

EMECS

No. 26

NEWSLETTER

"Current Status and Future Prospects of Coastal Seas in East Asia" EMECS International Seminar < Report >

The International EMECS Center held an international seminar called, "Current Status and Future Prospects of Coastal Seas in East Asia" at JICA (Japan International Cooperation Agency) Hyogo International Center on February 16, 2007.

Since the 8th International Conference on the Environmental Management of Enclosed Coastal Seas is scheduled to be held in Shanghai, China in October, 2008, we chose the theme of the seminar by focusing on East Asia, especially China, South Korea, and Japan, and the environmental issues concerning the coastal environment. The environmental degradation of sea areas such as eutrophication in the coastal seas caused by rapid economic growth and the use of marine resources including fishery resources and energy resources has become a big issue in East Asia.

The special lecture focusing on the resolution of Japan's territorial and maritime disputes was conducted in the first part of the seminar. Then, a panel discussion to discuss about the necessity and development of Integrated Coastal Management (ICM) in East Asia was held in the latter part.



Program

Special Lecture

Theme : "Resolving Japan's Territorial and Maritime Disputes with China, Korea and Russia"
Lecturer: Thomas Schoenbaum, Ph.D., J.D.
Dean Rusk Professor Emeritus, University of Georgia

Panel Discussion

Theme : "Development of ICM (Integrated Coastal Management) in East Asia"
Chair : Masataka Watanabe,
Prof. Dr. Keio University, Japan
Panelists: Zhongyuan Chen,
Prof. Dr., East China Normal University, China
Hi-Il Yi,
Dr. Head/Principal Research Scientist,
Korea Ocean Research & Development Institute (KORDI), Korea
Osamu Matsuda,
Prof. Dr., President, The Research Institute for the Seto Inland Sea (RISIS), Japan
Erdal Özhan,
Prof. Dr., Chair, MEDCOAST, Turkey

Special Lecture

RESOLVING JAPAN'S TERRITORIAL AND MARITIME DISPUTES WITH CHINA, KOREA AND RUSSIA

Thomas Schoenbaum, Ph.D., J.D.
Dean Rusk Professor Emeritus, University of Georgia

Japan shares two coastal seas, the East China Sea and the Sea of Japan, with neighboring countries, China, Korea and the Russian Federation. The United Nations Convention on the Law of the Sea (1982), which all four countries accept, extends the jurisdiction of coastal states to 200 nautical miles of offshore ocean lands and waters. However, where the coastal waters claimed under this rule by coastal states overlap, the states concerned should by agreement delimit their maritime boundary using the line of equidistance as a beginning point in arriving at an equitable solution to the boundary problem. Japan has so far been unable to settle its maritime boundaries with its three neighbors.



My study of these disputes, which will be published in book form in

2008, advocates the solution of these disputes on the basis of three principles: Peace, Justice and International Cooperation.

Peaceful settlement means that the means for settling the disputes should be negotiation or submission of the disputes to international mediation, arbitration or adjudication.

The principle of Justice means that international law should be the substantive basis for settlement of the disputes.

International cooperation means that the disputes should be settled, not by a one-off agreement, but by initiating and maintaining a process of cooperation between Japan and each of its neighbors so that information can be shared and the valuable offshore resources at issue can not only be exploited but conserved and the coastal environment protected.

With respect to the East China Sea, settlement of the dispute with China means drawing a maritime boundary that is a compromise. Such a boundary line should favor Japan to the south of the disputed area in order to accommodate Japan's just claim to the Senkaku Islands, which rightfully belong to Japan. But in the north, the maritime boundary line should favor China because of its greater proportion of coastal area and greater popula-

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tion. In addition, Japan and China should agree on joint development of the natural gas and other resources of the disputed portion of the East China Sea as well as joint measures to protect the environment of this area.

With respect to the Sea of Japan, international law favors the recognition of Korean sovereignty over the disputed territory of Takeshima (Dok Island). Because Takeshima is what is called in the UN Convention on the Law of the Sea a "rock", it is only entitled to a 12 mile territorial sea, so that the maritime boundary between Korea and Japan can be drawn taking this into consideration. In addition, Japan and South Korea should agree to establish a cooperative zone of joint administration in the Sea of Japan in order to facilitate fishing by nationals of both nations and to guarantee the protection of the marine environment.

Japan's dispute with the Russian Federation centers on the occupation by Russia of the northern territories of Etorofu, Kunashiri, Habomai, and Shikotan. These four islands were occupied and annexed by the Soviet

Union at the end of World War II. Although international law favors the return of these islands to Japan, the Russian Federation is willing to transfer only two, Habomai and Shikotan, to Japanese sovereignty. A possible cooperative solution to the impasse over this matter, which has prevented the signing of a treaty of peace between Japan and the Russian Federation, is for the two nations to come to a compromise cooperative agreement. The best such agreement would be a joint declaration by both nations to designate the two disputed islands as a World Heritage Site and an International Park to be enjoyed by nationals of both countries as well as by visitors from around the world. Japan and Russia should also agree to exercise joint sovereignty and joint administration of the International Park covering the two disputed islands.

By following these principles of peace, justice and international cooperation, fair and lasting solutions can be found to enhance Japan's relations with its neighbors as well as to solve political problems over the administration of Japan's coastal seas.

Panel Discussion

Integrated Coastal Environmental Management: linkage to the upper drainage basins

Zhongyuan Chen
Prof. Dr., Department of Geography,
East China Normal University

Coastal environmental degradation due to the impact of human activity has been rapidly increasing along the vast coast of eastern China as the economy has boomed over the past 20 years. This has become the focus of social attention, since human health is being affected through the food-chain, bringing about a critical and complex issue that hampers sustainable development. Extensive delta coast regions in China, closely associated with the Yellow, Yangtze and Pearl drainage basins, are turning into industrial and urban sinks that receive huge anthropogenic input carried by river discharge. For instance, heavy metals along the muddy Yangtze coast are highly concentrated in the upper tidal flats, especially around sewage outlets, and can be as much as two to three times higher than in adjacent areas. On the other hand, aquaculture and fishery on the muddy coast are helping the local economy to support people's daily life. Urbanization in the drainage basin has caused great changes in land-use over the past 20 years, yielding numerous domestic non-point pollution sources, especially inorganic pollutants that have been discharged into the river-coast water bodies. A hypoxia zone has been formed due to an excess of nutrients off the river mouth, where oxygen is less than 1-2 mg/l. This destroys healthy biological circulation and frequently leads to occurrences of red tides. Another coastal environmental issue in the Yellow River coast has been associated recently with insufficient freshwater from the upper drainage basin. Over-irrigation without reasonable planning for the region is a key issue. This has resulted in decreasing discharge and sediment load into the river mouth on the coast, leading to coastline erosion, where there is a heavy petroleum industry. Riverbed dry-up can reach over 260 days a year. Also, in the Pearl River delta, excessive sand mining in the estuary and in the upstream channel is leading to saltwater intrusion inland.

resource abuse should increase social awareness, although it is a long-term and painstaking task.

Global Environmental Problems and Discussion of Regional Solutions in Northeast Asia

Hi-Il Yi, Ph. D
Head/Principal Research Scientist,
Korea Ocean Research & Development Institute (KORDI)

Introduction

The subject of global problems, the related Korea ICM Program, and the conflict of environmental issues along the Korean coasts are all closely related to the philosophy and character of EMECS. Some have suggested that the future direction of EMECS should deal with global issues such as global climate change, while others have advocated returning to the starting point of when EMECS was established.

Global Climate Change and Regional Issues

Global climate change is one of the most important issues in the world today. An IPCC report published just two weeks ago, predicted that future climate change will have the effect of raising the sea-level 59 cm by about 2100 if we continue exploiting and abusing fossil fuels. Also, at the 2002 World Summit on Sustainable Development, Article 30 of the Johannesburg Plan of Implementation, emphasized the importance of ocean environments.

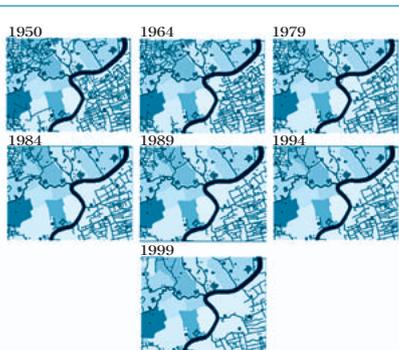
Two significant, key issues can be established for achieving the above. One is global climate change and the other is regional ocean and coastal systems. The two issues are interrelated and affect each other.

It must be emphasized that climate variability has an impact on all countries and on all strata of socio-economic activity at present. Since the ocean plays a major role in global climate change, the availability of high quality, long-term ocean and coastal data on the national and international level is a prerequisite. An integrated regional ocean and coastal system would offer numerous benefits if it is properly implemented for both global and regional climate studies.

For successful solutions to this present global issue, the problems need to be clearly identified in order to find solutions. To do so, practical plans need to be formulated with realistic goals that can be achieved in the near future within national and international communities.

The sharing and exchange of global ocean data is required within the international scientific and policy communities to assess and predict phenomena such as the impact of climate change and weather events such as coastal storms, natural and man-made hazards, and other activities such as fishing, recreational activities, marine transportation, coastal construction and development and other coastal and marine operations.

To solve global problems, regional cooperation is absolutely crucial. For instance, regionally in the northwest Pacific areas, to solve problems in the coastal areas of China, Japan, Korea and Russia, data taken from regional seas such as the Yellow Sea, the East China Sea and the Japan Sea must be shared to provide suitable boundary conditions for the coastal areas of the region. Thus, EMECS' Scientific and Policy Committee Meet-



Decreasing drainage networks over the last 50 year on the Shanghai coast due to rapid urbanization (1950 - 1999)

Taking the above into consideration, integrated coastal management that involves policy modification and the establishment and amelioration of laws, and which can be reinforced through communication among scientists, policy-makers and government officials, is urgently needed. Hard and soft environmental engineering should be combined to help long-lasting coastal management. Furthermore, public education about environmental conservation against natural

ings and Seminars are a trigger for regional cooperation as well as global collaboration. In other words, we are going in the right direction.

Ocean policies on both regional (including national) and global levels can be fulfilled, but first, the national interest of many groups - not only scientists, but also governments, congresses, and citizens - need to be persuaded and some groups must be educated. This can also contribute to the world community by having international conventions such as EMECS 8, which is planned to be held in Shanghai, China in 2008.

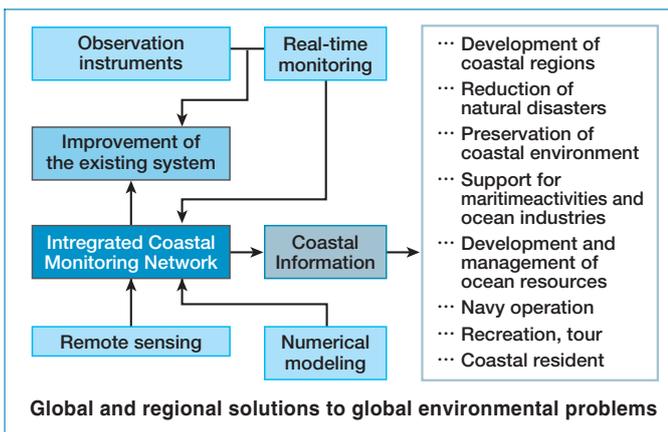
Finally, how can regional cooperation contribute to global ocean and climate change?

A strong network for exchanging marine environmental information should be built for coastal waters, and a strong desire developed for preserving healthy coastal environments, for finding answers to the challenge of sustainable use of marine resources, mitigating coastal hazards and ensuring safe and efficient marine operations is also needed. Regional seas surrounded by neighboring countries should be dealt with as one system and all the data in the region need to be shared through regional cooperation.

Conclusions

Globalization is a new trend in the world that is ensuring sustainable and responsible use of resources and management of ocean and coastal zones. The role of oceans and coasts deals with pollution, ecosystem interaction, global warming and so forth, and is why oceans and coasts are emerging as important issues.

National and international institutions should cooperate across a range of policy issues to ensure and support a move towards sustainable and responsible fisheries and oceans. Global and regional programs could provide an opportunity to highlight and tackle these issues in a coherent and productive way for humankind.



Development of ICM - New Activities in the Seto Inland Sea -

Osamu Matsuda Prof. Dr.
President, The Research Institute for the Seto Inland Sea (RISIS)

The Seto Inland Sea is the largest enclosed coastal sea in Japan. Some 30 to 40 years ago, it suffered from very serious pollution but, as a result of taking special legal action on the environmental conservation of the Seto Inland Sea, namely, by passing the "Law Concerning Provisional Measures for Conservation of the Environment of the Seto Inland Sea" ("Seto Inland Sea Law") enacted in 1973, which was made permanent in 1978 as the "Law Concerning Special Measures for Conservation of the Environment of the Seto Inland Sea," water quality has gradually been recovering ever since. The law includes an area-wide, total pollution load control system that depicts the concept of watershed management. As a result of this special legal action established more than 30 years ago in the Seto Inland Sea, the idea of ICM has already been partially realized.

New environmental policies contributing to the recovery of a sound environment were officially introduced in the Seto Inland Sea in 2000. These new policies formed the vanguard of a new law on the restoration of the natural environment enacted in 2002, not only in the Seto Inland Sea but in all areas of Japan, in which collaboration of a variety of groups such as local and national government, local residents, NGOs, NPOs, scientists,

fishermen, etc. was required in order to play a leading role in promoting individual restoration projects.

However, in general, official legal and administrative systems in Japan do not provide the means to achieve ICM, and Japan is therefore said to be lagging far behind international trends in promoting this. In order to improve on such an undesirable situation, a number of institutions and organizations such as the Academic Council in Japan and the Ocean Policy Research Foundation have proposed new legal and administrative systems to promote ICM, but despite all their efforts, little improvement has been made so far.

As far as activities to promote ICM are concerned, a new concept, the creation of "Sato Umi", has recently been proposed by the Research Institute for the Seto Inland Sea. In Japanese, "Sato Umi" refers to a coastal sea under the harmonization of sustainable, judicious use and the conservation of appropriate natural environments and habitat conditions. Compared with a coastal environment that has deteriorated, "Sato Umi" is thus able to provide a higher degree of biological diversity for habitat, and higher biological productivity for living resources. These characteristics of "Sato Umi" are based on a concept of ICM with particular reference to a combination of activities between land and sea such as the combination of "Sato Umi" and "Sato Yama (sustainable forest ecosystems, including human activity)."

The Research Institute for the Seto Inland Sea has made a proposal to the Governors and Mayors' Conference on the Environmental Conservation of the Seto Inland Sea for a new legal and administrative system based on the concept of "Sato Umi" that is designed to enhance the environmental restoration of the deteriorated coastal environment in the Seto Inland Sea. The Governors and Mayors' Conference is now promoting activities to review the "Seto Inland Sea Law." In a separate measure, the Bill of Fundamental Marine Law*, including the concept of ICM, is expected to clear the Diet shortly. As a result of these activities, a new era of ICM in Japan is expected to open up very soon both in the local area around the Seto Inland Sea and on the national level.

(* Fundamental Marine Law is enacted on July 20th, 2007)

Preparation and implementation of an Integrated Management Action Plan in collaboration with stakeholders for the Inner Gökova Bay and the Sedir Island within the Gökova Specially Protected Area

Erdal Özhan Prof. Dr.
Chairman, MEDCOAST

Turkey borders on three seas - the Mediterranean, the Aegean Sea and the Black Sea - and has an inland sea of her own,



the Sea of Marmara, with a total shoreline length in excess of 8,300 km. With the remarkable increase in the economic activities in the coastal zone, mainly since the 1970's, management of coastal areas has gradually gained in importance in Turkey. At the same time, diversification of activities and increases in their scale have caused conflicts of use on the one hand and degradation of coastal resources and environment on the other. To the classical uses of urbanisation, industrial development, agriculture, fisheries, navigation and transportation, new demands were added in the 1980's such as the development of tourism, secondary (holiday) housing projects, mariculture facilities, preservation and conservation efforts.

Turkey has developed significant management capabilities in each of the sectors that utilise space in the coastal zone, especially since the mid-1980's, starting with a series of new legislation to guide important coastal development activities such as tourism on the one hand, and to protect resources and the environment on the other. Despite several efforts dating back to the early 1990's, however, very little progress has been achieved to date

towards integration of management in coastal areas.

The Gokova project, which was initiated with generous funding provided by the SMAP III Programme (Small and Medium-term Priority Environmental Action Programme) of the European Community, was basically designed to address the issue of the integration of coastal management in Turkey. The most important goal of the project is to demonstrate integrated coastal management for a period of three years over an area at the tip of the Gokova Bay located on the southern Turkish shores of the Aegean Sea, with the participation of all stakeholders. The main coastal issues that are primarily dealt with in the scope of the project are:

- (a) Nature conservation and ecosystems protection (marine, freshwater, wetland, beach)
- (b) Management of archaeological sites
- (c) Coastal and marine tourism, recreation

- (d) Beach erosion, regeneration and management
- (e) Support for local subsistence fisheries
- (f) Coastal water quality and litter

The project, which started in early 2006, will last for a period of three years. The Project Coordination and Integrated Coastal Management Advisory Unit (PC&ICMAU), created in May 2006 and comprising 15 members, overlooks the day-to-day management of the coastal area covered by the project. At the same time, PC&ICMAU guides efforts for developing thematic management plans to address each of the six coastal issues dealt with by the project. These will contribute to the Integrated Coastal Management Action Plan for the project area, which is one of the important final products envisaged by the project. It is expected that the experience developed through the Gokova Project on a pilot scale will lead to several proposals for the establishment of institutions and legislation that will enhance Turkey's capabilities for nationwide integrated coastal management.

Panel Discussion: Summary

"Development of ICM (Integrated Coastal Management) in East Asia"

Masataka Watanabe
Prof. Dr., Faculty of Environmental Information,
Keio University

Professor Chen presented a paper on changes in land use, urbanization and agricultural production in the upper reaches of the Yangtze and Yellow River basins, global warming, and so forth, and presented case studies together with a wealth of data to show that these factors are having a major impact on the environment in terms of flooding, water pollution, saltwater intrusion and so on in downstream areas and estuaries. Dr. Yi noted that global climate change is increasing the occurrence of typhoons and damaging coastal zones, and emphasized the importance of Integrated Coastal Management (ICM) and the need for a regional program for China, Japan and Korea. Professor Matsuda evaluated the role played by the Law Concerning Special Measures for Conservation of the Environment of the Seto Inland Sea and stressed the need for comprehensive integrated coastal management of the Seto Inland Sea as a new framework. Professor Özhan presented case studies for the Mediterranean to point out the need to conserve archaeological site, rich natural environments, beach, channels, family-scale subsistence fisheries and so on, and also introduced examples of the creation of a structure for ICM advisory units.

Following these presentations, the speakers participated in a panel discussion. Using case studies from the Mediterranean as examples, Professor Özhan suggested that, in order to translate scientific knowledge into a form that decision-makers will find understandable, the multifaceted value of the environment -meaning the wealth that it provides to human society, its regulatory functions, its support functions and its cultural functions (ecosystem services) - was presented, with particular emphasis on its cultural

value. Professor Matsuda discussed the concept of the "Sato Umi" as an ocean rich not only in terms of the conservation of water quality but also living organisms and fisheries. He further stressed the importance of the role of the Governors and Mayors' Conference on the Environmental Conservation of the Seto Inland Sea and the Research Institute for the Seto Inland Sea as a framework for its achievement. However, the transfer to local governments of financial resources due to the reorganization of central government ministries and the promotion of local government control has increased local government autonomy and produced disparities between local governments in terms of efforts at coastal environmental management. For this reason, it was pointed out that many problems remain to be resolved before the Governors and Mayors' Conference on the Environmental Conservation of the Seto Inland Sea can possess the same level of authority as the national government as an entity conducting ICM of the Seto Inland Sea.

The need for ICM in the regional seas (the Yellow Sea and East China Sea) that represent a common issue for China, Japan and Korea was noted. However, due to the host of political issues that are still unresolved, such as disputes over territorial waters, the view was emphasized that, as an initial step, the creation of a joint framework for scientific research should be given priority as a promotional mechanism. In addition, the panelists agreed that the International EMECS Center should play an active and central role working toward the achievement of this kind of integrated management of regional seas that are essentially international in character.

We are grateful for this discussion between four panelists who have such a wealth of experience in the field of ICM, and which provided various suggestions for achieving a new approach to these challenges.



News:

International Workshop

EMECS International Workshop in Tianjin, China (EMECS 8 Preliminary Conference)

International EMECS Center will hold the International Workshop in Tianjin, China in November this year, as a preliminary conference to the 8th International Conference on the Environmental Management of the Enclosed Coastal Seas (EMECS 8) which is scheduled to be held from October 28 to October 31, 2008.

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| 1) Date&Time | November 23, 2007(Fri.) 10 a.m.~5 p.m. |
| 2) Venue | Tianjin, China |
| 3) Language | English (English/Chinese simultaneous interpretation available) |
| 4) Program | Theme: "International Workshop for Building Integrated Management of Catchment and Coastal Areas of the Yellow Sea and the East China Sea" |



Dr. Bengt-Owe Jansson

Professor Emeritus, Stockholm University

Rest In Peace

Dr. Bengt-Owe Jansson, one of Sweden's foremost marine ecologists and Professor Emeritus of Stockholm University and member of the International EMECS Center Scientific and Policy Committee, passed away on March 29, 2007. His wife, Ann-Mari Jansson, passed away of a sudden illness on January 13, 2007. The loss of these two renowned scientists is a blow not just for Sweden but also for the entire world, and condolences have come from friends and colleagues in Europe, the United States and many other places throughout the world. The website of Stockholm University where the Janssons taught reported the death of Dr. Bengt-Owe Jansson under the title "A Giant Has Passed Away!"

Profile of Dr. Bengt-Owe Jansson

- 1931 Born in Sweden
- 1958 Graduated from Stockholm University
- 1968 Obtained doctorate
- 1972 Professor, Stockholm University
(Member of the Royal Swedish Academy of Sciences)
- 1997 Professor Emeritus, Stockholm University

The Janssons attended EMECS 7, held in May 2006 in Caen, France, and it is unthinkable that both should have departed this world less than a year later. Dr. Bengt-Owe Jansson has been a key person in the EMECS world and has made major contributions to EMECS activities over a period of many years. Particularly at the time of the 3rd International Conference on the Environmental Management of Enclosed Coastal Seas (EMECS 97), held in August 1997 in Stockholm, Dr. Jansson worked tirelessly to liaise with relevant organizations within Sweden. Due in no small part to his efforts, EMECS 97 attracted numerous scientists, researchers and government representatives from all over the world and was acclaimed as a major success. The success of EMECS 97 also spurred the success of subsequent EMECS conferences.

Dr. Bengt-Owe Jansson's remarkable scientific knowledge also gave birth to the Department of Systems Ecology at Stockholm University. While promoting research activities as the driving force behind the development of the Asko Laboratory, a center for Baltic Sea research, since November 1994 Dr. Jansson also worked tirelessly for the development of EMECS activities, and he had been extremely active as a member of the Scientific and Policy Committee since its founding. He and his wife AnnMari were widely loved and respected in the EMECS community for their friendly manner. Now that they have departed this world, many memories of him & his wife attending EMECS conferences, seminars, etc. together passed before our eyes.

We sincerely mourn the loss of Dr. Bengt-Owe Jansson and Dr. AnnMari Jansson and we pray that they may rest in peace eternally.

It seems somehow more appropriate to call Bengt-Owe Jansson not as Professor Jansson but simply as "Jansson san (san: friendly respected expression in our way)". It illustrates his character better. I will leave it to specialists in the study of marine environments to describe his accomplishments. Here, I would like to introduce his unforgettable contributions to EMECS activities, and to commemorate his life and express my gratitude for his contributions.

This story dates back to the last day of the 2nd EMECS conference, held in Baltimore, Maryland in 1993. On that morning, I went to visit Jansson san at his hotel some distance away, as I had a sudden request to make. I asked him whether it might be possible to organize the next (3rd) EMECS conference in Stockholm. The announcement and invita-

In Remembrance: Dr. Bengt-Owe Jansson

Nobuo Kumamoto

Chair, Scientific and Policy Committee,
International EMECS Center

Former president, Hokkai-Gakuen University



tion to attend the next conference was supposed to be made at the closing ceremony that afternoon. Based on my experience of having previously made preparations for conferences eight times, I know this was an impossible request.

Normally, such proposals are supposed to undergo careful study by relevant organizations at least two years in advance before they can become a possibility. Asking someone to organize the next conference on the morning of the last day of the current conference is like asking someone to announce the next Olympics on the day of the closing ceremony of the games.

Actually, there had been opportunities to make exploratory inquiries and to propose Sweden as the venue for the 3rd EMECS conference at the preparatory meetings for the 2nd conference in Baltimore the previous year. However, we had decided to see how things went and thus were

effectively prohibited from asking. I think this was because at the time it was by no means certain that the EMECS conference would even continue to be held.

For some time, Jansson san listened to my request with his eyes closed. Slowly he raised his head and said "All right, let's go ahead!" Then he stood and extended his right hand, and we shook hands.

The real problems began afterward. Because we had announced Sweden as the next venue without obtaining prior consent, Jansson san, who was also a member of the Stockholm Water Symposium committee, held numerous discussions with relevant entities. It is not difficult to imagine the prodigious effort that it must have taken to reach an agreement to hold the EMECS conference as a joint conference with the Stockholm Water Symposium. Jansson san said nothing about it, but clearly his previous accomplishments in his home country, as well as his broad knowledge and sincere personality, were able to convince the relevant entities.

Soon thereafter, joint committees for both organizations were inaugurated. Jansson san had no direct responsibility and possessed neither discretionary power nor the right of decision, and at times he put up with being relegated to the role of a messenger. Still, he set up the joint committees and functioned effectively as a bridge between the two organizations. He was strongly supported in his

efforts by Dr. Lars Ulmgren, the chair of the Swedish Water Symposium secretariat, Professor Malin Falkenmark, the chair of the Executive Committee, and Jiro Nagata, Executive Director of the International EMECS Center. Still, there were often times when he was forced into an awkward position. It is due to these tireless efforts on the part of Jansson san that the 3rd EMECS conference, held jointly with the Stockholm Water Symposium, was such a success.

Subsequently, EMECS conferences have been held several times. Next year, the 8th EMECS conference will be held in Shanghai, China. If there had been no link in the chain leading to Stockholm conference following the Baltimore conference, the EMECS activities held up to now might never have been developed and achieved so well.

Jansson san cared for his wife AnnMari up until her death in January. In February, he attended a meeting of the Scientific and Policy Committee in Kobe, providing valuable advice about the direction of future EMECS activities before he passed away the following month. Now, I recall with fondness my last sight of his smiling face as he prepared to board the limousine bus to the airport to return home. Jansson san was a rare person, a true gentleman.

Bengt-Owe Jansson and EMECS A Personal Remembrance

Wayne H. Bell

Vice-chair, Scientific and
Policy Committee, EMECS

Senior Associate, Washington College, USA

I first met Professor Bengt-Owe Jansson on the telephone. The year was 1985, and I was then staff to a project, "Coastal Seas Governance," that was attempting to identify common strengths and weaknesses of restoration and conservation efforts around the world that would be relevant to the newly established Chesapeake Bay Program. When I reached him in Stockholm and explained the project, he replied without hesitation, "But that is so terribly important." He immediately joined Coastal Seas Governance, and, also without hesitation, participated in the project's site visits to Chesapeake Bay, Baltic Sea (which he and his associates organized so very effectively), North Sea, and Seto Inland Sea. As a founding scholar on the Scientific and Policy Committee, he became a major influence on the evolution of EMECS since its establishment.

Prof. Jansson's mantra was, "The Whole System." His time in the laboratory of Howard T. Odum connected him with the new field of systems ecology. That field incorporated humans as part of the system at a time when most ecologists were more interested in eliminating human influence in an attempt to understand how "natural" systems work. His systems' approach can be seen in the 3rd EMECS conference in Stockholm (1997), "With Rivers to the Sea," for which he and his associates designed a program of invited speakers, special sessions, and workshops that demonstrated how processes on coastal watersheds connect fresh water and marine ecosystems together. His advocacy of a systems approach to coastal seas policy was both pervasive and persuasive. You can see it in the EMECS Conference Declarations that emphasize economics and aesthetics as much

as they emphasize ecology. The very last meeting of the Scientific and Policy Committee centered around how to focus more effectively on "The Whole System" as part of the future of EMECS.

One cannot easily separate the thinking of Prof. Jansson from that of his wife, AnnMari. Perhaps my fondest memory is when my wife and I dedicated our new home in Maryland with a performance in our living room by the late jazz/classical guitarist, Charlie BYRD, for which Bengt-Owe and AnnMari were our honored guests. They were a scholarly duet, each taking the lead and playing ideas off one another like a sonata. Their shared perspectives and absolute dedication to the importance of education -- they especially loved the EMECS Students and Schools Partnership session -- changed the lives of young people and professional colleagues alike. I spent many a late evening talking with both of them on topics that ranged from classical music to environmental management. They cared deeply about how to better communicate the results of science to policy makers and citizens alike. EMECS is a richer program because the results of these conversations eventually found their way into committee meeting agendas and conference programs. They also found their way into our hearts and minds, a priceless legacy that we must never forget.



"Jansson the Great Communicator"

The EMECS legacy of Prof. Bengt-Owe Jansson will make a difference in the lives of future generations of scientists, policy makers, students, and citizens. The world's coastal seas are sure to benefit from those who remember this remarkable person and the lessons he taught us about "The Whole System."

EMECS Environmental Education Programs

The International EMECS Center develops and implements a variety of marine environmental education programs. These programs can be divided into two general categories: environmental education activities conducted at fixed location; the Port of Amagasaki, and environmental education activities in the field; Ieshima-Island, Awaji-Island and other locations in Hyogo prefecture. The EMECS environmental education programs will be continued in fiscal 2007.

1. Marine Environmental Education Activities conducted at fixed location

Under a grant from Ministry of the Environment, the International EMECS Center has created test facilities for verifying environmental restoration and creation techniques, such as artificial tideland, artificial floating seaweed beds, etc. at the Port of Amagasaki in Amagasaki city, Hyogo Prefecture. Here, researches are being conducted to determine appropriate environmental restoration technologies in order to eliminate the negative legacy of the 20th century in coastal zones by restoring the flexibility of material circulation in these areas. (See EMECS Newsletter No. 21.)

Since 2002, the demonstration test facilities at the Port of Amagasaki have also been used to conduct environmental education training programs under a grant from the Nippon Foundation and Hyogo prefecture. In these programs, the artificial tideland, etc. at the demonstration test facilities are used to teach primarily elementary and junior high school students about the mechanisms by which ocean water is purified and about the various creatures that inhabit the nearby ocean. These programs also enable Amagasaki residents to learn more about the marine environment. The programs are designed by the International EMECS Center based on advice from academic experts with knowledge and experience.

Although these programs have been conducted at the above facilities located in an urban area, the participants, both children and adults, have been able to gain firsthand knowledge of the real sea through such hands-on experiences as having contact with sea creatures (crabs and fishes), observing plankton, and cultivating wakame seaweed. This kind of experience has encouraged them to pay more attention to the conservation of the environment through activities such as saving water and reducing garbage, in their daily lives.



Digging for clams



Gathering Wakame (seaweed)

Marine environmental education activities at the Port of Amagasaki

Fiscal Year	No. of Times	No. of Participants	Fiscal Year	No. of Times	No. of Participants
2002	15	276	2005	5	117
2003	18	545	2006	3	69
2004	17	339	Total	58	1,346



Observing rocky shore areas



Fishing using a beach seine net

2. Marine Environmental Education Activities conducted in the field

Although problems in the marine environment are close to home, at present there are few opportunities for people to get a true sense of the seriousness and importance of these problems. For this reason, the International EMECS Center has developed programs to enable participants to learn about problems in the marine environment by going out into the field and getting some hands-on experiences with listening to experts. These programs, entitled Seto Inland Sea Hands-on Marine Environmental Education Programs, were held ten times in fiscal 2001 and 2002 (for a total of 368 participants) on topics that include "Learning the Secrets of Laver", "Secrets of the Aquarium" and "What Kind of Places are Tidelands?."

In addition, in fiscal 2003 Hyogo Prefecture commissioned the International EMECS Center to develop and implement some environmental education programs by using facilities on Ieshima and the Hyogo Prefectural Hahatokono-shima, camping and recreation area for day-return and overnight field activities. These field activities were designed to enable participants to experience the natural marine environment in order to increase their awareness of the importance of preserving marine environments.

Another program, also commissioned by Hyogo Prefecture in fiscal 2005 and 2006, dealt with the important topic of training "supporters" (who are primarily college students). The theme of the program was to encourage elementary and junior high school students to think about the connection between the natural marine environment and their own lives. The supporters participated in the training program from program planning through implementation. Outside facilitators were invited to participate in the training of supporters. More than 30 supporters were trained over the two-year period.

Marine Environmental Education Activities conducted in the field were held five times in fiscal 2003 for 235 participants. In fiscal 2005 and 2006, programs were held once for 30 participants and 3 times for 71 participants, respectively (not including supporters).

3. Development of Teaching Materials for Marine Environmental Education

The International EMECS Center is also working to create teaching materials for marine environmental education. The International EMECS Centre has also contributed to the development of teaching materials and programmes. These include a teaching guideline to help elementary and middle school students to understand the interrelationship between the ocean, river and forest, a guidebook for environmental educators, booklets as well as a DVD focusing on the marine environment for education programme participants.

These teaching materials for marine environmental education are distributed free of charge in order to promote our activities in raising awareness and educating the importance of the marine environment and in strengthening human resources development. The content of these marine environmental teaching materials have been updated as needed to reflect achievements in the field of environmental education.

If you are interested in trying out these materials in your environmental education activities and the like, please contact the International EMECS Center (Note: these materials are available in Japanese only).



"Teaching materials developed by the International EMECS Centre"

JICA Training Course

"System of the Environmental Management of Enclosed Coastal Seas"

Japanese people have successfully struggled with environmental hazard in the Seto Inland Sea, the largest inland sea in Japan, caused by urbanization and the concentration of industry and population along the Inland Sea areas during the rapid economic growth in latter half of 1960' and 1970's. The Inland Sea was referred to 'Dying Sea' in 1970. Their experiences would be a valuable warning to people in overseas countries especially those who have been experiencing rapid economic growth. And Japan's experiences suggest people in developing countries should not commit the same failures as the Japanese had done and show them a possibility to make effective measures in advance against prospected environmental pollution in enclosed coastal seas.

The International EMECS Center, commissioned by JICA (Japan International Cooperation Agency), has organized a training course titled "System of the Environmental Management of Enclosed Coastal Seas" every year since 1990.

(Course Objectives)

1. Understand the present environmental conditions of enclosed coastal seas in Japan and environmental pollution mechanisms of enclosed coastal seas.
2. Understand the methods for the environmental conservation of enclosed coastal seas.



3. Understand the legal systems and policies for the sustainable development and environmental management of enclosed coastal seas.

In order to develop human resources that will take on a leadership role in the future, the course is designed to provide mid-level officials in government administrative bodies of developing countries engaged in the environmental management of enclosed coastal seas with the following:

- (1) Both strategies for environmental management specifically applied to the Seto Inland Sea as examples as well as opportunities to find solutions for the problems of environmental pollution in enclosed coastal seas in their respective countries.
- (2) Opportunities in which participants can have discussions with Japanese experts on site through lectures on pollution mechanisms, methods for environmental conservation and restoration, information systems, policies for environmental management, etc. as well as through visits to environmental conservation or industrial facilities such as a research institute on environmental science, a heavy industry factory, a sewage treatment facility and a land reclamation site.

The training course is scheduled to be held from August 13 to October 27 this year.

Call for Articles

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

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