japanese example, our future will be much healthier.

Arigato gozaimasu.



Training at the EMECS training program

## Science and Policy Trends (4)

## Promoting scientific outcomes from EMECS activities as well collaboration between science-based agencies

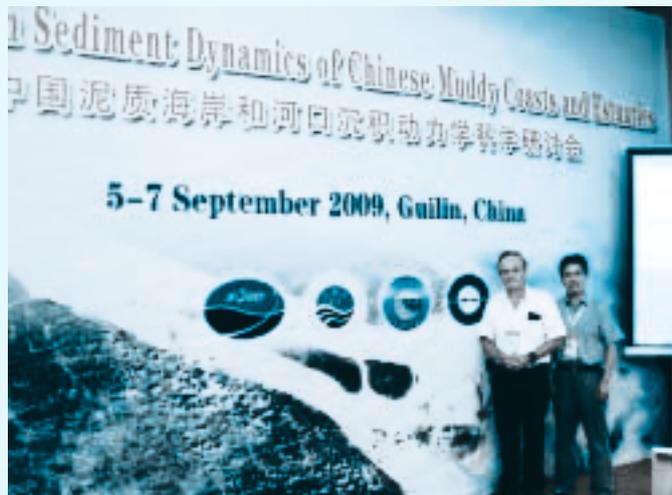
Eric J. A. WOLANSKI

Leading Scientist, Australian Institute of Marine Science (Australia)

Humanity in southeast Asia is facing tremendous challenges in how to deal with estuaries and the coastal zone faced with increasingly complex issues dealing with changes in the water circulation, the geomorphology, the ecology, and their ecosystem services, as a result of human influences. EMECS attempts to help provide solutions to these problems by promoting a dialogue between biophysicists, social scholars, government officials, politicians, and industry representatives. Two relevant outcomes from EMECS activities are underway.

The first one is the outcome from the 8th EMECS (Environmental Management of Enclosed Coastal Seas) International Conference held in October 2008 in Shanghai, China. Professors Zhongyuan Chen (China), Tetsuo Yanagi (Japan), and Eric Wolanski (Australia), who are members of EMECS Scientific Planning Committee (SPC), have edited a special issue of the scientific journal "Estuarine, Coastal and Shelf Science", and this issue has now been published as Volume 86, Issue 3, Pages 313-534 (10 February 2010). The 28 papers selected for this special issue focus on the practical goals of the conference, namely 1) environmental vulnerability under global warming setting, 2) integrated coastal zone management and future perspective; 3) water quality, total load controls and management, and 4) ecological, hydrological, geochemical and biological processes, and 5) large river input into the estuarine seas - processes and response. These papers provide important lessons and have profound implications. Can these modified estuaries continue to absorb the loads of nutrients and heavy metals that are ever increasing as a result of human influences? At what rate will the decreased SSC lead to coastal retreat? How will global warming, and/or sea level rise, and/or ocean acidification, and/or introduced species change the ecology of these estuaries and the coastal waters? Will these estuaries and coastal waters keep providing vital ecosystem services including food to an ever increasing human population?

A second EMECS outcome resulted from the workshop on 'Sediment Dynamics of Chinese Muddy Coasts and Estuaries' held in September 2009 in Guilin, China. The workshop was organized by the State Key Laboratory of Satellite Ocean Environmental Dynamics, China, and sponsored by EMECS and the IGBPS's Land-Ocean Interactions in the Coastal Zone (LOICZ). Professors Zhongyuan Chen (China) and Eric Wolanski (Australia), who are EMECS SPC members, attended the symposium. The thematic presentations focused on: 1) Observation and instrument development; 2) Modeling for sedimentary processes; 3) Fluid mud transport and behavior; 4) Sediment effect on biogeochemical processes, and 5) Ecological and socio-economic impacts. Zhongyuan Chen presented the comparative pattern of heavy metals and eco-health between the Nile delta and the Yangtze estuary, and warns of significant degradation threats in the mega-estuaries of China from recent huge anthropogenic impacts as well as climate change. Eric Wolanski made the keynote presentation on advances in physics-biology links in fine sediment dynamics and its impact, and he also presented the new LOICZ budget methodology for nutrients in muddy estuaries. The discussions highlighted the LOICZ and EMECS-related targets and concepts, i.e. the need to get away from the traditional focus on the biophysics of estuaries in order to focus also on understanding and quantifying the socio-economic values of estuaries and wetlands and watershed-scale management in China. An important outcome is that the Chinese scientists have established a network for collaboration and, as we speak, they are developing a proposal for a large, multi-institution and multi-disciplinary proposal for a 973 Project to study the dynamics and the eco-health of Chinese muddy mega-estuaries.



Professors Zhongyuan Chen (right) and Eric Wolanski (left) are EMECS SPC members and attended the September 2009 Guilin workshop on 'Sediment Dynamics of Chinese Muddy Coasts and Estuaries'.

## On the Inauguration of the EMECS Science and Policy Committee

We received the following Inauguration address from new the Scientific & Policy Committee members.

**Hisakazu Kato**  
**Professor, Faculty of Law, Teikyo University**  
**Professor Emeritus, Nagoya University, Japan**

I am not an expert in physics, chemistry or biology or any of the other natural sciences. However, when I worked for the Ministry of the Environment as Assistant Manager of the Water Quality Management Division of the Water Quality Bureau, I became involved in overall water quality issues, particularly environmental issues and the water quality of enclosed bodies of water. At that time, eutrophication of enclosed bodies of water, especially of lakes and marshes, had become a major issue and I worked on legislation for water quality management.

Initially, rather than narrowly concentrate on the water quality of lakes and wetlands, to also preserve the natural environment around lakes and wetlands, I was involved in drafting "Environment Lakes and Marshes Preservation Act". During conferral and coordination with the ministries concerned, every ministry was strongly opposed to a comprehensive lakes and marshes preservation act that included provisions for regulating land use. In the end, an act focusing on the water quality of lakes and wetlands was presented to the Diet. It came into effect, at long last, in 1984. Later, after I had left the Ministry of the Environment, it was deeply gratifying to see the earlier statute revised in 2005, when necessary regulations to establish the Lakeshore Environment Preservation Zone Scheme were enacted with the intention of preserving green spaces and other natural environments around the shores of lakes.

I was even more deeply moved by experiences, long before this, when I was invited by the U.S. Department of State to go on a fact-finding tour that covered all kinds of places in different regions of America. Lasting about a month, the tour enabled me to visit Chesapeake Bay and San Francisco Bay, which are models of coastal management. It is heartening to recall exchanging opinions with members of the conservancy committees, resident groups, and NGOs that look after these famous places.

I would be delighted if, even with these modest credentials, I could be of service to the EMECS Science and Policy Committee.

**Kaori Fujita**  
**Professor Momoyama Gakuin (St. Andrew's) University, Osaka, Japan**

How do you do?

My fields of specialty are environmental economics, local government finance and public finance. My main research focus is on the relationship between the environment and socioeconomics, specifically environmental policy and the cost burden. So far, I have been studying the so-called "environment tax," but recently my research has expanded from topics such as resource management fishing at Lake Saroma (Hokkaido), an experimental community roundtable conference in the Taihu Lake Basin (China), and a study of poverty and the environment in Guizhou Province (China), to also include a study of the forest and water resource environment tax being levied by local governments in Japan.

My relationship with the International EMECS Center dates back to the joint 3rd EMECS Conference (EMECS 97) and 7th Stockholm Water Symposium that was sponsored by the Center. This international conference was held in August 1997 under the theme, "With Rivers to the Sea: Interaction of Land Activities, Fresh Water and Enclosed Coastal Seas." I was able to give an oral presentation at the conference under the young researcher support program of the International EMECS Center. This was the beginning of my association with EMECS. At the time, I was a graduate student (holder of a research fellowship for young scientists from the Japan Society for the Promotion of Science). The opportunity to attend and give an oral presentation at an international conference through the support of the International EMECS Center was a profoundly valuable experience for my subsequent research, and in terms of deepening research exchanges, and it was an opportunity for which I am very grateful.

I plan to work hard to repay this kindness. I look forward to having a mutually rewarding association with you for many years to come.

**Peter Söderbaum**  
**Professor emeritus, ecological economics**  
**School of Sustainable Development of Society and Technology**  
**Mälardalen University, Sweden**

Water management cannot be separated from other policy issues in contemporary society. For this reason our mental maps in the form of theoretical and ideological perspectives have to be considered and reconsidered. As I see it, we have relied too much upon mainstream neoclassical economics and a related neoliberal ideology to the exclusion of competing perspectives. Economics research and education needs to be democratized and become more pluralistic. Also water professionals may need to take some steps away from technocracy towards democracy.

Success in water management depends largely on a willingness to reconsider policy and life-styles in non-water sectors of the economy. There are, as we all know, limits to the absorptive capacity of water ecosystems. In future EMECS activities, there need to be a focus on how water management can be improved by new policies in non-water sectors. This means for instance that pharmaceuticals need to be tested also with respect to their impacts on various species and ecosystems.

### Facts about Peter Söderbaum

Peter Söderbaum is an economist and social scientist currently connected with Mälardalen University, Västerås, Sweden, and its Academy of Sustainable Development of Society and Technology. He has previously held various positions at Uppsala University, the department of economics and the department of business management and later the department of economics, Swedish University of Agricultural Sciences, Uppsala. 1993-2005 he was a member of the scientific committee of Stockholm Water Symposium.

## Announcements from the International EMECS Center

### EMECS International Forum

Sato-umi, a new concept in coastal zone environmental preservation from Japan, is gradually spreading around the world. In October 2010, the tenth Conference of the Parties to the Convention on Biological Diversity (COP 10) will be held in the city of Nagoya, Japan. To take advantage of this opportunity, an EMECS International Forum was held in the city of Kobe, Japan, on February 10, with the theme of "Sato-umi and Biodiversity." The Forum featured reports on trends relating to Sato-umi and biodiversity in Japan and other countries around the world, as well as case studies of activities in Japan, Thailand and the Philippines. The Forum was attended by more than 120 persons and provided the opportunity to consider both biodiversity itself and how to involve themselves in improving biological productivity. A report on the Forum is currently being prepared, and when it is ready it will be made available on the International EMECS Center website and an announcement will be issued in the email magazine.

### 8th EMECS Conference Report (English and Japanese editions) Now Available.

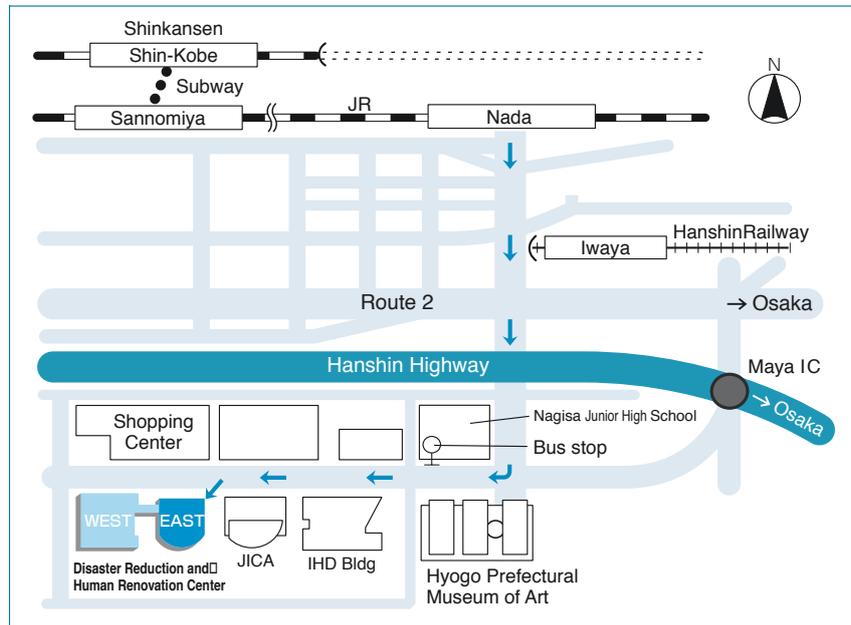
A report on the 8th International Conference on the Environmental Management of Enclosed Coastal Seas (EMECS 8), held October 27 - 30, 2008, has been published. The report is also available in PDF form at the International EMECS Center website:  
[http://www.emecs.or.jp/emecs8/index\\_e.html](http://www.emecs.or.jp/emecs8/index_e.html) (English)  
<http://www.emecs.or.jp/emecs8/index.html> (Japanese)

### New Office Location

As of January 9, 2010, International EMECS Center has a new address. The email address and telephone and fax numbers have not changed. Please update your records.

#### New Address:

DRI East Bldg. 5F  
 1-5-2, Wakinohama-kaigandori,  
 Chuo-ku, Kobe 651-0073, JAPAN



### Call for Articles

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

### International EMECS Center

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