

# Tropical Coasts

Vol. 10 No. 1

ISSN 0117- 9756

July 2003



**THE  
REGIONAL  
APPROACH**

**Harnessing Intergovernmental  
Partnerships for Sustainable  
Development of the World's Seas**

# The Regional Approach: Experiences and Lessons

**Stella Regina Bernad**

Issue Editor

Through history, neighboring countries had gotten together for purposes such as security or the management of a common resource. But it was only in the last few decades that regional cooperation was recognized as necessary for environmental management, and more recently for sustainable development. As the modern world brings about stronger transboundary impacts (see *Tropical Coasts* Vol. 8, No. 1 (July 2001)), nations have responded with recommendations for regional cooperation, such as those of the 1972 United Nations Conference on the Human Environment and the 1982 Convention on the Law of the Sea. Since then, many countries have chosen to join forces under an assortment of regional arrangements and action plans.

This issue of *Tropical Coasts* examines some of the regional arrangements that have been adopted and the lessons learned, as well as the trends in regional cooperation relating to the environment, regional seas and their associated river basins. Some of the featured arrangements are well established while others are relatively new. Beyond the recognition of intergovernmental cooperation as a concept, the aim of this issue is to show some of the practicalities involved in operationalizing the ideals and modalities of regional arrangements.

The issue starts with the rationale behind the regional approach, and several of these are provided in the article by Lee A. Kimball, showing the trends in regional arrangements implementing the UNCLOS' recommendations. An overview of experiences and trends is also provided in the article of Dr. Elik Adler on UNEP'S Regional Seas Programme.

Throughout this issue, commonalities among regional arrangements are apparent. The similarity of conditions among neighboring countries is the primary basis for regional bonding. This is the case among the Pacific Island countries, as discussed in Mary Power's article. In the article of Dr. Chua Thia-Eng et al., the interconnectivities among the countries are what define the East Asian Seas as a region.

Aside from similarities and interconnectivities, the recognition of common issues and threats is a necessary starting point. UNCLOS identified what those common threats are, in general. Power lists the common issues among the Pacific Island countries. The next step is agreeing to a shared goal, and to cooperate in working collectively towards that goal. For some regional organizations, a major and rewarding achievement (albeit one that takes continuing effort), is overcoming differences in social, economic

and political systems that have historically constrained cooperation, as shown in the article of Jasmine Bachmann on the International Commission for the Protection of the Danube River, as well as the article from the Mekong River Commission.

The identified regional arrangements also provide examples of different types of operational modalities. A number of them, such as the Helsinki Commission, have regional conventions. A variety of instruments and modalities are utilized among the individual regional arrangements developed through the UNEP Regional Seas Programme. Others have agreements, general or specific, while still others use "soft law" as an instrument for cooperation. Dr. Chua's article on the future adoption of a regional strategy for sustainable development in East Asia provides a good example of the soft law approach.

An apparent trend in the development of regional mechanisms is the shift of focus from the sectoral concerns of pollution prevention and environmental protection to sustainable development. This is seen in almost all of the articles, but especially in those on the UNEP Regional Seas Programme, the Mekong River and the Baltic Sea. It is clear that this trend has been accompanied by a shift to integrated management with its concomitant intersectoral approach and emphasis on stakeholder participation and partnerships. The article by Achim Steiner on the IUCN emphasizes the role of partnerships in the pursuit of environmental and resource management and sustainable development. While IUCN is not a regional organization, this article provides a counterpoint to other mechanisms, namely, the mixed membership of IUCN, ranging from national and local governments to non-government organizations and individuals.

Certain elements of regional arrangements thread the articles. Sustainable financing is a common concern, and is mentioned particularly with regard to the South Pacific, Mekong and Danube Rivers and UNEP Regional Seas Programme. Regional organizations also see themselves playing an important role in awareness building and capacity building.

Not surprisingly, many barriers are encountered by regional organizations. The articles on the South Pacific and Baltic Sea show how constraints have been dealt with, turning a weakness into strength in the Baltic context, and maximizing limited resources through a network of programmes on the part of the Pacific Island countries.

The articles suggest some qualitative indicators for effectiveness. Without a doubt, collaborative intergovernmental action and the facilitation of actions on transboundary issues are two very obvious motivations for regional cooperation. In addition, the implementation of international conventions is a key objective, as well as an achievement, as international instruments serve the purpose of providing standards and goals to which all can agree, and focus for capacity building.

The recognition of common needs and goals on one hand, and weaknesses and constraints on the other, does not necessarily lead to the success of regional arrangements. In the end, as the articles in this issue show, it is hard work and the will to make it work that spell the difference. ■

# Tropical Coasts

www.pemsea.org

Volume 10 No. 1 July 2003

**Chua Thia-Eng**  
Executive Editor

**S. Adrian Ross**  
**Veerle Vandeweerd**  
Editors

**Stella Regina Bernad**  
Issue Editor

**Sylvia O. Inciong**  
Managing Editor

**Leo Rex Cayaban**  
Assistant Editor

**Jonel P. Dulay**  
Design/Illustration/DTP

**Azenith Carlos**  
**Leo Rex Cayaban**  
Research

**Lee A. Kimball**  
**Helsinki Commission**  
**Mary Power**  
**Mekong River**  
**Commission**  
**Jasmine Bachmann**  
**Ellik Adler**  
**Achim Steiner**  
**Chua Thia-Eng**  
**Stella Regina Bernad**  
**Maria Cecilia T. San**  
Contributors

The Global Environment Facility/United Nations Development Programme/International Maritime Organization Regional Programme on Partnerships in Environmental Management for the Seas of East Asia (GEF/UNDP/IMO PEMSEA), Sida Marine Science Programme, the Coastal Management Center (CMC), and the United Nations Environment Programme – Global Programme of Action (GPA) publish Tropical Coasts Magazine biannually. This publication is geared towards stimulating an exchange of information and sharing of experiences and ideas with respect to environmental protection and the management of coastal and marine areas. Readers are strongly encouraged to send their contributions to:

## Executive Editor

P.O. Box 2502,  
Quezon City 1165,  
Metro Manila, Philippines

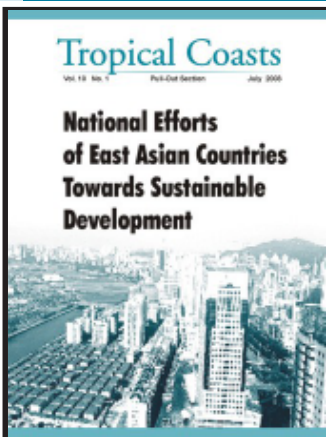
The contents of this publication do not necessarily reflect the views or policies of the Global Environment Facility (GEF), the United Nations Development Programme (UNDP), the International Maritime Organization (IMO), the Regional Programme on Partnerships in Environmental Management for the Seas of East Asia (PEMSEA), Sida Marine Science Program, Coastal Management Center (CMC), the United Nations Environment Programme – Global Programme of Action (GPA), other participating organizations, or the editors, nor are they an official record. The designation employed and the presentation do not imply the expression of opinion whatsoever on the part of GEF, UNDP, IMO, PEMSEA, Sida Marine Science Program or CMC concerning the legal status of any country, territory or city or its authority, or concerning the delimitation of its territory or boundaries.

ISSN 0117-9756

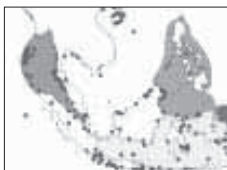
## Special Pull-Out Section

### National Efforts for Sustainable Development

This special pull-out section highlights the legislation and other institutions of East Asian Countries, as part of their efforts in attaining sustainable development.



# in this issue



4

## Developments in the Implementation of UNCLOS Provisions on Regional Cooperation

Lee A. Kimball



10

## The Helsinki Commission: Lessons Learned in ICZM

The Helsinki Commission



16

## Achievements in Small Islands Management: Regional Approaches in the Pacific Islands for Sustainable Ocean and Coastal Development

Mary Power



22

## The Mekong River Commission: A New Direction in International River Basin Management

The Mekong River Commission



28

## International Commission for the Protection of the Danube River: Achieving Cooperation in International River Basin Management

Jasmine Bachmann



34

## A World of Neighbours: UNEP's Regional Seas Programme

Ellik Adler



40

## IUCN: A Unique System of International Cooperation for Nature Conservation

Achim Steiner



46

## Coastal and Ocean Governance of the Seas of East Asia: Towards an Era of New Regional Cooperation and Partnerships

Chua Thia-Eng, Stella Regina Bernad, and Maria Cecilia T. San

## departments

Editorial	2	• PEMSEA News	61
Capacity Building	56	• Facts and Figures	64

## Introduction

Like most international laws, the 1982 United Nations Convention on the Law of the Sea (UNCLOS) incorporates and builds on earlier developments. In the case of regional ocean management, it reflects five rationales that began to emerge in the early 20th century and continues to evolve today. These are:

- marine scientific research;
- transfer of techniques and technology;
- enclosed and semi-enclosed seas (a predominant feature of the East Asian Seas);
- conservation and management of marine living resources; and
- preservation and protection of the marine environment.

# Developments in the Implementation of UNCLOS Provisions on Regional Cooperation

The Law of the Sea (LOS) Convention promotes the establishment of regional marine science and technology centers as a means of strengthening knowledge and capabilities within each region. The antecedents of these provisions date to the first decade of the last century when researchers established scientific organizations in the North Atlantic and Mediterranean to share information and pool scarce resources. By 1960, the Intergovernmental Oceanographic Commission (IOC)

was established within the United Nations Education, Scientific and Cultural Organization (UNESCO) to promote and coordinate marine scientific research and help disseminate results worldwide. Its programs to strengthen marine science capabilities were established at a regional level to stimulate collaboration within each region and study varied oceanic conditions.

States bordering enclosed and semi-enclosed seas receive special attention in the LOS Convention.

### The Evolution of the Regional Seas Agreements.

	NE Atlantic	Baltic	Mediterranean	Gulf/Kuwait	W & C Africa
Regional Seas Convention	1992	1974	1976	1978	1981
Regional Action Plan Only					
Subsidiary Instruments					
Dumping	1972	1974	1976		
Ship Pollution		1974			
Land-based Pollution	1974	1974	1980	1990	
Emergency Response	1969 /83 /90	1974	1976	1978	1981
Protected Areas/Species	1998		1982	draft	
Airborne Pollution	1986	1974	1995	1990	
Continental Shelf Exploitation	1992	1992	1994	1989	
Hazardous Wastes Movement			1996	1998	
Radioactive Contamination					

They are to cooperate directly or through an appropriate regional organization to manage and conserve living resources, protect the marine environment, and coordinate scientific research policies and programs. The Convention recognized that pressures mount more quickly in circumscribed areas and make joint action more urgent. The Baltic Sea states were the first to conclude a regional cooperation agreement in 1974, following an agreement on Baltic Sea fisheries in 1973.

Following World War II, new technologies and expanding fleets led to increased competition over fisheries further and further offshore. States fishing particular stocks began to conclude management agreements. At the same time, regional fishery commissions were established under the auspices of the UN Food and Agriculture Organization (FAO) to support data collection, analysis and

research, for example, in the Mediterranean and Indo-Pacific regions. The FAO Committee on Fisheries was established in 1965 to maintain an overview of global fisheries trends and, increasingly, to provide support for developing nations to manage and develop domestic fisheries. Like the IOC, FAO sought to strengthen scientific and technical capacity and improve management skills. There are now some 30 regional fishery conventions and 20 regional bodies that play a role in fisheries management. The essential principle behind regional arrangements is for all states fishing a particular stock throughout its range to cooperate, recognizing the rights and duties of coastal states in their exclusive economic zones (EEZs) [See UNCLOS articles 61–72 and 116–120 and the 1995 Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks (FSA)].

Since the adoption of UNCLOS in 1982, the regional fisheries agreements have evolved through several stages:

- They were initially modified to exclude expanded national zones of jurisdiction. FAO's efforts in the developing nations were largely displaced during the late 1970s and 1980s by foreign fishing interests seeking access to these zones. Expenditures on data collection and research languished in many countries and regions.
- In the late 1980s, growing conflicts between coastal and distant-water fishing states over species that migrate within and beyond national jurisdiction led to the FSA. This reinforces the LOS Convention's requirement for regional and sub-regional arrangements among fishing

SE Pacific	Red Sea/ Gulf Aden	Caribbean	East Asia	E Africa	S Pacific	Black Sea	NW Pacific	S Asia	NE Pacific	SW Atlantic
1981	1982	1983		1985	1986	1992			2002	
			1983				1994	1995		draft
1989					1986	1992				
1983		1999				1992				
1981/1983	1982	1983		1985	1986	1992				
1989		1990		1985		2002				
1983		1999				1992				
					1995					
1989										

states and strengthens the means to enforce them.

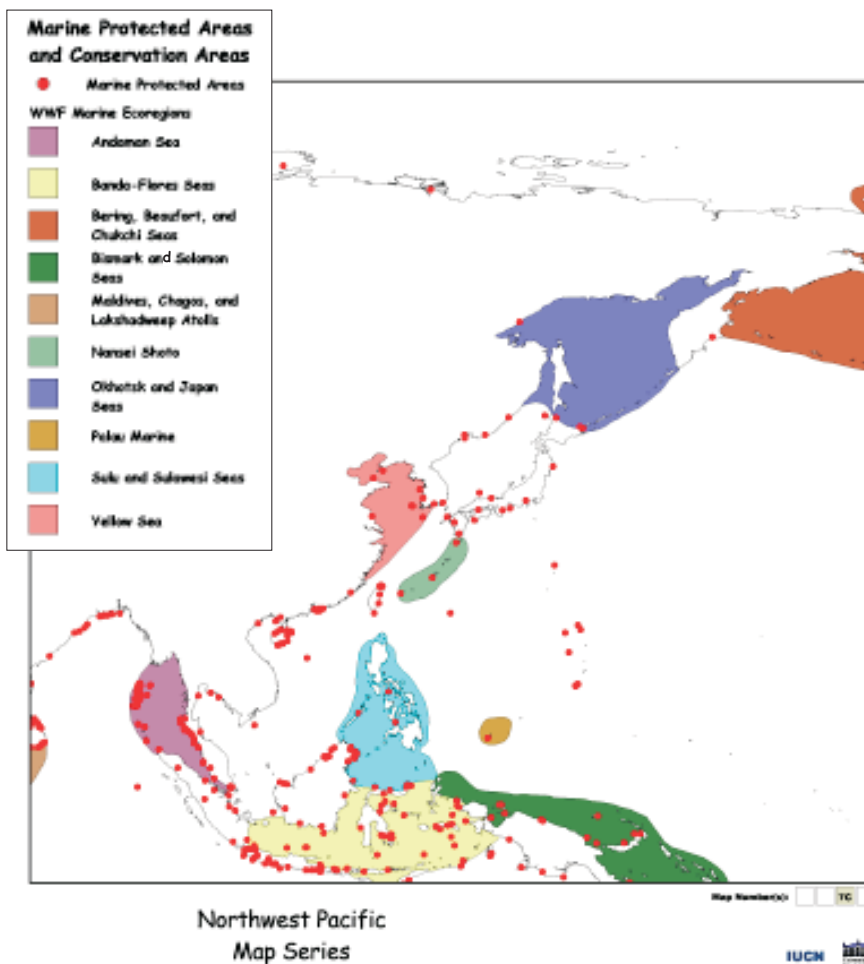
- The FSA establishes new principles for conservation and management, including the application of precautionary and ecosystem-based approaches. These same principles are incorporated into the non-binding 1995 FAO Code of Conduct for Responsible Fisheries, which applies to all fisheries within and beyond national jurisdiction. They lay a solid foundation for sub-regional and regional cooperation in

managing shared and transboundary resources.

Most of the forward-looking provisions of the FSA originate from regional developments, notably, port state enforcement and vessel registries from the South Pacific Forum Fisheries Agency and ecosystem and precautionary approaches from the 1980 Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR), which pioneered the concept of large marine ecosystems (LMEs). This shows how regional developments can upgrade global instruments and vice-versa.

With the crisis in world fisheries now household knowledge, effective management for 90 percent of the world fisheries that occur within national jurisdiction is essential. Problems of overfishing are compounded by the growing destruction and degradation of habitat for marine species. Sub-regional and regional cooperation may be required to manage the fisheries, as well as identify and protect key spawning, recruitment, and feeding areas for species that move between countries or their predators and prey. The growing emphasis on ecosystem-based approaches recognizes that inter-species relationships must be taken into account as well as environmental factors affecting species and habitat. It underscores the need to improve data collection, research and capacity-building.

The problems of the marine environment attracted attention in the early 1970s not only in semi-enclosed seas but throughout the world's oceans in relation to vessel-source pollution and deliberate dumping of wastes, e.g., nuclear, chemical, and sewage sludge. The LOS Convention targets pollution from six sources: vessels, dumping, mineral activities beyond national jurisdiction, seabed activities or artificial islands, installations within national jurisdiction, and airborne and land-based sources. In addition to global rules and standards, regional measures are called for in relation to



---

land-based, offshore seabed, dumping, and airborne sources. States are especially encouraged to harmonize policies at the regional level for land-based and offshore seabed activities. The initial regional agreements emerged in parallel with the UNCLOS negotiations (Baltic, Northeast Atlantic), followed by the series of regional agreements initiated under the United Nations Environment Programme (UNEP) with the 1976 Mediterranean Convention.

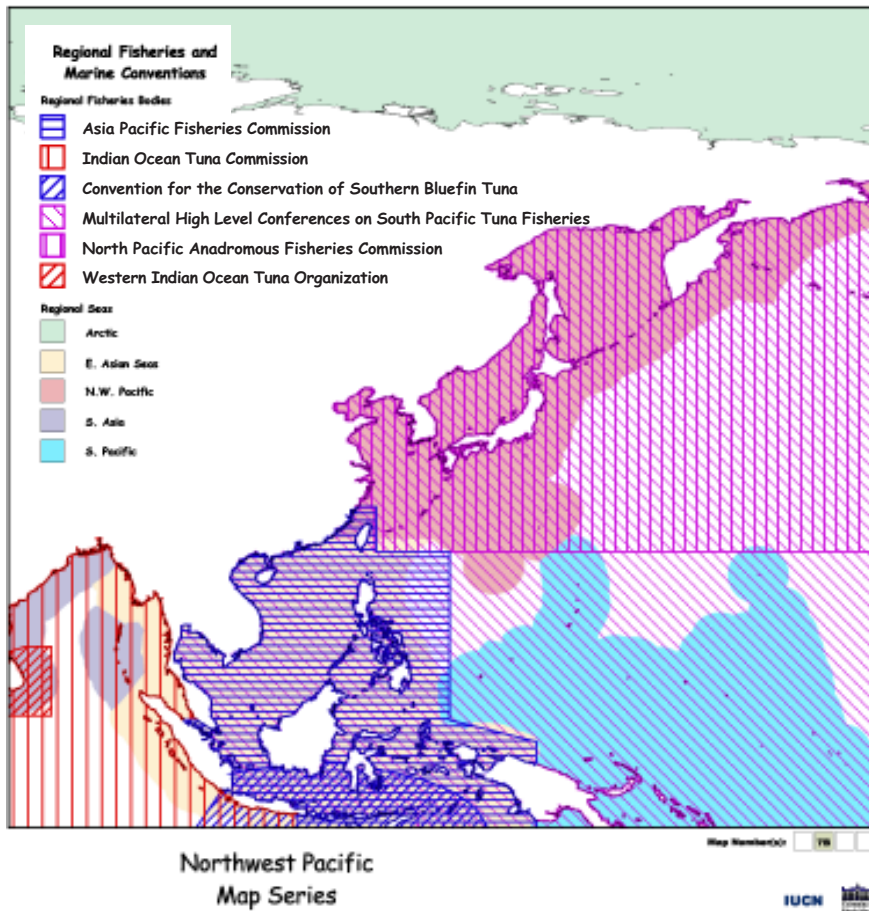
The emphasis on regional cooperation to control marine pollution partly stems from geographic configuration and proximity (e.g., semi-enclosed sea), from characteristic features (such as similar oceanographic and environmental conditions), and common socio-economic circumstances. These vary from region to region as do local pollution sources, and pollution control measures must be tailored to the different situations. Although not all states are in a position to modify domestic practices at the same rate, it does not relieve them of meeting their obligations under the LOS Convention.

The regional seas agreements have also evolved substantially. During the 1970s and 1980s they concentrated on pollution monitoring programs and sea-based threats such as shipping, dumping, and offshore oil and gas activities. Regional cooperation was a means to harmonize data collection and to prepare for and respond to pollution emergencies, largely oilspills, cost-effectively. Agreed regional measures to control pollution were virtually non-existent. In some regions, national legislation set standards for industrial and wastewater emissions. As with EEZ fishing, problems within national jurisdiction were not widely known elsewhere. There was not much

**Most of the more forward-looking provisions of the FSA originate from regional developments, notably, port state enforcement and vessel registries from the South Pacific Forum Fisheries Agency and ecosystem and precautionary approaches from the 1980 Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR), which pioneered the concept of LMEs.**

documented evidence of transboundary pollution from land-based or offshore sources.

This situation began to change in 1990 when a major global marine assessment highlighted impacts on coastal areas and habitat. The United Nations Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) cited these impacts in order of importance, on a global basis: nutrients (sewage, agricultural run-off from fertilizer-treated fields and stock-raising), microbial contamination by sewage, plastic litter, and the progressive buildup of synthetic organic compounds due to pesticide use. The report estimated that 44 percent of worldwide marine pollution was due to run-off and land-based discharges; 33 percent to pollution through the atmosphere; 12 percent to maritime transportation; 10 percent to dumping; and one percent to offshore facilities. This proved a wake-up call to address growing threats from land-based, including airborne,



sources. Moreover, the report underscored that physical degradation and sediments should be included in a broader concept of threats, along with contaminants. It drew attention to pollution borne to the sea by rivers (including sediments) – legally a form of land-based pollution – as well as the effects on the coastal and marine environment of human manipulation of the hydrological cycle through dam construction and water diversion.

Together with growing worldwide concern over deteriorating coastal areas, the GESAMP report set in motion a major effort to tackle the full range of impacts from land-based activities. This led to the 1995 Global Programme of Action on

Protection of the Marine Environment from Land-Based Activities (GPA). Drawing on evolving approaches to preventive and precautionary action in the European regional seas agreements, the GPA focused more on targets, best practices, and incentives and less on uniform standards. Its framework for decision-making allows countries and regions to address multi-sectoral problems effectively, identify hotspots, and set priorities. It also underscores the importance of integrated approaches to watershed, coastal and marine management, reflecting early efforts to coordinate sea management with river basin agreements. An important related concept is integrated island management – from the mountains to the sea. This

takes into account the special case of small island developing states set out initially in the 1994 Barbados Programme of Action.

The new focus on land-based impacts, coastal degradation and watershed management has played a major role in reinvigorating regional cooperation. These issues touch on local livelihoods and well-being and require action by the people who depend on the resources. This had led to new mechanisms associated with the regional seas agreements which broaden involvement and consultation, such as the North Sea Conferences or the Mediterranean Commission on Sustainable Development. Several regional seas programs have strengthened their contacts with local stakeholders and research institutes through networks and regional activity centers that deal with protected areas. New and improved regional protocols on land-based activities have emerged since the mid-1990s (Table I), and the GPA Office now plays a significant catalytic and facilitating role in strengthening regional initiatives.

The logic of these interrelated issues also motivates regional cooperation. The influence of rivers on coastal wetlands or marine pollution is largely confined within regions and sub-regions. The same is true of airborne pollution of the marine environment, although persistent organic pollutants (POPs) are an exception. Most fish stocks and marine species do not range widely. A



---

regional scale is consistent with the ecosystem approach endorsed by the Convention on Biological Diversity and, more recently, the World Summit on Sustainable Development (WSSD) in relation to oceans and coasts. It applies both at the smaller scale of coral reef systems, mangroves and seagrass beds, and at the scale of LMEs and tropical island systems. As the concept evolved, it supports the idea of "nesting" marine and coastal protected areas (MCPAs) within larger systems to maintain ecosystem productivity and ecological services.

Major non-governmental organizations such as the World Conservation Union (IUCN) and the World Wide Fund for Nature (WWF) have strongly supported a more systematic approach to ecosystem management and MCPAs. They have been instrumental in strengthening and updating the regional seas protocols on protected areas, species, and biodiversity. Several of the regional seas programs have already endorsed the WSSD target of representative networks of MCPAs by 2012. This goal is an important way to link regional seas' role in habitat protection with fisheries management and the conservation of threatened species like migratory sea turtles (Trono and Cantos, 2002).

This raises another increasingly important aspect of regional cooperation which is the coordination of the application and implementation

**At the operational level, the Global Environment Facility was the first to integrate freshwater and ocean management in the mid-1990s. Its international waters program specifically notes that linkages with numerous international agreements represent an opportunity for countries to forge comprehensive regional approaches.**

of a growing number of global and regional agreements. Trono and Cantos (2002) mentions links with the Convention on Migratory Species (CMS) and the Convention on International Trade in Endangered Species (CITES). Some of the regional seas programs cooperate with the Ramsar Wetlands Convention and the World Heritage Convention at the regional level and have updated their protected areas/species protocols incorporating the goals and approaches of the Biodiversity Convention. This builds on earlier practice to develop regional protocols reflecting obligations under the London Convention on ocean dumping and the Basel Convention on Transboundary Movements of Hazardous Wastes. Collaboration on chemicals management is likely to evolve with the POPs and PIC Conventions (Prior Informed Consent Procedures for Certain Hazardous Chemicals and Pesticides in International Trade). In most regions, however, there has

been little communication between regional fishery management bodies, where they exist, and the regional seas programs. Regional bodies applicable to the East Asian Seas region are shown in Table 1.

At the operational level, the Global Environment Facility was the first to integrate freshwater and ocean management in the mid-1990s. Its international waters program specifically notes that linkages with numerous international agreements represent an opportunity for countries to forge comprehensive regional approaches. The GPA has been a strong motive force in making the regional seas agreements the institutional focal point for agreement and the delivery of international support. Together with UNEP, it has promoted them as a platform to implement multilateral environmental agreements and global programs. Like the IOC and

continued on page 60

## Introduction

The Helsinki Commission (HELCOM) works to protect the marine environment of the Baltic Sea from all sources of pollution through intergovernmental co-operation among Denmark, Estonia, the European Community, Finland, Germany, Latvia, Lithuania, Poland, Russia, and Sweden.

HELCOM is the governing body of the "Convention on the Protection of the Marine Environment of the Baltic Sea Area," also known as the Helsinki Convention. The 1974 Convention for the first time made all the sources of pollution around an entire sea subject to a single convention. In the light of political changes and developments in international environmental and maritime law, a new convention was signed in 1992 by all the states bordering the Baltic Sea, and the European Community.

# The Helsinki Commission: Lessons Learned in ICZM



**Map 1. The catchment area of the Baltic Sea.**

All Baltic Sea countries are engaged in Integrated Coastal Zone Management (ICZM), although there is no specific legislation pertaining to ICZM in the Baltic region. Experience suggests that these ICZM initiatives are meeting significant constraints which relate to continued institutional and traditional ways of thinking, the prevalence of a

sectoral approach towards management issues, a lack of involvement of all stakeholders, and problems with full public participation. The increasing, anthropogenic pressure on the sensitive ecosystems and biodiversity of the Baltic Sea region means that ICZM needs to be systematically implemented throughout the region.

## The Baltic - A Landlocked Sea

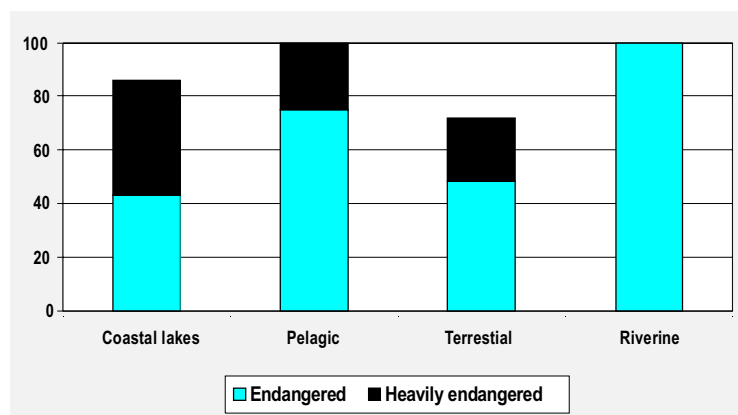
The Baltic Sea is one of the major brackish water basins in the world, and home to many species of plants, animals and micro-organisms in a variety of habitats. Conditions are challenging since winters are harsh and salinity varies considerably over time and between waters. A total of 133 distinct marine and coastal habitat types have been classified by HELCOM for conservation purposes.

The Baltic is a relatively shallow inland sea surrounded by Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, Russia, and Sweden. It also receives surface water drainage from five other countries: Belarus, Czech Republic, Slovak Republic, Norway, and Ukraine.

Nearly 85 million people live in the Baltic catchment area, with 26 percent in large metropolitan areas, 45 percent in smaller urban areas, and 29 percent in rural areas. Population growth, urbanization, agricultural intensification, and land use changes have led to inadequate sewage treatment and increases in fertilizer use and industrial emissions.

The increasing anthropogenic pressure on the sensitive ecosystems and biodiversity of the Baltic Sea region implies that ICZM needs to be systematically implemented. Areas within HELCOM

**Nearly 85 million people live in the Baltic catchment area, with 26 percent in large metropolitan areas, 45 percent in smaller urban areas, and 29 percent in rural areas. Population growth, urbanization, agricultural intensification, and land use changes have led to inadequate sewage treatment and increases in fertilizer use and industrial emissions.**



**Figure 1. Red list of biotopes in the Baltic Sea area – 88 percent of the biotopes are considered to be threatened to some degree.**

which are in urgent need of ICZM measures are Baltic Seas Protected Areas, Natura 2000 (a site conservation programme by the European Union) sites, bays, the whole of the eastern Gulf of Finland, and metropolitan areas.

HELCOM's Fourth Periodic Assessment of the State of the Marine Environment of the Baltic

Sea (1994–1998), shows that there have been significant improvements in many aspects of the marine environment, yet continuing problems still occur.

Water quality has generally improved in coastal areas over the last two decades, although eutrophication is still a major problem with the sea water less

## **Experience suggests that most of the ICZM initiatives in the Baltic region are meeting significant constraints which relate to continued traditional ways of thinking, the prevalence of a sectoral approach towards management issues, lack of involvement of all stakeholders, and problems related to full public participation.**

transparent than it was 50 years ago. While concentrations of many hazardous substances, notably DDT, mercury, and lead, have declined considerably leading to improvements in the health of birds of prey and mammals, levels of toxic PCBs and dioxins in the food chain remain stubbornly high, affecting seals in particular.

Cod, herring, salmon, and eel fisheries are currently operating at unsustainable levels. Other threats to fish stocks include the loss of spawning grounds in rivers, and excessive by-catch. Cod stocks are declining rapidly due to overexploitation and unfavourable environmental conditions for hatching. Illegal discharges of oil and other wastes from ships are a continuing problem, despite HELCOM regulations obliging ships to dispose of wastes at port reception facilities.

### **Lack of Legislation Does Not Hamper ICZM Work**

Although there is not one, agreed definition for ICZM, it is generally acknowledged to be "a continuous process with the general aim of implementing sustainable use in coastal zones and maintaining their overall diversity." To this end, it aims at more effective management "to establish and maintain optimum, sustainable levels of use, development and activity in coastal zones and, eventually, to improve the state of the coastal environment."

ICZM is recognized as the most effective tool for incorporating conservation and the sustainable use of marine and coastal biodiversity aspects into the planning process. Therefore, ICZM should deal with all aspects of land and water use and

---

good planning and management should be seen as a preventive, environmental control. Nonetheless, it is still a challenge to find the right balance between biodiversity conservation, the sustainable use of its components, and development.

A recent assessment of the Baltic Sea region showed 24 ongoing ICZM projects, nine ICZM-related projects and 28 completed projects, including some international projects. It concluded that although no state bordering on the Baltic has specific legislation relating to ICZM, existing policies, authorities, and instruments can be used to accommodate the implementation of ICZM within an individual country's national borders and, therefore, within the Baltic region as a whole. Although there is no specific legislation pertaining to ICZM in the Baltic region, all countries are, without exception, engaged in ICZM work. This is not systematic within any country, nor within the region, but it is clear that the lack of legislation need not hamper the development of ICZM.

Among the four Baltic projects of the European Union (EU) demonstration programme, the Gulf of Finland project recommended that integrated planning should be undertaken at the regional and local levels during the preliminary phase of ICZM.

---

Although Storstrøm County (Denmark) did elaborate coastal planning at the local level, it was built on the implementation of a strong public participation process within the regional planning process for all relevant stakeholders. However, in trying to apply a rigorous sustainability assessment on new tourist developments, there was public misconception that conservation initiatives would curtail economic activities. Public participation was also regarded as a particular difficulty in Latvia. All of these projects have ended with no follow-up.

Experience suggests that most of the ICZM initiatives in the Baltic region are meeting significant constraints which relate to continued traditional ways of thinking, the prevalence of a sectoral approach towards management issues, lack of involvement of all stakeholders, and problems related to full public participation.

The Third Meeting of the Nature Conservation and Coastal Management Group (HELCOM – Habitat) held in Gdynia, 29 January – 1 February 2002, decided that a common approach for ICZM in the region should be developed. It should include a list of adherent principles and appropriate strategies and a possible draft HELCOM recommendation towards applying that approach in the nine HELCOM riparian states.

## The main challenge for HELCOM is the implementation of the current ICZM projects in each of the member States employing a systematic common approach at an international level within the framework of the EU Strategy.

HELCOM, in 1993, initiated ICZM plans for the sustainable use of coastal lagoons and wetlands in Latvia, Estonia, Lithuania/Russia, Russia/Poland, and Poland/Germany applying ICZM principles and methodologies.

The plans, based on an ecosystem approach, were criticized because they were dominated by nature protection considerations and economic and human activities were discussed under this restriction. Although the management plans were comprehensive, they were not balanced (it could have been argued that this is precisely the approach needed in such sensitive areas). An evaluation of the programme completed in 1999 covered technological, economic, institutional, cultural, and ecological constraints while recognizing significant lessons concerning ecosystem-based planning.

In 1996, "Vision and Strategies Around the Baltic 2010" (VASAB), an Intergovernmental Programme of the

Baltic Sea Region, recognised the need to elaborate common guidelines for spatial planning and management in the coastal zone to ensure and guide development in the area. Among others, it recommended a three-km landwards planning strip and a protected zone outside urban areas both landwards and seawards of 100–300m.

The approach taken in the Baltic will need to consider the differences between the EU States, with a strong tradition of legal and administrative systems and public participation, and the non-EU States where these features are not so institutionalized.

The main challenge for HELCOM is the implementation of the current ICZM projects in each of the member States employing a systematic common approach at an international level within the framework of the EU Strategy.

To help achieve this, the experience gained from the two main

# Within the Baltic, a common approach in the region will only be accomplished by the adoption of a set of specific principles which augment those of the EU and are adopted with them. These principles need to take into account the special nature of the sea and its high vulnerability to rapid, human-induced change.

European integrated coastal management initiatives has been considered for the development of specific principles for the Baltic region. These initiatives are the EU ICZM demonstration programme and strategy and the Coastal Area Management Programme (CAMP) in the Mediterranean Sea. Other relevant ICZM experience is also taken into account.

## A Common Approach to the Implementation of ICZM in the Baltic Region

The Third Meeting of HELCOM – Habitat decided that a common approach for ICZM in the Baltic Sea region should be developed. Consequently, a review of current ICZM practice was made to harness the experience gained in the rest of Europe and elsewhere.

Within Europe, the European Community (EC) Recommendation on ICZM states that Member States should

commit to a Common Vision for the future of their coastal zones. It lays out a set of principles concerning good coastal management for adoption. However, these principles are very broad and, at best, provide only a framework. Alone, they will not prevent the further degradation of coastal habitats and biodiversity. Neither does the EC strategy, developed from the Recommendation, deal specifically with conservation issues or with the question of the marine environment and the extent to which it should be considered within ICZM planning.

The CAMP of the Mediterranean Action Plan was the first systematic approach to ICZM in Europe. However, the basic question remains despite the more than 12 years of ICZM experience in the region: Is it necessary to develop a shared, long-term strategic vision for coastal management? Globally, few countries have developed specific principles to support their ICZM programmes.

---

Within the Baltic, a common approach in the region will only be accomplished by the adoption of a set of specific principles which augment those of the EU and are adopted with them. These principles need to take into account the special nature of the sea and its high vulnerability to rapid, human-induced change.

Therefore, when considering the implementation of ICZM, the following underlying principles should be used to govern all spatial planning decisions in the Baltic Region:

1. Biodiversity must be conserved and environmental damage prevented as a prime consideration in coastal development.
2. ICZM should include the exclusive economic zone.
3. ICZM should be linked to, and co-ordinated with, freshwater and land planning and management.
4. ICZM must be based on an understanding of coastal and marine ecological processes and dynamics and the ecosystem approach should be used when planning ICZM.
5. Sustainable use is a prerequisite in ICZM.
6. Cultural heritage must be preserved.
7. All levels of government within a country must be involved in coastal

management and planning, with transnational cooperation in coastal border projects.

- Public participation, including relevant stakeholder involvement, must be an inherent part of coastal management programmes.

The following should always be considered when implementing ICZM as an incentive for good management practice:

- The use of economic instruments;
- The precautionary principle;
- Adaptive management; and
- Environmental impact assessments.

To implement ICZM adequately according to these principles and instruments, it is necessary that data and information concerning ICZM should be systematically collected, and used by the appropriate stakeholders.

The meeting of the Monitoring and Assessment Group (HELCOM MONAS 5 / 2003) in Vaasa finalized a HELCOM Recommendation on "Implementation of Integrated Marine and Coastal Management of Human Activities in the Baltic Sea Area" which was adopted by the Helsinki Commission on the 25th of June 2003.

Following these developments, the next step will be the advancement of a strategy for implementation of ICZM in the region. ■

+  
i  
S  
i  
V

[www.pemsea.org](http://www.pemsea.org)



**Get the latest news and information on marine and coastal environmental management in the East Asian Seas region online @ [www.pemsea.org](http://www.pemsea.org)**

**The countries included in the region are: Brunei Darussalam, Cambodia, China, DPR Korea, Indonesia, Japan, Malaysia, Philippines, RO Korea, Singapore, Thailand and Vietnam.**

**Functional information is discussed in the section on the various programme components of PEMSEA:**

- integrated coastal management;
- managing subregional sea areas and pollution hot spots;
- capacity building;
- environmental management and investments;
- scientific research;
- integrated information management systems;
- civil society;
- coastal and marine policy; and
- regional mechanism.

**Now with more links, the PEMSEA website presents a wider array of references and databases particularly regarding the practice of two environmental management approaches - integrated coastal management, and risk assessment and risk management.**

**Also, lists of relevant and timely publications and trainings are featured. Plus a lot more.**

Mary Power  
Coastal Management Adviser

South Pacific Regional  
Environment Programme  
Apia, Samoa

## Introduction

The combined sea area of 29 million km<sup>2</sup> that comprise the Pacific Islands region accounts for 98 percent of the region's total area with the remaining two percent that is land having an area of only approximately 580,000 km<sup>2</sup>. Only seven of several thousand islands have land areas of over 1,000 km<sup>2</sup> while four have less than 30 km<sup>2</sup> each. The Exclusive Economic Zones (EEZs) of the nations are by contrast enormous, ranging from 120,000 km<sup>2</sup> in Samoa to more than five million km<sup>2</sup> in French Polynesia. Nine countries/territories have a sea area (EEZ) extending over one million km<sup>2</sup> (Table 1 & Figure 1). Fifteen countries/territories are made up either wholly or largely of low-lying atolls and coral islands.

There are disadvantages and vulnerabilities derived from the small size and geographic isolation of the islands and the expansive EEZ, which contribute to a brand of "islandness". Of particular importance is the critical reliance on a healthy environment for subsistence, limited human and financial capacity, and a strong reliance on, and vulnerability to, external inputs and influences. In addition, due to their size, most island states are entirely coastal entities.

# Achievements in Small Islands Management: Regional Approaches in the Pacific Islands for Sustainable Ocean and Coastal Development



Figure 1. Pacific Island countries and their EEZs.

There has been significant progress among Pacific Island Countries and Territories (PICTs) in addressing the challenges relating to sustainable use of coasts and oceans. With the effective support of regional organizations such as the South Pacific Regional Environment Programme (SPREP), issues transboundary in nature such as management of migratory fish stocks, ocean pollution and shipping, and the spread of invasive and exotic species are addressed. Even at the

national level, the similarity of concerns such as those related to sewage, unsustainable fishing practices, and economic development have led to the pooling of resources for a sharing of knowledge, experiences, and expertise.

This paper briefly explores the nature of this regional approach, the success achieved, and the constraints to current and future effectiveness of arrangements.



**Table 1: Expanse of Pacific Islands EEZs relative to land areas and affiliations to regional organisations.**

Country/territory	Political status	Land (km <sup>2</sup> )	Sea Area (EEZ) in thousands km <sup>2</sup>	Membership*
American Samoa	Unincorporated US territory	200	390	2,3,5
Cook Islands	Self-governing free association with New Zealand	237	1,830	1,2,3,4,5
Federated States of Micronesia	Self-governing free association with the US	701	2,780	1,2,3,4,5
Fiji	Independent republic	18,333	1,290	1,2,3,4,5,6
French Polynesia	Overseas territory of France	3,521	5,030	2,3,5
Guam	Unincorporated US territory	541	218	2,3,5
Kiribati	Independent republic	811	3,550	1,2,3,4,5,6
Marshall Islands	Self-governing republic in free association with US	181	2,131	1,2,3,4,5,6
Nauru	Independent republic	21	320	1,2,3,4,6
New Caledonia	Overseas territory of France	18,576	1,740	2,3,5
Niue	Self-governing free association with New Zealand	259	390	1,2,3,4,5,6
Northern Mariana Is.	Commonwealth of the US	471	777	2,3,4
Palau	Independent republic	488	629	1,2,3,4
Papua New Guinea	Independent state	462,243	3,120	1,2,3,4,5
Samoa	Independent state	2,935	120	1,2,3,4,5,6
Solomon Islands	Independent state	28,370	1,340	1,2,3,4,5,6
Tokelau	Dependency of New Zealand	12	290	2,3,6
Tonga	Independent monarchy	649	700	1,2,3,4,5,6
Tuvalu	Independent state	26	900	1,2,3,4,5,6
Vanuatu	Independent republic	12,190	680	1,2,3,4,5,6
Wallis & Futuna	Overseas territory of France	255	300	2,3
* 1 – Pacific Islands Forum 2 – Secretariat for the Pacific Community 3 – South Pacific Regional Environmental Programme		4 – Forum Fisheries Agency 5 – South Pacific Applied Geoscience Commission 6 – The University of the South Pacific		

Adopted from: South G.R and J. Veitayaki

## Key Issues in Coastal and Marine Environments in the Pacific

The key regional issues facing the Pacific Islands with regard to sustainable development of their coastal and ocean environments have been highlighted in a number of recent documents (CROP 2001, 2002 and SPREP 2001) as follows:

- Rapid population growth and

- urban drift in many countries, including lack of family planning;
- Sustainable management of living resources – overexploitation of coastal resources and the use of destructive fishing methods is still widespread;
- Implementation of management regimes and conventions relevant to the Pacific Islands;
- Sustainable management of

- non-living resources (minerals);
- Pollution prevention and waste management;
- Marine biodiversity and natural resource conservation and management;
- Coastal degradation;
- Marine scientific research;
- Defense, surveillance, monitoring and enforcement;
- Sustainable tourism;
- Training, education, and public awareness;
- Shipping;

- Appropriate technology transfer;
- Climate change and sea level rise;
- Natural and environmental disasters;
- Intellectual property rights/ ownership and access to genetic resources;
- Globalization; and
- Vulnerability

## Regional Arrangements for Sustainable Coastal and Ocean Development in the Pacific Islands Region - Assessing Progress

Regional organizations (Table 1) range from those of a political and economic nature such as the South Pacific Forum, to specialized bodies such as the Forum Fisheries Agency (FFA) and the Secretariat of the Pacific Community (SPC) established to address specific issues. Other regional organizations focus on non-living resources such as the South Pacific Applied Geoscience Commission (SOPAC), environment and sustainable resource use such as SPREP, agriculture and health such as SPC, and tertiary education such as the University of the South Pacific.

Support from these regional organizations is further enhanced through the Council of Regional Organisations of the Pacific (CROP) where cross-agency sectoral working groups collaborate on regional issues and activities. Ocean and coastal

matters are addressed through the CROP Marine Sector Working Group established in 1997. Other working groups established to deal with emerging issues include those on trade and economic development, and human resource development.

## Key Initiatives

Some key programs and initiatives include the following:

- Pacific Platform for WSSD 2002 and Type II Initiatives (CROP)
- WSSD Pacific Regional Preparatory Processes (CROP)
- Regional Oceans Policy (2001) and upcoming Regional Oceans Forum (Feb. 2004)
- International Waters Strategic Action Plan and Program for the Pacific Islands (SPREP-SPC-FFA)
- Convention and Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific (FFA-SPC)
- Comparative Coastal Fisheries Assessment Project (SPC)
- Pacific Action Phase – International Coral Reef Action Network (SPREP)
- Climate Variability and Adaptation Program (SPREP)
- Pacific Ocean Pollution Prevention Program (SPREP)
- Waigani – Regional Convention for Implementation of the Basel Convention (SPREP)
- Framework for the Protection of

- the Marine Environment from Land-Based Activities (SPREP)
- Inventory and Clean Up of Persistent Organic Pollutants (SPREP)

These initiatives have benefited the region resulting in progress towards the sustainable development of ocean and coastal resources. Among these benefits are the following:

- Completion of the Implementing Agreement for Highly Migratory and Straddling Fish Stocks that led to the Multilateral High Level Consultations on the conservation and management of critical tuna resources in the region;
- Specific recognition within the WSSD outcomes of the sustainable development needs of Small Island Developing States (SIDS) [Section VII of the Plan on Sustainable Development of Small Island Developing States and recognition within the political declaration from the Summit of the particular needs of SIDS];
- Progress to address critical waste management issues in the region, including the identification of hazardous waste stockpiles and plans for their removal;
- Mainstreaming environment issues into trade and economic development policies and increased engagement of CROP organizations in sustainable

development policies and programmes;

- Range of community-based projects focusing on coastal fisheries management, use of marine protected areas as a management tool, watershed management and waste management in the 14 independent PICTs and the states and territories;
- Regional Networking of community-based projects through the Locally Managed Marine Areas Network (LMMA);
- Pilot projects to develop methodologies to assist communities adapt to impacts of climate change; and
- Round tables for nature conservation and climate change and adaptation.

## Advantages of Regional Approach

The use of a regional approach in the PICTs to develop strategic responses to issues has many advantages:

- Sharing of high investment or establishment costs for capital intensive activities;
- Augmenting capacity or capability constraints in small



SPREP

**Capacity building is a challenge for PICs as many lack expertise on ocean issues.**

populations needing specialist skills/advice;

- Attaining economies of scale in the provision of centralized training services;
- Formulating better policies or activities that have "spill-over" or "mutually reinforcing" impacts creating their own economies of scale; and
- Critically, providing a stronger voice in global fora.

## Continuing Challenges

In their efforts to pursue sustainable development, Pacific Island countries and territories (PICTs) face a range of difficulties which impede the process of implementation. Despite the benefits of strong regionalization, difficulties exist at regional and national levels. Some of these include:

### 1. Institutional weaknesses

The sectoral nature of CROP agencies and working groups is an impediment at the regional level. At the national level, fragmentation of authority/jurisdiction is entrenched and there is a lack of integration of environmental dimensions into socioeconomic planning and development practices. National priorities are often sector-based or understandably related to fundamental social and economic goals that are essential to job creation, health, education, and food security but do not always consider environment as an integral part of any program.

### 2. Capacity

Despite the benefits of regionalism and the support of regional organizations, the collective strength of the PICTs must be underpinned by strong

# International trade and investment are becoming increasingly important drivers of growth in developing PICTs. Despite considerable effort to deal with these forces, globalization is impacting negatively on small island states and its marine and coastal areas.

individual country entities. PICTs lack expertise on many ocean issues. In some cases, cash-strapped governments are unable to hire the necessary experts. Many talented individuals from the Pacific migrate to other countries where opportunities are often better or are absorbed into their countries' private sector. This limited capacity in the area of policy development and decision-making is further compounded by the fact that capacity in the areas of enforcement is even more limited and often totally absent.

### 3. Aid dependence

Aid dependency and the use of geopolitical agendas to underpin support for developing countries is as common in the Pacific as elsewhere. There is an almost total (often unavoidable) reliance on donor funding. Unfortunately, there can be a considerable gap between national priorities and the support provided under the

banner of Overseas Development Assistance for sustainable development activities.

### 4. Externalities

Sustainable development strategies are currently being formulated in the framework of climate change and globalization for the most part. The burden of dealing with global impacts of economic changes and the anticipated impacts of climate change and accompanying sea level rise are increasingly impacting on regional and national economies.

The increasing emphasis on climate change issues which involve long term perspectives, and the donor focus on associated programs, may be overshadowing more urgent and immediate issues such as solid and other waste management, water quality and availability, and inshore fisheries depletion.

International trade and investment are becoming increasingly important drivers of growth in developing PICTs. Despite considerable effort to deal with these forces, globalization is impacting negatively on small island states and their marine and coastal areas. PICTs are finding it difficult to secure the necessary benefits of international trade due to their isolation, remoteness from metropolitan markets, lack of skilled labor, underdeveloped economic infrastructure, and subsistence status. The newly emerging global trade and investment regime discourages regional protectionism in the interest of more open and competitive trade that will result in rapid economic growth and sustained (rather than sustainable) economic development. Developing export industries and inviting direct foreign investments are generally considered the natural and possibly only options for most countries bent on increasing their economic growth. Related activities are promoting a shift from subsistence to cash based economies and accompanying social dislocation (SPREP/FORSEC 2002).

### Where to from here?

Improving the sustainable development of coastal, marine, and

ocean resources will need to directly address pressing national priorities. Responses need to be based on people empowerment by encouraging greater multi-agency interaction, multi-sectoral collaboration, and local community involvement.

There is a need to accord greater emphasis towards building national capacity essential to progress at country and community levels. Emphasis must be placed on incorporating traditional conservation techniques and encouragement provided for more culturally compatible and sensitive educational materials, projects and programmes. The employment of mentors and coaches for longer-term engagement, leadership development, peer learning networks, and accessible experts should be encouraged (South and Power 2001).

Innovative financing schemes (e.g. marine investment bonds, fees for environmental services, etc.) need to be explored to move away from donor dependence. There is a need to secure greater and sustainable returns from ocean resources for the region through (i) improved terms of trade in ocean resources; (ii) higher levels of domestic and foreign investment in the ocean sector; (iii) greater foreign investment in onshore processing to add value to ocean products before export; and (iv) equitable returns from access arrangements.

## Improving the sustainable development of coastal, marine, and ocean resources will need to directly address pressing national priorities. Responses need to be based on people empowerment by encouraging greater multi-agency interaction, multi-sectoral collaboration, and local community involvement.

Aid practices need to be reviewed to ensure full involvement of stakeholders in the conceptualization and design of both large and small projects. ODA to PICTs needs to be targeted more towards dealing with national and regional priorities rather than longer-term global issues.

There needs to be a decoupling between poverty reduction and sustainable development. Poverty reduction should not be seen simply as a shift from

subsistence to cash economies and as an increase in per capita consumer spending power or growth in GDP. Nor should increased power to consume or engage in the market economy, or rampant economic growth, be the measure of sustainable development. PICTs need to replace the concept of economic growth with that of human development and emphasize self-sufficiency and domestic markets first, and promote in-country value adding to products and processes rather than export of raw product. ■

### References

Council of Regional Organisations of the Pacific (CROP). 2001. *An Ocean Policy for the Pacific Islands - Background Paper*.

Council of Regional Organisations of the Pacific (CROP). 2002. *Draft Pacific Regional Ocean Policy*.

Multilateral High Level Conference on the Management and Conservation of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (MLHLC). *Report of the third session of the MLHLC. Tokyo. 22 -26 June 1998*.

South, G.R. and J. Veitayaki. 1999. *Global initiatives in the South Pacific: Regional approaches to workable arrangement*. Asia

Pacific Press at the Australian National University. Canberra, Australia. 7 p.

South, G.R. and M. Power. 2001. *Ocean and coastal issues and policy responses in the Pacific Islands*. Paper presented at IOC-UNESCO Conference Oceans and Coasts at RIO + 10. Paris December 2001.

South Pacific Regional Environment Programme (SPREP). 2001. *Action Plan for Managing the Environment of the Pacific Islands Region 2001-2004*.

SPREP/FORSEC. 2002. *Draft Pacific Regional Submission to the World Summit on Sustainable Development 2002*. South Pacific Regional Environment Programme & Forum Secretariat.

## Introduction

The Thies International Riverprize for 2002 to the Mekong River Commission (MRC) given at the Brisbane Riversymposium last 5 September 2002 highlighted a regional agreement that is longstanding but little known.

The Mekong River Commission, an international river basin authority, was created in 1995 with the signing of the Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin. The agreement, which has the status of an international treaty, links Cambodia, Lao PDR, Thailand, and Vietnam to "cooperate in a constructive and mutually beneficial manner for sustainable development, utilization, conservation and management of the Mekong River Basin water and related resources." Under the 1995 agreement, the four countries have undertaken to notify, consult and, in certain circumstances, agree with each other regarding specific planned uses of the Mekong River Basin - no small task considering the different legal, administrative, and policy frameworks of the member countries.

# The Mekong River Commission: A New Direction in International River Basin Management



www.mrcmekong.org

**The Mekong River Basin.**

In accepting the Thies International Riverprize, MRC Chief Executive Officer, Mr. Joern Kristensen said, "The cooperation between the Mekong countries has started before there was a crisis of water management. There is time for us to learn from the successes and failures of other river basin organizations of the world."

Unusual in the context of agreements relating to international rivers, the Mekong cooperation arrangements were made without the

"push" factors of pollution or water scarcity.

The story begins in the middle of the 20th century with the formal signing of the Geneva Accords, when the newly independent nations of Cambodia, Laos and Vietnam took their places on the world stage. At that time, studies of the Mekong by the United Nations Economic Committee for Asia and the Far East (ECAFE) and the US Bureau for Reclamation suggested great scope for irrigation and hydropower

---

development. The studies sparked interest in the Lower Mekong countries and at the newly established ECAFE for a grand scheme to develop what was thought of as one of the world's great 'untamed' rivers.

This early thinking embraced many sectors including agriculture, navigation, and flood control. Peace and security concerns were uppermost in the minds of the planners as the world was recovering from the devastation of World War II, and former empires were breaking up into independent nations. The Mekong Project was thought of, in its early years, as a conduit for development and an impetus for modernization.

With the establishment of the Committee for the Coordination of Investigations of the Lower Mekong Basin (Mekong Committee), significant data collection, research and planning was carried out, particularly on possibilities for hydropower development. However, war hindered real collaboration among the four countries.

Lasting from the early 1960s until 1975, and including the massive US bombing of Vietnam, Cambodia and Laos, the war in Vietnam had detrimental effects on political relations within and outside the region. The Pol Pot regime in Cambodia (1975–79) and its political aftermath further blocked regional collaboration. It is only with the

## **Creating an effective intergovernmental institution in an economically poor region where financing is largely dependent on international contributions, where national institutions suffer from severe capacity constraints, and where even sharing of information can be viewed with suspicion, has been a daunting task.**

gradual stabilization of Cambodia since the early 1990s that Mekong basin collaboration has become a real possibility.

### **The New Mekong Cooperation**

The 1995 agreement provided a new, legal basis for Mekong cooperation, in a still-clean river basin with a wealth of flora, fauna, and landscapes that qualify it to be considered a world heritage area.

The new direction taken represents a significant move away from a narrow view of river management focusing on hydropower and irrigation, to a broad vision of integrated, sustainable development bringing equitable benefits to the people of the Mekong, while maintaining the healthy ecosystem on which they depend. Each member country has committed itself to consider potential transboundary consequences before undertaking any major interventions in its part of the

river system. Important in this regard, the 1995 agreement established high-level political mechanisms for dialogue, building trust, and reaching agreements.

Creating an effective intergovernmental institution in an economically poor region, where financing is largely dependent on international contributions, where national institutions suffer from severe capacity constraints, and where even sharing of information can be viewed with suspicion, has been a daunting task.

Yet this is what has been achieved in the seven years since the 1995 Agreement was signed. In part enabled by a major restructuring of the MRC Secretariat in 2000, the Commission has reshaped itself from an earlier perception of its being slow, closed, hydropower-focused and hampered by sectoral interests, to become a modern river basin authority with a broad-based, integrated and participatory approach to basin management. In

# The new direction taken represents a significant move away from a narrow view of river management focusing on hydropower and irrigation, to a broad vision of integrated, sustainable development bringing equitable benefits to the people of the Mekong, while maintaining the healthy ecosystem on which they depend.

the process, more than 40 additional professional staff from within and outside the region have been recruited to the Secretariat in Phnom Penh. Through an active gender policy, around half of these are women. The Secretariats of the four National Mekong Committees, which provide the essential link between the MRC Secretariat and line ministries, have been strengthened through restructuring, recruitment, training, and new equipment, supported with funds from the United Nations Development Programme.

Following on from the restructure, international donor confidence in MRC has dramatically increased, with pledges more than doubling from US\$12.7 million in 1999 to US\$28 million in 2001. The cash-strapped MRC member countries themselves have agreed to gradually increase their funding to ensure self-financing of MRC administrative costs by the year 2012.

Political collaboration will be put to the test over the next two to three years, when the tough decisions that the member countries have committed to make will actually have to be negotiated in the context of water-sharing agreements and priority-setting of development projects.

MRC is not the only institution promoting regional cooperation in the development of the Mekong basin. However, the unique legal agreement on which MRC is based, and its political and technical forums for joint research, dialogue, negotiation and implementation, will most likely prove to be its greatest assets.

## Understanding and Focusing on Core Tasks

MRC is under pressure to provide tangible development benefits to its member countries, while its core task as an international basin

---

organization is to provide the data, knowledge and institutional and political support needed to share and develop water resources in an equitable and mutually beneficial manner. It must propose real development opportunities, while safeguarding the sometimes contradictory needs of the member countries, such as the need for more upstream irrigation during the dry season while maintaining water flow downstream to protect the Mekong Delta crops from salt water intrusion from the South China Sea.

To maintain focus, MRC has structured its work around three core programmes: The Water Utilisation Programme, The Basin Development Plan, and the Environment Programme. The Water Utilisation Programme supports a schedule of negotiated legal agreements to be made between the four member countries. The Basin Development Plan is a joint planning process for research and identification of appropriate investments for development in the basin. The Environment Programme carries out monitoring, preparation of training materials, and provides technical advice and recommendations to the other two programmes, especially in relation to transboundary impacts and concerns.

The core programmes draw from the experience and expertise contained in five sector-focused programmes, including Fisheries and



---

Navigation, as well as from a backbone of Geographic Information System and other technical data maintained by a Technical Support Division.

Some achievements of MRC include:

- Detailed diagnostic studies carried out on the Mekong's resources. In August 2003, the MRC issued a State of the Basin Report, which reports on the health of the Mekong River Basin. The report reviews the main water-related sectors of fisheries, agriculture, forestry, hydropower, trade and transport, domestic water, sanitation, and flooding in the four Lower Mekong Basin countries of Cambodia, Lao PDR, Thailand and Vietnam, providing an overview of the challenges, opportunities, and appropriate regional responses.
- A legal agreement on data and information sharing established among the member countries (2001). Data and information sharing is the platform of any effective regional cooperation, but historically has not been the practice among member countries. This agreement was, therefore, a significant milestone towards closer regional cooperation.

## To maintain focus, MRC has structured its work around three core programmes: The Water Utilisation Programme, The Basin Development Plan, and The Environment Programme.



www.mrcmekong.org

**The Mekong River Basin ranks third among the world's river basins in terms of biodiversity.**

- A schedule for further agreements among the four member countries. Supported by the World Bank through the Water Utilisation Programme, the member countries have agreed to enter into further agreements relating to water utilization over the next few years, which are:
  - Preliminary procedures on notification, consultation and agreement by November 2002;
  - Procedures for monitoring existing water uses by the end of 2003;

## One major challenge in the immediate future is to ensure that the regional basin management issues gain the prominence they deserve at the highest levels of political decision-making within the member countries.

- Rules for the maintenance of flows by the end of 2004; and
  - Rules for water quality by the end of 2005.
  - A flood management and mitigation strategy prepared (2001). MRC has established an on-line flood forecasting system based on an extensive network of hydrological monitoring stations. Causes and consequences of the exceptional floods of 2000 have been assessed, and effective procedures for further collaboration put in place.
  - Detailed understanding of the value and nature of the Mekong fishery. The Mekong represents two per cent of the global fish catch. Through a major assessment of Mekong fisheries based on international scientific expertise as well as local knowledge of expert fishers, the exceptional value of the Mekong fishery is now much better understood. Major risk factors for the well-being of the fishery sector have been identified and accounted for in management planning.
  - Development of a hydropower strategy for the Mekong River Basin. The strategy focuses on public participation and sound environmental and social impact assessments (2001). Previous regional planning for hydropower development has not sufficiently considered implications on other sectors such as fisheries. Through extensive consultations, MRC has helped establish a regional hydropower strategy in line with recommendations of the World Commission on Dams.
  - Draft guidelines for environmental impact assessment in a trans-boundary context developed (2002) for the first time in the region.
- Over the past few years, MRC has been increasingly called upon to take the role of an "honest broker" to facilitate resolution of

---

transboundary issues. In the Se San hydropower project involving Vietnam and Cambodia, MRC facilitated the establishment of a Cambodia – Vietnam Sesan Committee for bilateral sharing of information and clarification of plans. In the case of the proposed navigation channel on the Upper Mekong involving the member countries of Lao PDR and Thailand, and the non-member states of PR China and Myanmar, MRC assisted the involved countries in assessing the plans and providing recommendations.

With a view to the future, an internship and exchange programme for young professionals in river basin management in the Lower Mekong region has been established.

As an international river basin organization, the MRC Secretariat has become a thriving centre where ideas are shared and debated. The Secretariat today has many collaborative agreements, formalized by Memoranda of Understanding, which bring in a broad range of expertise from partners including the Asian Institute of Technology in Bangkok, IHE Delft in the Netherlands, the World Meteorological Organisation, the Murray–Darling Basin Commission, the World Conservation Union, the World Wide Fund for Nature, and the WorldFish Centre.

## Future Challenges

One major challenge for the immediate future is to ensure that the regional basin management issues gain the prominence they deserve at the highest levels of political decision-making within the member countries. This is not always evident among the Mekong countries, which in their foreign policy work are often preoccupied with issues related to security, trade and foreign investment, rather than on water resources management. However, one cannot adequately consider these issues in isolation from water issues.

Another major future challenge is to strengthen the capacity of national departments to deal with regional and integrated water management. MRC programmes depend to a great extent on the operational work carried out at this level. Major efforts at institutional strengthening and collaboration will be required in the coming years, in order for basin-wide water management to become an operational reality.

Water is seen by some as "the" foreign policy issue of the 21st century. With the strong legal and institutional basis of the 1995 Agreement and the wealth of international goodwill and support received, the nations of Southeast Asia who conceived and nurtured a Mekong Committee, then turned it into a modern river basin commission, may yet prove to be a model for the world. ■

More information about the Mekong River Commission and its work is available on its website, [www.mrcmekong.org](http://www.mrcmekong.org)



Mekong River Commission

**With collaborative agreements bringing in a broad range of expertise from partners, the MRC Secretariat has become a thriving centre where ideas are shared and debated.**

### Facts about the Mekong River Basin

- At 4,800 km, the Mekong is the world's 12<sup>th</sup> longest river.
- The Mekong is the 8<sup>th</sup> largest river in terms of volume of water. During the peak month of September, the amount of water in the Mekong is 20 to 25 times more than during the dry season.
- In terms of biodiversity, the Mekong ranks 3<sup>rd</sup> among the river basins of the world, after the Amazon and Congo. There are more than 1,500 different species of fish in the Mekong.
- The river basin produces a huge amount of rice. The Mekong Delta alone produces 40 percent of Vietnam's total rice crop.
- Eighty percent of people in the Lower Mekong Basin earn their living from fishing and farming.
- There are over 70 different ethnic groups living in the Mekong River Basin.

**Jasmine Bachmann**  
Public Participation Consultant

International Commission for  
the Protection of the Danube River  
Wien, Austria

## Introduction

The Danube River Basin –  
A Cultural and Historical  
Center of Europe

The Danube River Basin is the geographical catchment of the second largest river in Europe. It plays an important role as a cultural and historical center for the political, social, and economic development in Central and Eastern Europe including the ongoing enlargement of the European Union (EU).

The Danube River is 2,780 km long and drains 817,000 km<sup>2</sup>, nearly 10 percent of the total surface of the European Continent. Numerous large rivers are the tributaries of the Danube - particularly in its middle part, where the Drava, Tisza, and Sava rivers double the water volume of the main river before it finally joins the waters of the Black Sea (Figure 2). The basin area includes all of Hungary; nearly all of Austria, Romania, Slovenia, Slovakia and Serbia and Montenegro; significant areas of Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, Moldova; and small parts of Germany and Ukraine (Figure 1). Five more countries make part of the Danube basin, but their areas are smaller than 2,000 km<sup>2</sup>, excluding them from the Danube River Protection Convention.

# International Commission for the Protection of the Danube River : Achieving Cooperation in International River Basin Management

## The Danube - River of Life

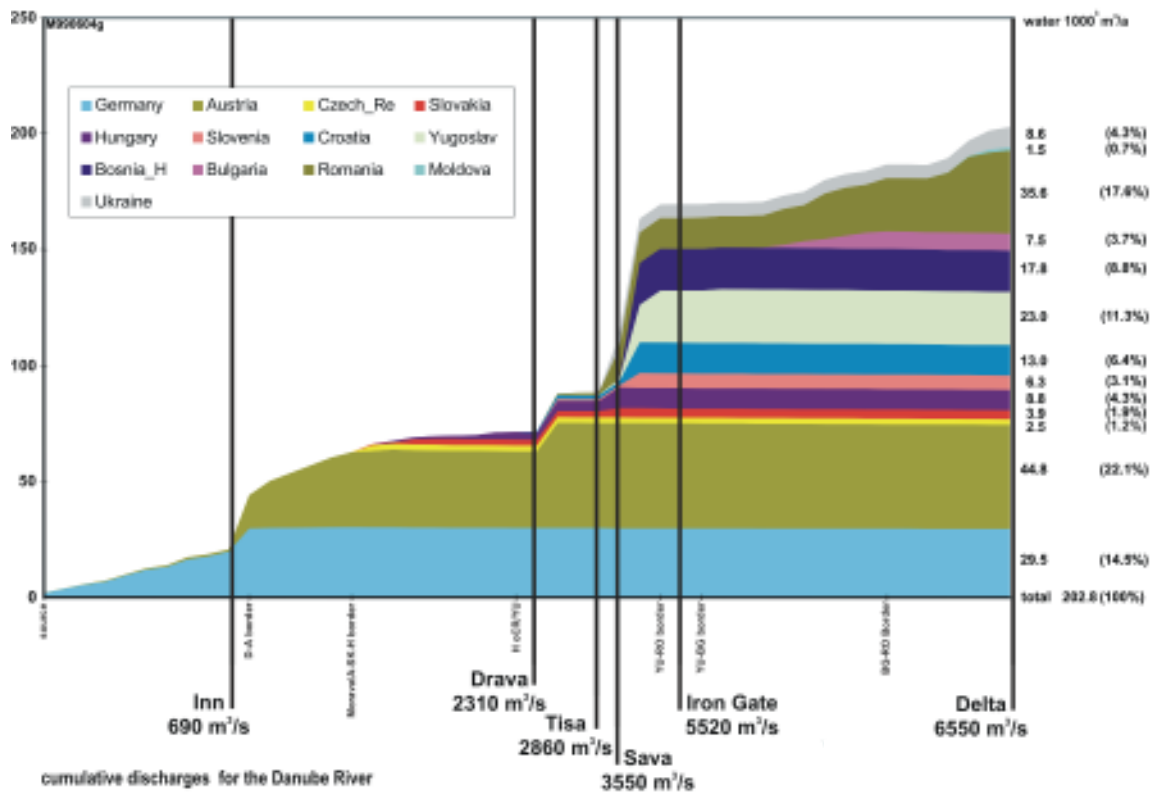
Besides the main body of water, tributaries, groundwater bodies, floodplain forests, and meadows form a complex ecosystem – providing habitat for specialized plants and rare animals, strongly depending on each other. Today 7,800 km<sup>2</sup> of floodplains are left

along the Danube River and its main tributaries, only half of which are in near natural conditions. Floodplains and thousands of lakes and ponds are part of an important network of feeding, resting, and breeding areas for numerous fish and bird species.



**Figure 1. The Danube River Basin: 18 nations hold a share in the Danube Basin and make it the world's most international river basin.**

## Longitudinal profile of the annual water volume in the Danube in 1000<sup>3</sup> m<sup>3</sup>/annum, subdivided over the countries of origin



**Figure 2.** The Danube is the largest tributary to the Black Sea with 6,550 m<sup>3</sup>/s mean annual water discharge.

The riverine wetlands act as the kidneys of the river system – they clean and store water and function as a sediment trap.

At its mouth, the Danube has formed the Danube Delta, an extensive fan-shaped area of river arms, lakes, reed-beds, dunes, and salt marshes. The Danube Delta ranks among the top biodiversity sites in the world. Its waters harbor 110 species of fish, including several species of sturgeon, and over 250 species of birds, some globally threatened, such as the pygmy cormorant, the red-breasted goose, and two species of pelicans.



Euronatur/ M. Schneider-Jacoby

**A 1994 study placed an average economic value of 383• per hectare per year on the Danube floodplains. For the remaining floodplains along the main river and its main tributaries, the annual value amounts to about 300 million •.**

## Nutrients and toxic substances from agricultural activities and households as well as chemicals from outdated industrial plants enter the river system without proper treatment.

### The Danube Peoples - Diverse Cultures and Languages

More than 82 million people representing different cultures and languages call the Danube Basin their home. Their livelihood is based on agriculture, industries, and tourism, which are heavily dependent on the rational use and sustainable management of water.



ICPDR

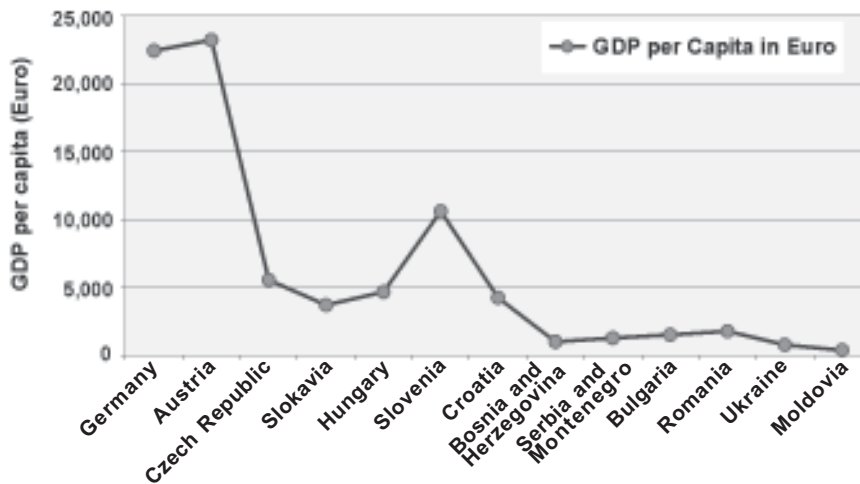
**Nature, the font of inspiration of culture and arts. In 1867, Johann Strauss composed "An der schönen blauen Donau" ("Blue Danube Waltz"), probably the world's most famous piece of music, describing the dance of water and waves.**

The waters in the Danube Basin are subject to serious pressures affecting the water supply for industrial and household consumption, irrigation, power production, fisheries, tourism, and navigation. This has created severe problems of water pollution and drastically affected biodiversity in the basin. Rivers are also the final destination of waste disposal. In many areas, water pollution exceeds threshold values. Nutrients and toxic substances from agricultural activities and households as well as chemicals from outdated industrial plants enter the river system without proper treatment. Groundwater is affected by waste deposit leakage. Natural habitats such as wetlands, floodplains, steep banks, and alluvial meadows have been dramatically reduced through drainage and intensified land use. River dynamics have been lost due to the building of solid embankments and impounding dams. All these have led to a change in the sediment regime and to a decrease of the river's self-purification capacity.

### The Socioeconomic Context - Diverse Cultures and Languages

An in-depth analysis of the social and economic context of the Danube countries is necessary to understand the problems of cooperation and the efforts that need to be undertaken to achieve common regional and global goals. The middle and downstream countries in transition are facing serious economic and financial problems and thus have difficulty in responding to the requirements of the Danube River Protection Convention and to implement measures for pollution reduction and environmental protection, as required for the accession to the EU (Figure 3). The analysis indicates the need to assist these countries and makes evident the responsibilities of the international community to respond to regional and global concerns of environmental protection.

## The Danube Countries: GDP per Capita in Euro (2001)



**Figure 3.** Economic analysis shows a clear decline in the GDP from the upstream to the downstream: from Germany and Austria with about 25,000• to Ukraine, which reports less than 1,000• per capita per year.

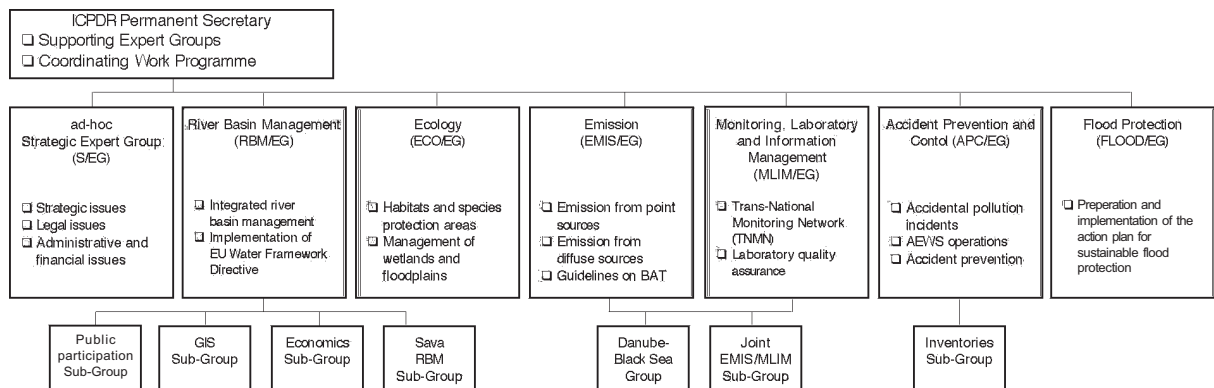
## The Danube River Protection Convention

As early as 1991, political visionaries started the process to develop the Danube River Protection Convention. When the Convention was developed in 1998, it served as the legal basis to ensure the

protection of water and ecological resources and their sustainable use for the Danube River Basin countries: Germany, Austria, Czech Republic, Slovakia, Hungary, Slovenia, Croatia, Bosnia and Herzegovina, Serbia and Montenegro, Bulgaria, Romania, Moldova, Ukraine, and the European Community.

## ICPDR - A Platform for Regional Cooperation

The International Commission for the Protection of the Danube River Basin (ICPDR) was created to promote and coordinate sustainable and equitable water management, including conservation, improvement and rational use of waters, for the countries' mutual benefit and the people's well being. Today, the ICPDR is one of the largest and most active international bodies for river basin management in Europe. It consists of national delegates from each contracting country at the highest ministerial levels, technical experts, civil society representatives, and the scientific community (Figure 4). The mission of the ICPDR is to promote and coordinate sustainable and equitable water management, including conservation and rational use of waters for the benefit of the Danube River Basin countries and their people.



**Figure 4.** In order to make the ICPDR effective and operational, international expert groups have been set up to develop strategies and guidelines for water management and pollution control in the Danube River Basin.

**According to the Black Sea Environment Programme, major rivers transport over 70 percent of the nutrients entering the Black Sea. Nutrient discharges are likely to increase with economic growth, unless action is taken to implement nutrient discharge control measures as part of the economic development strategies.**

The Black Sea ecosystem has been severely damaged by eutrophication since the 1970s. According to the Black Sea Environment Programme, major rivers transport over 70 percent of the nutrients entering the Black Sea. It is widely acknowledged that nutrient discharges are likely to increase with economic growth, unless action is taken to implement nutrient discharge control measures as part of the economic development strategies. To facilitate a process to bring about such action, a Memorandum of Understanding was signed between the Black Sea Commission and the ICPDR in November 2001. A joint Danube-Black Sea Working Group has been established to assure its efficient and timely implementation.

Within the framework of the ICPDR Joint Action Programme, about 250 investment projects have been identified out of which more than 150 are from the municipal sector and only about 50 from the industrial sector. Particular attention was given to the identification of sites for the restoration of wetlands. For countries in transition, the investment needs in relation to the per capita income represent an enormous burden. Countries affected by the Balkan Crisis (Serbia and Montenegro, Bosnia and Herzegovina, Croatia) have highest investment needs. Romania, Bulgaria, Moldova and Ukraine are presently lacking the financial capacity to respond to the investment needs. The DABLAS Task Force has been set up under the leadership of the EU to link the pollution reduction efforts of the Danube and Black Sea countries, to develop detailed project proposals, and to secure funding for treatment facilities in the Danube and Black Sea area.



Courtesy of NASA

**The blooming Black Sea: The satellite image shows clearly the phytoplankton bloom in the Black Sea.**



As a legal instrument, the EU Water Framework Directive poses new challenges and opportunities in its aim of achieving "good status" for the ecological and chemical quality of surface and groundwater by 2015. The Directive is binding for all EU member states as well as for accession countries. All Danube countries have expressed their commitment to implement the Directive. In this regard, the ICPDR forms the platform for coordination, harmonization and information exchange to develop the Danube River Basin Management Plan.

## UNDP/GEF - Facilitating Capacity Building

Through the Danube River Basin Pollution Reduction Programme (1997–1999), the United Nations Development Programme and the Global Environment Facility (UNDP/GEF) supported the establishment of the ICPDR in the amount of US\$ 3.9 million. The following set of actions have been carried out:

- A transboundary analysis has been accomplished to obtain

complete knowledge on pollution loads and their effects.

- The Strategic Action Plan has been revised and is the main guiding document for the activities of the ICPDR.
- The development of the Danube Environmental Forum (DEF), an umbrella organisation of nongovernment organizations working on water, has been supported and a Small Grants Programme for pollution reduction measures and awareness-raising projects has been accomplished.



ICPDR / I. Liska

**Cooperation between the Danube countries under the Danube River Protection Convention contributes to the stability in the region and paves the way for a new Europe.**

As a follow-up, the UNDP/GEF financed the Danube Regional Project (2001–2006) with US\$17 million, which was launched in December 2001. The main goal is to strengthen and to build capacities of the Danube basin countries in developing effective mechanisms for regional cooperation and coordination to ensure the protection of international waters, sustainable management of natural resources and biodiversity. A key target of the Danube Regional Project is to complement the activities of the ICPDR and provide a regional approach in the development of national policies and legislation. Another is to define priority actions for pollution control, with particular attention to the sustainable ecological effects within the Danube River Basin and the Black Sea area.

continued on page 59

**Dr. Elik Adler**  
Coordinator  
Regional Seas Programme

United Nations Environment Programme  
Nairobi, Kenya

## Introduction

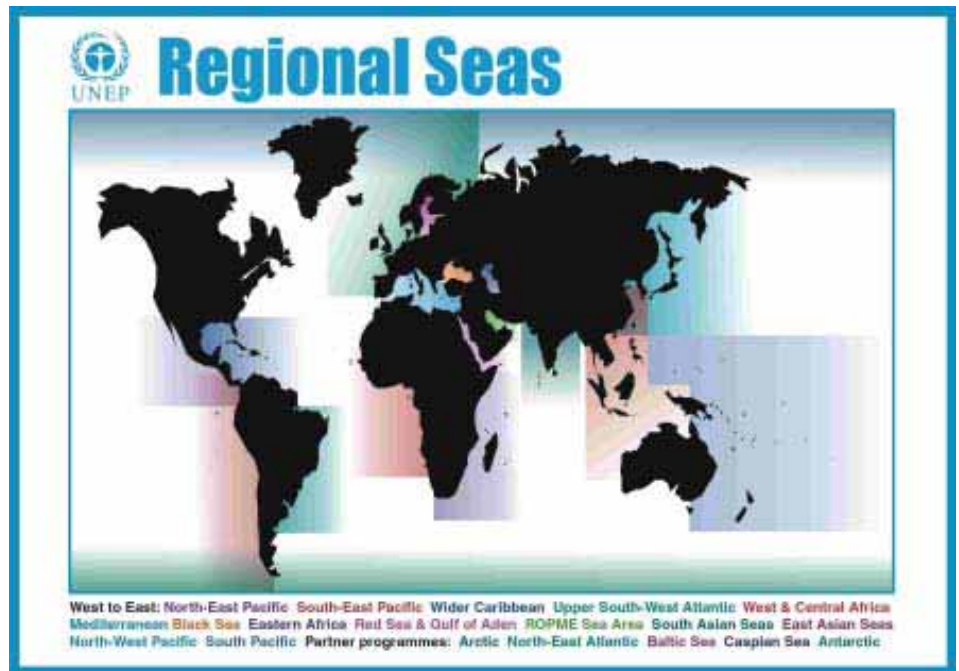
The UNEP Regional Seas Programme, launched in 1974 following the 1972 United Nations Conference on the Human Environment held in Stockholm, is one of UNEP's most significant achievements for the past 25 years.

The Programme aims to address the accelerating degradation of the world's oceans and coastal areas by working regionally to engage governments in comprehensive and specific actions to protect their shared marine environment.

Today more than 140 countries participate in 13 regional programmes in the Black Sea, Caribbean, East Africa, East Asia, the Kuwait Convention region, Mediterranean, North-East Pacific, North-West Pacific, Red Sea and Gulf of Aden, South Asia, South-East Pacific, South Pacific, and West and Central Africa – all under UNEP's auspices.

There are also five partner programmes for the Antarctic, Arctic, Baltic Sea, Caspian Sea, and North-East Atlantic.

# A World of Neighbours: UNEP's Regional Seas Programme



**UNEP Regional Seas Programmes.**

## Common Elements

The Regional Seas Programmes have several common elements. The process of establishing a Regional Seas Programme usually begins with the development of an action plan outlining the strategy and substance of a regionally coordinated programme, aimed at the protection of a common body of water. The action plan is based on the region's environmental challenges as well as its socioeconomic and political situation. It may cover issues ranging from chemical wastes

and coastal development to the conservation of marine species and ecosystems.

In most cases, the action plan is underpinned by a strong legal framework in the form of a regional convention and associated protocols on specific problems. The legally-binding convention expresses the commitment and political will of governments to tackle their common environmental problems through joint, coordinated activities.

Why has this approach worked so well?

First, the limited geographic focus of the action plans and conventions enables the countries to channel the energies of a wide range of interest groups towards a global purpose: preserving the world's ocean and coastal ecosystems, and the livelihoods they secure.

Second, although UNEP applies a common strategy in drawing up its regional action plans, it is by no means inflexible. The specific activities are customized to fit the needs and priorities of the region.

Third, from the start of the process, UNEP consults closely with a region's governments, regional organizations, interested international organizations, and regional experts to determine the scope and substance of a suitable action plan.

Fourth, UNEP ensures that the action plans are firmly grounded on regional knowledge, by producing comprehensive reviews of the environment and environmental problems which governments can use to set priorities.

Fifth, action plans are truly comprehensive. They normally include chapters on environmental monitoring and assessment, management and legislation, as well as institutional and financial arrangements needed to support

## The Mediterranean Action Plan

The Mediterranean, one of the world's most beautiful regions and a popular holiday destination, faces numerous threats to the marine environment brought about by solid waste generation, over-crowded coastal areas, soil erosion, and pollution from ships. These challenges prompted the Mediterranean countries and the European Community to start working together in the mid-1970s to protect the region's marine environment.

The Mediterranean Action Plan (MAP) is the mechanism through which the 20 countries bordering the Mediterranean Sea, and the European Union, cooperate. It is the first such instrument developed by UNEP. The Action Plan focuses mainly on four key fields of activity: curbing pollution, safeguarding natural and cultural resources, managing coastal areas, and integrating environment and development. MAP was expanded in 1995 to include sustainable development and make it more action-oriented.

The Athens-based MAP Coordinating Unit (MEDU) is the Action Plan's Secretariat. It manages and organizes the work of the Contracting Parties to the Barcelona Convention, *i.e.*, the 21 MAP members, as well as the activities of the six MAP Regional Activity Centers (RACs), which offer expertise in specific fields of action. Focal points, appointed by member countries, are responsible for the follow-up and coordination of MAP activities, while the Mediterranean Commission on Sustainable Development (MCSD) provides guidance on policies for promoting sustainable development in the Mediterranean basin.

Since its inception, MAP has involved various United Nations agencies and numerous grassroots organizations in its activities, and seen the adoption of its legal framework, the Barcelona Convention for the Protection of the Mediterranean Sea Against Pollution (1976) and six related protocols. Several key tools have been developed to reduce land-based sources of the sea's pollution and secure maritime safety and environmental protection in the region.

The Coastal Areas Management Programme was launched in 1987, indicating a shift of the Plan's focus to integrated coastal management. The introduction of the Mediterranean Action Plan Phase II (the Action Plan for the Protection of the Marine Environment and the Sustainable Development of the Coastal Areas of the Mediterranean MAP II) in 1995 incorporated UNCED principles into the Mediterranean context showing the determination of the parties to use the regional mechanism as a tool for sustainable development.

MAP presents a stable regional framework for meeting the challenges of environmental degradation and to link sustainable resource management with development in order not only to protect the Mediterranean region but to improve and maintain the quality of life of its inhabitants.

these actions. All these parts are interdependent, so they make up a coherent and effective whole.

Finally, the programme is flexible and responsive to evolution and changes in the international environmental agenda. The Earth Summit/UN Conference on

Environment and Development (UNCED) held in Rio de Janeiro in 1992, and the World Summit on Sustainable Development (WSSD) held in Johannesburg in September 2002, had an influence on the work programme and priorities of the various regional seas programmes. The five emerging global priority

## The East Asian Seas Action Plan

In 1981, five states of the East Asian region – Indonesia, Malaysia, Philippines, Singapore and Thailand – took the initiative to create a cooperative programme for the study, prevention and control of marine pollution in their shared environment. Backed by the UNEP Governing Council, these countries adopted an Action Plan for the Protection and Sustainable Development of the Marine Environment and Coastal Areas of the East Asian Region. In 1994, Australia, Cambodia, People's Republic of China, Republic of Korea and Vietnam joined the Action Plan and the 10 countries adopted a revised Action Plan and Long-term Strategy for the 1994-2000 period.

The Action Plan is steered from Bangkok by the Coordinating Body for the Seas of East Asia (COBSEA). The Regional Coordinating Unit (EAS/RCU) serves as Secretariat, and is the lead UN agency for marine environmental matters in East Asia, responsible for coordinating the activities of governments, NGOs, UN and donor agencies, and individuals.

The Action Plan encompasses assessment of the effects of human activities on the marine environment; control of coastal pollution; protection of mangroves, seagrasses and coral reefs; and waste management. Recent revisions have expanded it to include technology transfer, environmental governance, land-based pollution, habitat degradation, treatment and re-use of waste, and a transboundary diagnostic analysis carried out in cooperation with the GEF South China Sea project.

The region has not yet adopted a regional convention. Instead, the programme promotes compliance with existing environmental treaties.

A UNEP-led process of the revitalization of COBSEA and the activities of EAS/RCU is now under way. The Regional Seas programme for this extremely diverse and fragile region faces a promising future, based on the mutual commitment, sense of ownership and growing partnership of its governments and UNEP.

issues which were announced by the UN Secretary General prior to WSSD – water, energy, health, agriculture and biodiversity (WEHAB) – will be taken on board and addressed by the Regional Seas Conventions and Action Plans.

### A New Era

At the request of its Governing Council, UNEP strengthened its commitment to the Regional Seas Programme in the mid-1990s. To generate and sustain its momentum, UNEP

began to convene regular global meetings of the secretariats of all the regional seas and partner programmes. Today, 16 regional programmes discuss common interests, set priorities, and establish lasting links with one another, as well as with global environmental conventions and international organizations. This close collaboration continues today, and the global meetings are characterized by enthusiasm, determination, and productivity.

Since then, the UNEP Governing Council has repeatedly made its wishes clear: the programme is expected to increase both regional and inter-

regional collaboration by promoting horizontal ties among the action plans and partner programmes. It should link more closely and be better coordinated with the Global Plan of Action for the Protection of the Marine Environment from Land-based Sources of Pollution (GPA). It should also collaborate more closely with Multilateral Environmental Agreements (MEAs) or global conventions and other partners such as the International Coral Reef Initiative (ICRI), the International Coral Reef Action Network (ICRAN), the Global International Water Assessment (GIWA), and the Global Plan of Action for Marine Mammals.

The Governing Council requested the individual regional seas programmes to strengthen their cooperation with international organizations such as the International Maritime Organization (IMO), the Intergovernmental Oceanographic Commission of UNESCO, and the Food and Agriculture Organization of the United Nations (FAO).

The Governing Council also encouraged the Regional Seas Programme to expand to other parts of the world when requested by the countries of a region. Recognizing the regional programme's valuable role in delivering UNEP's own programme and priorities, the Governing Council requested the Executive Director to strengthen its contribution and technical support to the various regional seas programmes.

## Change and Flexibility

Many of the regional programmes began to reach maturity, just as the international environmental agenda was undergoing a change and shifting towards new directions.

UNCED 1992 propelled the concept of sustainable development to the forefront of international concern, creating a new paradigm for discussion and action that was embodied in the meeting's major product – Agenda 21.

Chapter 17 of Agenda 21 outlined detailed provisions for the protection of oceans, seas, coastal areas, and related resources. The concentrated work that led to the adoption of the chapter seemed to have a catalytic effect. The decade after UNCED saw the adoption or entering into force of some 20 instruments and initiatives related directly or indirectly to the marine environment or marine biodiversity. These developments had enormous implications for the future of the Regional Seas Programme in general, and for individual activities of the regional programmes.

In 1992 there were a number of such agreements. Governments at the Rio Summit signed the Convention on Biological Diversity and the Climate Change convention; the Baltic countries adopted the Helsinki Convention on the Protection of the Marine Environment of the



UNEP/Noroo  
Ohio

**Japanese children fishing. The Regional Seas Programme works in partnership with civil society to increase awareness on the marine environment and its resources.**

Baltic Sea Area; the Oslo and Paris Conventions combined to create the OSPAR Convention for the Protection of the Marine Environment of the North–East Atlantic; Black Sea States adopted the Convention on the Protection of the Black Sea Against Pollution (Bucharest Convention); the Arctic Council for the Protection of the Marine Environment was established; and the 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal entered into force.

In subsequent years, the United Nations Convention on the Law of the Sea (UNCLOS) entered into force (1994); the Washington Declaration established the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA) (1995); the International Tribunal on the Law of the Sea began operations (1997); and the Stockholm Convention on

Persistent Organic Pollutants was signed (2001).

In addition to the 1992 Bucharest Convention, the decade saw the adoption of several new regional seas agreements: the North–West Pacific Action Plan in 1994, the South Asian Seas Action Plan in 1995, the Convention for the North–East Pacific (Antigua Convention) in 2002, as well as a number of new protocols to existing conventions. In 1995, the Mediterranean countries adopted a revised and modernized text of the very first regional seas legal agreements – the Barcelona Convention and its protocols.

## A Milestone in Jakarta

Exemplifying the growing conviction that the conservation and sustainable use of marine and coastal biodiversity are essential elements of sustainable development, the 'Jakarta



UNEP/Vincent Yeung

**Fishing at dawn. The Regional Seas Programme seeks to relieve pressure on marine and coastal ecosystems from overfishing, biodiversity loss, and pollution.**

Mandate' was adopted by parties to the Convention on Biological Diversity in 1995.

The Jakarta Mandate and its 1998 programme of action represent a fresh and progressive approach to the management of marine and coastal resources. Its six main elements echo traditional concerns of the Regional Seas Programme such as marine and coastal living resources, protected areas and mariculture, as well as more recent ones such as alien species and genotypes, and coral bleaching. The Jakarta Mandate and the Regional Seas Programme both promote 'integrated marine and coastal area management' (IMCAM) as the best tool for the conservation and sustainable use of marine and coastal biodiversity.

## Reaching a Peak at WSSD

The decade-long surge in environmental activity resulting from the Rio Summit culminated in the

WSSD in 2002. This meeting resulted in a Plan of Implementation, the Johannesburg Declaration on Sustainable Development and perhaps most important, an abundance of potential new partnerships among countries, international organizations, civil society, the private sector, and other stakeholders.

Section IV of the WSSD Plan of Implementation, *Protecting and managing the natural resource base of economic and social development*, relates most directly to regional seas, and covers a range of water-related issues including the protection of the marine environment. It draws particular attention to pressures on marine and coastal ecosystems from fisheries, biodiversity loss, and pollution.

Moreover, it specifically calls for strengthening regional cooperation and coordination between relevant regional organizations and

programmes, including the UNEP Regional Seas Programme.

## A Firm Foundation

With nearly 30 years of experience, the Regional Seas Programme provides an ideal platform on which to construct regional sustainable development, using the deliberations and results of WSSD as a blueprint. Practically, it provides regional platforms for both implementation of the principles of sustainable development and for regional implementation of programmes and activities related to global conventions and MEAs.

In fact, at a meeting held during the WSSD preparatory phase, the Regional Seas Conventions and Action Plans identified their major concerns and priorities as:

- Land-based sources of marine pollution with particular emphasis on responding to pollution resulting from municipal wastewater;
- Ship-generated marine pollution, oil spill preparedness and response, and construction of port reception facilities for ships' wastes (a concern reinforced by the major oil spills that occurred off the coasts of France and Spain within the last three years);
- The impact of increasing urbanization and coastal development on marine and coastal ecosystems, requiring

capacity building in support of integrated coastal management;

- Conservation and management of marine and coastal ecosystems, including protected areas. Over-exploitation or depletion of living marine resources including fisheries has emerged as a priority concern; and

- Monitoring, reporting and assessment for the marine environment, to fill the need for more accurate scientific and technical information.

Most of these concerns are mentioned in the Plan of Implementation, and are nearly

identical to the issues identified by the Commission on Sustainable Development. As such, they will serve as a useful basis for cooperation between the various MEAs, including the major environmental conventions, and the various regional seas programmes.

Other areas of concern in the Regional Seas which could be basis for future collaboration with MEAs, international organizations and civil society include ecosystem-based management of living marine resources such as fisheries; data and information management including the use of sustainable development indicators; dissemination of best practices; and a multi-sectoral approach to IMCAM.

### The Northwest Pacific Action Plan

The Northwest Pacific Action Plan (NOWPAP), brings together People's Republic of China, Japan, Russian Federation, Republic of Korea (ROK) and Democratic People's Republic of Korea (DPRK). The countries realize that by joining forces, they can strike a balance between the provision for human needs; use of resources and economic development; and the protection, enhancement and sustainability of the environment. The Plan was adopted in 1994 and entered into force a year later. It is currently supported by four countries, with a hope of full participation of all five. DPRK currently has observer status.

NOWPAP focuses on the wise use, development, and management of the coastal and marine environment. To achieve long-term benefits for the region's population and to protect human health and ecological integrity for future generations, NOWPAP incorporates six priority projects to be implemented through a network of Regional Activity Centers (RACs) that serve all member states. Four of these are in operation and deal with a Data and Information Network (DIN/RAC, Beijing), Pollution Monitoring (POM/RAC, Vladivostok), Special Monitoring and Coastal Environmental Assessment (CEA/RAC, Toyama) and Oil and Chemical spills preparedness and response and marine based pollution (MER/RAC, Taejeon).

UNEP, UNEP/GPA and UNEP/GEF are developing a proposal on the formulation of a Strategic Action Plan for NOWPAP to address pollution of the marine environment from land-based activities. This will also focus on integrated and coordinated management of the marine and coastal environment for the NOWPAP area.

NOWPAP is currently engaged in the process of establishing its Regional Coordinating Unit (RCU) that will be co-hosted by Japan (Toyama) and the ROK (Busan). The RCU will serve as the nerve center and command post of the Plan's activities.

NOWPAP will work towards: the establishment of a regional monitoring and assessment system, a network of public outreach and environmental education, a regional oil and chemical spill prevention, preparedness and response contingency plan, a Regional Strategic Plan to abate marine pollution originating from land-based sources and activities in accordance with the GPA approach, and regional activities and programs aimed at the protection of the marine and coastal biodiversity; the development into a regional platform for the implementation of Multilateral Environmental Agreements and other global programmes and initiatives concerning the marine and coastal environment; and the development and implementation of programs (for the sustainable management of living marine resources) founded on the Ecosystem Based Management approach.

## A New Global Strategy

The UNEP Governing Council, at its 22<sup>nd</sup> Session and Global Ministerial Environmental Forum in early 2003, set out the elements of a global strategy for the regional seas based on the central idea of the Regional Seas Conventions and Action Plans as an instrument for sustainable development.

Other key elements of the strategy are:

Commitment. The strategy calls for member states to develop an

continued on page 58

**Achim Steiner**  
Director General

The World Conservation Union  
Gland, Switzerland

## Introduction

It is said that the deepest crisis in the marine environment lies in the shallowest waters. Today, marine and coastal issues are a cause for concern. An increasingly significant percentage of the global population lives within the coastal margin, relying heavily on coastal and marine ecosystems for food and income. For developing coastal nations, these are their only means of survival, with economies boosted through fisheries, petroleum exploitation, tourism, and seabed mining.

Further offshore, the oceans, covering over 71 percent of the earth's surface, are home to 97 percent of all life on earth, holding a cornucopia of biodiversity. Their vital "rainforests" benefit people and the natural world far beyond their boundaries.

The unprecedented rate, during the last ten years, of over-fishing and harvesting, overpopulation and poorly managed coastal development, threatens the fragile marine ecosystems. Progress in their conservation is slow and this negative trend will only be reversed through collective efforts at the international, regional, and local levels.

# IUCN: A Unique System of International Cooperation for Nature Conservation



**IUCN Regional Office for South America Director, Miguel Pellerano, speaks at the launch of the joint IUCN, Conservation International, and UNEP Galapagos - Cocos Initiative at the 2002 World Summit on Sustainable Development.**

## A World Partnership

The World Conservation Union (IUCN) is a unique world partnership that was founded 55 years ago, and has nearly 1,000 members in 141 countries. It brings together States, government agencies, and a range of non-governmental organizations, and is the largest environmental knowledge-based network today.

Through its six Commissions, IUCN draws together over 10,000 expert volunteers in project teams and action groups, focusing on species and biodiversity conservation and the

management of habitats and natural resources. These Commissions are sources of international expertise and professional advice to IUCN's activities.

IUCN aims to provide support and leadership to the conservation community and has responded to the need for conserving marine and coastal resources by establishing in 1985 the Global Marine Programme (GMP) which works across Southeast Asia, the Middle East, Africa, the Mediterranean, and Central and South America. The GMP covers multiple areas such as integrated coastal and marine management, fisheries, marine



protected areas (MPAs), larger marine ecosystems, coral reef rehabilitation, and the effects of coral bleaching and climate change.

## Marine Protected Areas

IUCN promotes the establishment of a global representative system of MPAs to conserve the oceans' rich biodiversity. In doing so, IUCN works closely with the World Commission on Protected Areas (WCPA), a global network of protected area specialists.

The WCPA provides policy guidance on global marine issues and works on the development of a network of MPAs. The establishment of the Aleipata and Safata MPAs in Samoa as multi-use, community-based MPAs to conserve marine biodiversity, is an example of WCPA's work. These MPAs are planned and managed by village committees as a key element of the World Bank/IUCN/Government of Samoa Project on Marine Biodiversity Protection and Management in Samoa. They provide opportunities to improve the livelihoods of local people by developing and maintaining sustainable fisheries and tourism.

In 2001, the Aleipata and Safata Marine Protected District Committees in Samoa placed bans on scuba fishing, and called upon the Government to ban scuba spearfishing throughout Samoa. Scuba fishermen use dive tanks and breathing gear to gain access to fish, especially at night. While scuba diving is viable for tourism, it can be destructive when used for commercial

# IUCN encourages nations to pursue better international governance by ratifying important international agreements and by promoting international cooperation at high levels.



**Overfishing and harvesting has increased at an unprecedented rate in the last ten years.**

fishing because fishermen are able to follow and catch fish in deep water. Most vulnerable are parrotfish, surgeon fish, grouper and wrasses. The growing commercial scuba fishery benefits only a few who earn highly from it, and are mostly non-residents of the area. The local fisherfolk and their families are the ones who suffer if the reefs are overfished. Equity has thus emerged as a key challenge, alongside the sustainable management of the resource itself. The project reflected how policy and practice can be bridged to benefit the people and ecosystems.

The Fifth IUCN World Parks Congress on Protected Areas, held under the theme "Benefits Beyond Boundaries," will be held in Durban, South Africa from 8-17 September 2003. The Congress will be critical in shaping the global agenda for protected areas in the 21<sup>st</sup> century. It will guide IUCN's work on protected areas over the next ten years. The Congress will particularly look at the current gaps in the system of MPAs and will provide input to the upcoming Conference of the Parties to the Convention on Biological Diversity that will consider protected areas in 2004.

# Biological boundaries and ecosystems do not recognize political borders. Therefore, governing species introduction, especially in the marine environment, should be addressed at the local, national, regional, and international levels.

Almost all IUCN's Commissions deal with aspects related to water issues. The Species Survival Commission (SSC), the largest of the six Commissions, has over 120 Specialist Groups and Task forces. SSC is home to the IUCN Red List of Threatened Species™— the world's most comprehensive inventory of the global conservation status of plants and animals. It uses a set of criteria to evaluate the extinction risk of thousands of species and subspecies. SSC, supported by its Shark Specialist, Coral Reef Specialist, Grouper and Wrasse Specialist, and Inland Water Crustacean Specialist groups, provides technical and scientific advice to governments, international environmental treaties, and conservation organizations, publishes action plans, and implements on-ground conservation projects.

The Commission of Environmental Law (CEL) works with the IUCN Environmental Law Programme in assisting decision makers with information, legal analysis, advisory services, legislative drafting, mentoring, and capacity

building at national, regional and international levels. The Commission was instrumental in drafting international treaties such as the Convention on Biological Diversity (Rio de Janeiro, 1992) and its Jakarta Mandate, which defines the Convention's role in ocean management. It provided critical technical commentary and proposals for textual language for the Law of the Sea Convention (1982) negotiations, the Conventions on the Conservation of Antarctic Marine Living Resources and the Regulation of Mineral Related Activities in Antarctica, and the Marine Pollution and Hazardous Waste Conventions. The CEL has a strong regional presence through its regional 'centres of excellence' and institutional partnerships, and works in close collaboration with the IUCN Secretariat on issues with specific legal ramifications including transboundary ecosystems and species, integrated coastal zone management, alien invasive species, water resources management, environmental governance, and capacity building.

The IUCN encourages nations to

---

pursue better international governance by ratifying important international agreements such as the Law of the Sea, and by promoting international cooperation at high levels, as was highlighted by Ms. Lee Kimball in the recent IUCN publication, "International Ocean Governance: Using International Law and Organizations to Manage Marine Resources Sustainability".

## The High Seas

High seas represent 50 percent of the earth's surface. They are home to submarine canyons, deep-sea trenches, seamounts, and deep sea reefs displaying intriguing biodiversity, often new to science. Effective governance is needed to deal with issues facing the high seas, as they represent one of the last places on earth that belong to all.

Focusing on the high seas, the IUCN Global Marine Programme has partnered with the World Wide Fund for Nature (WWF) and WCPA to develop a High Seas Ecosystem Management Project, a major initiative to conserve its marine living resources. The GMP Head raised key issues at the Public Hearing on High Seas Fisheries held at the European Parliament. An action plan is under way to address the conservation issues in the light of a joint IUCN and WWF publication, "Status of the Natural Resources of the High Seas" (2001).

At regional levels, the GMP works

through conventions such as the Convention for the Protection of the Mediterranean, and at national levels through policy advice and project implementation, supported through the Malaga office.

## Biodiversity

Biological boundaries and ecosystems do not recognize political borders. Therefore, governing species introduction, especially in the marine environment, should be addressed at the regional and international levels, as well as at the local and national. Cooperation between nations and organizations is critical to efficiently address this problem.

In its guidelines for the prevention of biodiversity loss caused by alien invasive species, IUCN committed to maintain and develop links and cooperative programmes with other organizations involved in this issue. Faithful to this commitment, IUCN's Global Marine Programme is now engaging with the International Maritime Organization (IMO) and the GloBallast Programme to bring its expertise, through its different components (including its Commissions, Programmes and Regional Offices), to raise awareness on the problem of aquatic invasive species.

IUCN's contributions aim to raise awareness about the threats posed by alien species, and more particularly to



IUCN

**Coastal areas sustain thousands of communities with a wide range of products, such as drinking water, fish, food, and timber.**

the precious few remaining undisturbed ecosystems. Today, the world is witnessing a global mixing of faunas and floras across the oceans, and the beginnings of changes in marine biodiversity hot spots like certain coral reef areas in the Pacific region.

The initiation of this new partnership between IUCN and IMO/GloBallast, including co-production of the "Ballast Water News", signifies a new era of international cooperation upon which additional efforts can be built.

## Large Marine Ecosystems

IUCN creates partnerships to achieve goals of protection and sustainable use of the ocean. Through its Large Marine Ecosystems Strategy initiated with the Intergovernmental Oceanographic Commission of the United Nations Education, Scientific and Cultural

Organization (UNESCO) and other UN agencies, and the US National Oceanic and Atmospheric Administration, IUCN implements a total portfolio of 15 projects, involving over 100 countries. In 2002, IUCN produced an updated map with the currently described 64 large marine ecosystems, each around 200,000 km<sup>2</sup>, covering the coastal waters of the world.

## Mangroves and Wetlands

Coastal and wetland areas sustain thousands of communities with a wide range of products, such as drinking water, fish, food, and timber. Freshwater ecosystems provide an estimated annual value of US\$ 8,700 billion/year to humanity: they are the most productive ecosystems in the planet and are under increasing pressure from over-extraction of fresh water, overuse, drainage, and

# Some areas of the Indian Ocean's coral reefs lost up to 90 percent of their living corals in early 1998 due to sustained above-average sea temperatures.

pollution. They are blocked by dams or converted to agricultural land. Fifty percent of the world's wetlands have been lost in the past century and over 800 freshwater species worldwide are now threatened with extinction. The degradation of wetlands puts their biological diversity and the livelihoods of communities at great risk, especially considering that it is often the poorest in society who depend directly on wetlands.

The IUCN Global Marine Programme works closely with the Wetlands and Water Resources Programme (WWRP) to handle the diverse and complex coastal and wetland issues, improve the conservation and sustainable use of wetlands, manage water resources, and restore wetlands around the world. The WWRP is active in 40 countries and is involved in demonstrating sustainable development, knowledge dissemination, and designing policies.

The WWRP carries a strong voice in wetland and water policy development and implementation. "Vision for Water and Nature" was written to support the World Water Council which defines actions to avert a world water crisis. It also aids

governments to set up and realize national strategies for wetland conservation.

Working with the Centro Agronómico Tropical de Investigación y Enseñanza (CATIE) and IUCN's Regional Office of Mesoamerica (ORMA), a project on the Appropriate Use of Mangrove Resources recognizes that local peoples are the best guardians of their natural resources. But financial and legislative support from the government is required. Several levels of government and a cross sector of society were involved to produce a successful integrated management plan.

The WWRP also collaborated with Fondation International du Banc d'Arguin (FIBA) and the National Park of Banc d'Arguin (PNBA) on setting up a successful management plan for a national park on the coastal zone of Mauritania on the Atlantic coast. Research, capacity building, and working with local people contributed to the sustainable development of the area, which was achieved with effective ecosystem management and improved livelihoods of the communities. IUCN, FIBA/PNBA, and the Mauritanian Government are now

---

developing the next phase for this project.

Another 18-month project to address the severe Asian coastal zone problems was initiated in October 2002. Through the Regional Technical Assistance Project on Coastal and Marine Resources Management and Poverty Reduction, IUCN joins forces with the Governments of India, Maldives, Pakistan and Sri Lanka, in partnership with the Asian Development Bank (ADB), the South Asia Cooperative Environment Programme, and other local organizations. In India, for example, the project focuses on the Kerala State with support from the Centre for Earth Sciences Studies in Trivandrum.

## Pollution

Pollution is occurring in the marine environment at unprecedented levels. Land-based discharges containing chemicals and nutrients alter the natural ecological processes in the ocean, and this is one of the biggest threats to a healthy marine and human environment. IUCN helps Rio de Janeiro's Guanabara Bay Project in Brazil with pollution control technology trials, in an attempt to reduce the impact of nutrients and other pollution entering the bay. These tests build on similar trials in Venice, Italy, and will help determine processes to be used in rehabilitating affected marine areas.

## Coral Reefs

Much biodiversity work focuses on coral reefs, considered the richest of all ecosystems in the ocean. In collaboration with Coral Reef Degradation in the Indian Ocean (CORDIO), IUCN produced a Status Report for 2002 which documented the slow recovery of reefs after the massive bleaching and death of corals in 1998. Some areas of the Indian Ocean's coral reefs lost up to 90 percent of their living corals in early 1998 due to sustained above-average sea temperatures. Assessment of the socioeconomic impacts from this event, and exploration of alternative livelihood possibilities for affected people, involved 50 scientists in 12 countries.

IUCN works with the International Coral Reef Initiative (ICRI), WCPA, The Nature Conservancy, and WWF in evaluating the vulnerability of existing MPAs to coral bleaching and devising supplementary criteria for MPA design and selection that will enhance adaptation to climate change.

IUCN has recently undertaken an evaluation of the Indonesia Coral Reef Rehabilitation and Management Project (COREMAP), which assists Indonesia in managing its coral reefs, recognized as the center of the world's marine biodiversity. Arguably the largest ongoing marine conservation programme to date, it focuses on local and national capacity building to address non-sustainable practices such as cyanide and



**Coral reefs are considered the richest of all ecosystems in the ocean.**

dynamite fishing – major problems in some of the islands in Indonesia. COREMAP is the first World Bank project to focus exclusively on coral reef ecosystems, and it is helping to make informed, science-based decisions on the wise use of the marine environment.

## Conclusion

A real success story is the IUCN Tanga Project in Tanzania which has focused efforts on the coastal zone and its rich mangroves and reefs since 1994. The project, in support of local communities, seeks innovative solutions for development that conserve the reefs and mangroves on which fish stocks depend. Since the project began, fish catches have increased, dynamite fishing has been reduced, small-scale mariculture projects are being piloted, and agricultural practices and enforcement of regulations are

improving. In 1997, a major review of the project considered it to be a possible international model. This is an example of the value added of IUCN activities, both in terms of conservation impact and funds invested.

One may wonder how an organization with limited resources can be active in so many countries, across such a wide spectrum of issues and in partnership with hundreds of organizations. Without the combined efforts of the Union's members, networks, partners and volunteers, the vast amounts of initiatives, projects, and products would not be possible. Great strength lies in building and working together to enhance capacity, to support the global alliances and to safeguard natural resources at local, regional and global levels, making IUCN a unique system of international cooperation for the conservation of nature and sustainable use of natural resources. ■

**Chua Thia-Eng**  
Regional Programme Director

PEMSEA  
Quezon City, Philippines

**Stella Regina Bernad**  
Legal Officer

PEMSEA  
Quezon City, Philippines

**Maria Cecilia T. San**  
Technical Assistant for Policy/  
Legal Analysis

PEMSEA  
Quezon City, Philippines

## The Interconnectivity Feature

The interconnectivity of the East Asian Seas (EAS) is a distinct feature of the coastal nations in the region (Figure 1). This interconnectivity is brought about by the geographical linkages of the five large marine ecosystems, i.e., Yellow Sea, East China Sea, South China Sea, Sulu-Sulawesi Sea and Indonesian Seas. The coastal nations consist of those in Northeast Asia, i.e., D.P.R. Korea, Republic of Korea, Japan, and P.R. China and of those in Southeast Asia, i.e., Brunei Darussalam, Cambodia, Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam.

# Coastal and Ocean Governance of the Seas of East Asia: Towards an Era of New Regional Cooperation and Partnerships

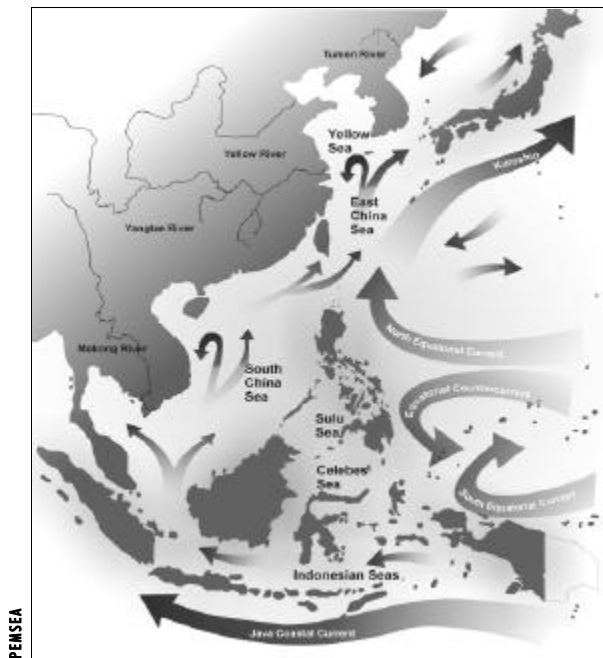


Figure 1. The East Asian Seas.

## Social, Cultural, and Political Interconnectivity

The EAS region is socially and culturally interconnected as a result of population movement and commerce that began centuries ago. This interconnectivity can be seen from the interrelationship and mutual influence

among the nations' way of life, which covers cultures, religions, habits, customs, languages, and many other aspects. About 60 percent of the total population of 1.92 billion in the region live within 100 km from the coast (Burke et al. 2001) and contribute to a large part of the national and regional economy. Economic interconnectivity

This article is based on the Keynote Speech by Dr. Chua Thia-Eng at the Second Meeting of the Regional Network of Local Governments Practicing Integrated Coastal Management (RNLG) held in Xiamen, PR China on 20-21 September 2002.

---

is apparent in maritime trade, shipping, oil exploration and refining, fisheries, tourism, and manufacturing industries. Major ports, which commercially link the countries, have grown in the region. East Asia's economic growth over the last few decades has resulted in an explosion of inter-Asian maritime trade as well as trade with Europe and North America (Meyrick 2000). As a result, container traffic in the region grew by 270 percent from 1985 to 1995, and is expected to reach 50 percent of the total world container traffic throughput by 2005 (Meyrick 2000). About 8.2 million barrels of oil pass through the Straits of Malacca and Singapore each day from the Middle East to various countries in the region (Lloyds of London, Ports of the World, 1997, as cited in Chua and Ross 2002).

In tourism, East Asia and the Pacific captured an 18 percent share of the world market in 2001, growing at an average rate of six percent a year from 1995 to 2001 with an average of over 90 million tourists annually (WTO 2002). While security- and health-related threats resulted in a sharp downturn in late 2002 and early 2003, it is clear that tourism will remain a major source of income for the region. During the last three decades, the emergence of economic growth triangles among East Asian countries further reflects their intricate and inextricable relationship.

The formation of the Association of Southeast Asian Nations (ASEAN)

## The formation of the Association of Southeast Asian Nations (ASEAN) more than 35 years ago is a testimony of the recognition of the mutual reliance among the countries.

more than 35 years ago is a testimony of the recognition of the mutual reliance among the countries. The recent economic regionalization, manifested by the impacts of globalization, has expanded the political relationship to cover three nations from the north, i.e., Japan, P.R. China, and the Republic of Korea, resulting in ASEAN + 3.

### Ecological Interconnectivity

The physical, chemical, and biological characteristics of the EAS are strongly influenced by major ocean currents such as the Kuroshio current, the north and south equatorial currents, and the Java coastal currents. Specifically, these currents affect ocean temperature, salinity, waves, tides, and sediment transport; influence the distribution of dissolved oxygen, pH, nutrients, and other chemical properties of the seas; and define the distribution of marine flora and fauna. Upwelling zones contribute to high productivity and bring about long-distance dispersal of marine larval recruits of coastal and marine organisms.

The region receives a substantial supply of freshwater from river

basins. Big river basins such as those of the Mekong River, Yangtze River, Yellow River, and Red River, as well as of several small- and medium-sized ones, open directly into the EAS. These cover a total of 6.25 million km<sup>2</sup> and accommodate about 1.5 billion people (Talaue-McManus, L. 2000; and Yu, et al. 2001). The EAS are the catchment areas of these associated upstream rivers. Thus, the health of the EAS is significantly affected by the river basins and related human activities.

The physical, chemical, and biological characteristics of the seas in the Southeast Asian region have enriched its flora and fauna, making it the world's center of marine biodiversity. The total number of marine fish and hard coral species exceeds that of the Great Barrier Reef or the Caribbean Seas (Chou 1997; and Veron 2001). This indicates that a rich and valuable genetic resource is yet to be fully exploited.

Pelagic fish species, many of them migratory and shared stocks such as tuna, mackerel, and sardines, abound in the region. High biological productivity accounts for the region's significant contribution of fish production to the global supply,

# **At present, coastal and ocean management is far from effective. Sustainable use of coasts and oceans has not been achieved.**

providing no less than 40 percent of world fish catch and 80 percent of world aquaculture production (FAO 1999a and FAO 1999b).

Socioeconomic and ecological interconnectivity is also reflected in the sharing of environmental hazards, such as typhoons, earthquakes, sandstorms and haze from forest fires, as well as of environmental/public risks associated with red tides, oil spills, nutrient pollution and the impacts of invasive species.

Over the last two decades, the occurrence of harmful algal blooms in the region's waters have increased and spread geographically, resulting in detrimental impacts on human lives and economy. While the total number of spills caused by oil tankers have been reduced globally, these have occurred frequently in the region and caused public alarm across national borders.

Nutrient pollution is one of the most serious problems shared by all countries of the region. Most of the sewage that enters the EAS is barely treated (Chia and Kirkman 2000) – thus, the coastal waters and some

species consumed as seafood are severely contaminated with coliform bacteria, affecting public health. The negative impacts of invasive species from ballast water are of serious concern to the region and the world. Globally, more than 3–5 billion tons of ballast water are transported each year, contributing to no less than 7,000 species of microscopic marine animals and plants that are distributed throughout the world's oceans, causing serious ecological and health threats (Globalballast 2003). For instance, between \$750 million and \$1 billion were spent in the United States for control measures of the hazards brought about by the introduction of the zebra mussel from European waters (Globalballast 2003).

Many of these environmental risks are transboundary and require collective mitigating measures. The transboundary impacts are less visible although their negative impacts could be more severe compared with those resulting from typhoons, earthquakes and sandstorms – all of which receive greater public attention and concern.

---

## **The State of the EAS and Challenges to Sustainable Development**

Various reports by the Economic and Social Commission for Asia and the Pacific (ESCAP), United Nations Environment Programme (UNEP), and the Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) have indicated that the state of the EAS, like other seas and oceans, is deteriorating, putting the marine life support system at risk. At present, coastal and ocean management is far from effective. Sustainable use of coasts and oceans has not been achieved. Environmental degradation affects the goods and services provided by the ecosystems. This situation is aggravated by contamination or physical destruction of nursery, feeding and spawning grounds, and shelters of marine species; inappropriate physical alteration of coastlines resulting in the weakening of shoreline defense and destabilization of coastal equilibrium; removal of wetlands and coral reefs, affecting the natural pollution and carbon sink; and overexploitation of natural resources, which eventually affects the livelihoods of millions of artisanal fisherfolk. The lack of adequate planning for and management of the natural resource base, and ignorance about the non-market values of the ecosystems, contribute to the failure of proper management measures.



The main challenge to sustainable use of the EAS lies in the capability and willingness of the concerned countries in the region to undertake policy reforms for improving coastal and ocean governance at local and national levels; appropriate structural reforms to strengthen institutional support in terms of interagency and intersectoral coordination; and appropriate pricing policy and market for natural products. Another major challenge especially for developing nations in the region is in the urgency to increase their planning and management capacity at national and local levels so that they are able to provide good governance to address poverty, public health, and livelihood issues, especially with the pressure of rapid urbanization and economic development.

A common issue being increasingly recognized amongst coastal and ocean managers worldwide is the difficulty encountered in interagency and intersectoral coordination at the national level. The essential element for holistic and integrated management is a coordinating mechanism vested with the power and responsibility for interagency and intersectoral coordination to avoid duplication of responsibilities, reduce unnecessary interagency competition for funds and human



**PEMSEA organizes expert meetings to promote better coastal and ocean governance in the region.**

resources, and to orient coastal and ocean development towards sustainable development. In most countries, there is neither such a mechanism nor a national agency with these mandates. The lack of a proper “home-base” makes it difficult to implement coastal and ocean governance initiatives.

## Opportunities for Action

During the last decade, opportunities have arisen for the region to take a course of action to better manage its coasts and oceans. The demand to reverse the trend of environmental degradation is high on the political agenda of most countries, especially after the World Summit on Sustainable Development (WSSD) in Johannesburg, South Africa. The need for concrete actions is obvious, especially in alleviating the plight of people living in poverty, including those in urban areas; increasing access to water supply and adequate sanitation; protecting the natural resource base and ensuring sustainable fisheries; and conserving biodiversity through

development of coastal and marine protected areas.

The conflicts between trade globalization, the increasing trend toward economic regionalization and realizing the benefits of regional cooperation, and the strengthening and enhancement of corporate social responsibility, are priority concerns of the region. Reduction of the conflicts will require the joint effort of concerned national and local governments.

## Ten Years After UNCED 92

Ten years after the United Nations Conference on Environment and Development (UNCED), there was general consensus that most of the planned activities under Agenda 21 had not been fully implemented and that no appreciable achievements had been made. While there are sufficient grounds to argue that countries could have done better, the process of sustainable development is a long and tedious one and requires substantial effort before positive impacts become visible.

# The array of marine-related legislation enacted by the concerned governments in the region well before UNCED is impressive. Moreover, such legislation has increased considerably, probably influenced by the Law of the Sea Convention and UNCED.

Nevertheless, the EAS region has made significant progress since UNCED 92. This conclusion is based on five indicators: (1) development and implementation of National Agenda 21; (2) adoption of institutional arrangements; (3) establishment of national marine affairs institutes; (4) formulation of national legislation; and (5) ratification of international instruments. National governments in the region are serious about the protection of the marine environment and have undertaken necessary institutional reforms and structural improvements. In Japan, Malaysia, P.R. China, Republic of Korea, and Singapore, improvement of the coastal environment is obvious, and much of urban poverty has been effectively eradicated. Similar efforts are now being undertaken in other nations, though under a different scale of operation (see issue pull-out section).

**Development and implementation of National Agenda 21.** Nine out of the 12 countries in the region have developed their respective National

Agenda 21 and action plans. P.R. China and Republic of Korea each has an Ocean Agenda 21. Although Brunei Darussalam has yet to prepare one, it has already developed a national environmental strategy, which basically covers most of the issues of Agenda 21. This year, Vietnam is preparing its Agenda 21 with the help of UNEP. It is expected that all the countries in the region will have their own National Agenda 21 in the near future. They are in different stages of implementing their Agenda 21 action plans.

**Institutional arrangements.** Various institutional arrangements have been made in addressing maritime and ocean issues in the region. Most countries have a Ministry of Environment while some aspects of maritime matters are addressed by the Ministry of Transport/Communication. Other countries set up new departments/ministries. The Republic of Korea in 1996 formed a Ministry of Marine Affairs and Fisheries and Indonesia established a similar ministry in

---

2001. Thailand and Vietnam formed a new Ministry of Natural Resources and Environment by integrating the environment and natural resource-related functions of other ministries. Japan expanded the responsibility of the Ministry of Transport to become a new Ministry of Land, Infrastructure and Transport, which has jurisdiction over most coastal waters.

P.R. China has long given considerable importance to ocean affairs. It established the State Oceanic Administration well before UNCED. In Singapore, the Maritime and Port Authority has evolved into an agency with a key role in the management of coastal and marine waters within its jurisdiction.

**Establishment of marine affairs institutes.** At least nine of the 12 countries in the region have established institutes related to national marine/maritime affairs to support the efforts of their respective governments in addressing such issues as boundaries, pollution, and marine piracy. These institutions include the China Institute for Marine Affairs (CIMA), Indonesian Center for the Law of the Sea (ICLOS), Ship and Ocean Foundation (SOF) of Japan, Maritime Institute of Malaysia (MIMA), Philippine Center for Marine Affairs (PhilMar), Korean Maritime Institute (KMI), Thailand Institute of Scientific and Technological Research, and the Continental Shelf Committee (CSC) of Vietnam. There are several other institutions related to ocean research

---

in the region, some of which were established well before UNCED.

**National legislation.** The array of marine-related legislation enacted by the concerned governments in the region well before UNCED is impressive. Moreover, such legislation has increased considerably, probably influenced by the Law of the Sea Convention and UNCED. While there are obvious gaps requiring legislative improvements, countries of the region have the basic national legislation to regulate human activities regarding the use of marine natural resources, prevention of marine pollution, and protection of natural habitats.

**Ratification of International Instruments.** The record of ratification of international instruments in the region is also impressive. Since 1992, over 100 ratifications and accessions to international conventions and subscriptions to other instruments related to environmental protection, biodiversity, climate change, and other marine related aspects in the region have been made. The ratified international instruments (Tables 1 and 2), if implemented, will substantially achieve the goals of Chapter 17 of Agenda 21.

## **International and Regional Initiatives**

Several international and regional projects and programs in marine

# **The region is in a good position to take a quantum leap in meeting the challenges and opportunities posed in the two world summits. To achieve this, it needs to develop a new paradigm in mobilizing collective efforts in the management of the EAS.**

sciences, coastal resources management, fisheries, and pollution prevention and management initiated by UN and international agencies as well as by donors and multilateral financial institutions have, over the last three decades, helped lay a solid foundation of technical capacity essential for coastal and ocean governance. The work of the United Nations Educational, Scientific and Cultural Organization in the 1960s and 1970s in marine sciences; Food and Agriculture Organization of the United Nations in the 1970s and 1980s in fisheries and aquaculture; the UNEP Regional Seas Program in the 1980s, and the Global Environment Facility in the 1990s and beyond, as well as other efforts from United Nations Development Programme, International Maritime Organization, World Bank, and Asian Development Bank have all contributed in a complementary manner to the needed knowledge and information, policy and institutional reforms, public awareness, and most importantly, a critical mass of expertise.

In the last two decades, several donor agencies have placed greater emphasis on coastal and marine issues. Many regional projects have made significant contributions in coastal resources management (CRM), particularly the work of the ASEAN/United States Agency for International Development (USAID) CRM Project, and the ASEAN/Canada Marine Science Project, and the ASEAN/ Australian Project on Coastal and Marine Ecosystems. Bilateral support from the international community was also intensified in the early 1980s and 1990, further enhancing national capacities.

## **The Challenges and Opportunities of WSSD**

The principal challenge issued by the WSSD was to execute an implementation plan which focuses on the dual objectives of poverty eradication and environmental improvement. While the percentage of people in the EAS region living in direct poverty is small compared with those in South Asia or Africa, there

**Table 1. East Asian ratification of international conventions relating to marine pollution as of 30 June 2003.**

COUNTRY	C O N V E N T I O N S																		
	UNCLOS	MARPOL					London Convention		Intervention		CLC		FUND		Salvage	OPRC	OPRC-HNS	HNS	Bunker Oil
	82	73/78		Annex			Conv	Prot	Conv	Prot	Conv	Prot	Conv	Prot	89	90	00	96	01
		I/II	III	IV	V	VI	72	96	69	73	69	92	71	92					
Brunei Darussalam	96	86								D	02	D	02						
Cambodia		94	94	94	94					94	01		01						
PR China	96	83	94		88		85		90	90	D	99		99*	94	98			
DPR Korea		85	85	85	85														
Indonesia	86	86								D	99	D							
Japan	96	83	83	83	83		80		71	D	94	D	94		95				
Malaysia	96	97			97					95		95			97				
Philippines	84	01	01	01	01		73				97		97						
Rep. of Korea	96	84	96		96		93			D	97	D	97		99				
Singapore	94	90	94		99	00				D	97		97		99				
Thailand															00				
Vietnam	94	91									03								

Numbers represent year of ratification/accession D - denounced \*With application to Hong Kong SAR only

are no less than 260 million people in East Asia and the Pacific reported to be living on less than one US dollar per day (World Bank 2003). The situation is most serious in the urban areas of the region, where many of the poor live in slums and have limited or no access to safe drinking water or adequate sanitation facilities.

The WSSD highlights new opportunities for the countries of the region to take concrete actions towards sustainable development. A new era of regional collaboration and partnerships is warranted, to relieve the pressure on unsustainable exploitation and use of natural resources, to prevent further destruction of coastal and marine habitats, and to improve living conditions of the urban poor. A more holistic and integrated planning and management approach towards sustainable coastal and ocean development is needed.

## Functional Framework for Regional Cooperation and Collaboration

The region needs a functional framework for:

- Promoting intergovernmental collaboration on global and regional environmental concerns;
- Strengthening synergies and linkages among UN and international agencies;
- Encouraging active participation from the private sector, NGOs, academe, communities and other members of the civil society; and
- Identifying and developing opportunities for environmental investments.

The region also needs a regional platform for integrated implementation of international instruments to:

- Enhance the synergistic relationships among multilateral environmental agreements;
- Strengthen partnerships among governments and intergovernmental bodies and across sectors, and establish multi-tiered arrangements for the cost-effective implementation of multilateral environmental agreements;
- Promote effective use of human and financial resources through shared information systems, information exchange, networking and capacity programs; and
- Establish working models of holistic, integrated environmental management programs at regional, national and subnational levels.

**Table 2. East Asian ratification of international conventions relating to the marine environment as of 31 October 2002.**

COUNTRY	C O N V E N T I O N S											
	Basel 89	Basel Prot 99	UN FCCC 92	Biodiversity 92	Jakarta Mandate 95	Ramsar 71	CITES 73	Migratory Species 79	World Heritage 72	Whaling 46	GPA on LBS 95	Montreal Declaration 01
Brunei Darussalam	02						90					
Cambodia	01		95	95	Y	99	97		91		Y	Y
PR China	92		93	93	Y	92	81		85	80	Y	Y
DPR Korea			94	94	Y				98			
Indonesia	93		94	94	Y	92	78		89		Y	
Japan	93		93	93	Y	80	80		92	51	Y	Y
Malaysia	93		94	94	Y	95	77		88		Y	Y
Philippines	93		94	93	Y	94	81	94	85	81	Y	Y
Rep. of Korea	94		93	94	Y	97	93		88	78	Y	Y
Singapore	96		97	95			86					
Thailand	97		94			98	83		87		Y	Y
Vietnam	95		94	94	Y	89	94		87			

Numbers represent year of ratification/accession Y - Participated in the Conference

**LEGEND:**

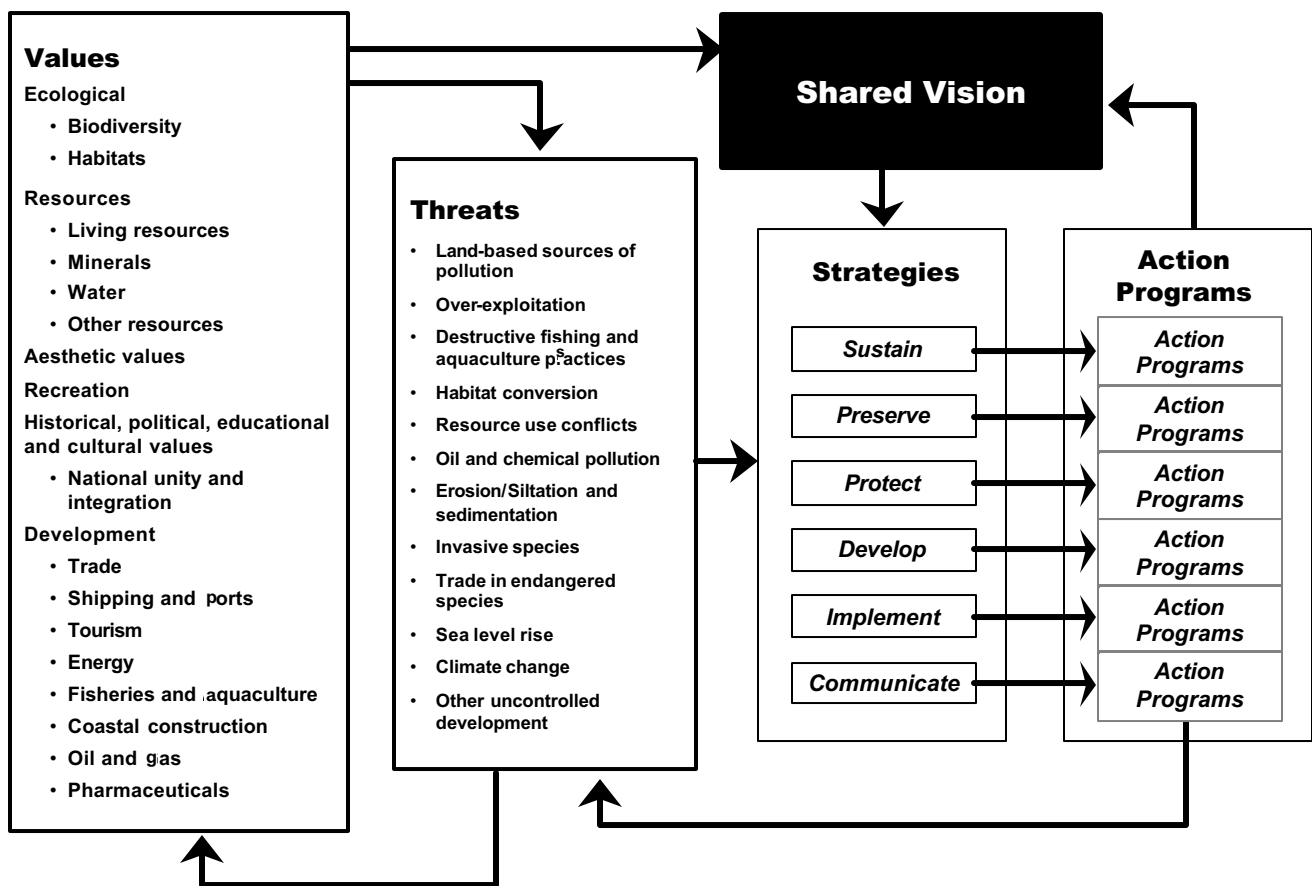
BASEL	Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, 1989
BASEL PROTOCOL	Basel Convention Protocol on Liability and Compensation, 2000
BIODIVERSITY or CBD	Convention on Biological Diversity, 1992
BUNKER OIL	International Convention on Civil Liability for Bunker Oil Pollution Damage, 2001
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora, 1973
CLC	International Convention on Civil Liability for Oil Pollution Damage, 1969 and its 1992 Protocol
FUND	International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971 and its 1992 Protocol
GPA	Global Programme of Action for the Protection of the Marine Environment from Land-based Activities
HNS	International Convention On Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea, 1996
INTERVENTION	International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969 and Protocol Relating to Intervention on the High Seas in Cases of Pollution by Substances Other Than Oil, 1973
JAKARTA MANDATE	Jakarta Mandate on Marine and Coastal Biological Diversity, 1995
LONDON CONVENTION	Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 and its 1996 Protocol
MARPOL 73/78	International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto
MIGRATORY SPECIES	Convention on the Conservation of Migratory Species of Wild Animals, 1979
MONTREAL DECLARATION	Montreal Declaration on the Protection of the Marine Environment from Land-Based Activities, 2001
OPRC	International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990
OPRC-HNS	Protocol on Preparedness, Response and Co-operation to Pollution Incidents by Hazardous and Noxious Substances, 2000
RAMSAR	Ramsar Convention on Wetlands, 1971
SALVAGE	International Convention on Salvage, 1989
(UN)CLOS or LOSC	(United Nations) Convention on the Law of the Sea, 1982
UNFCCC	United Nations Framework Convention on Climate Change, 1992
WHALING	International Convention for the Regulation of Whaling (1946)
WORLD HERITAGE	Convention Concerning the Protection of the World Cultural and Natural Heritage, 1972

## Sustainable Development Strategy for the Seas of East Asia

Three years ago, 12 countries of PEMSEA embarked on the development of a functional framework to streamline national, regional, and international environmental management efforts in the EAS. A draft framework document, entitled “Sustainable Development Strategy for the Seas of East Asia” is a product of three years of

consultation with stakeholders, including governments, users and beneficiaries, NGOs, academe, international and intergovernmental organizations, and business communities. The framework document is designed to:

- Promote regional cooperation for addressing environmental relationships across national boundaries;
- Harmonize interactions and enhance synergies between



**Figure 2. Strategic Framework of the Sustainable Development Strategy.**

- economic development and environmental management;
- Reinforce relationships between a healthy environment and social issues, such as poverty alleviation, food security, employment and human health; and
- Provide a platform for partnerships among countries of the region, the private sector, NGOs, academe, local communities and other members of the civil society, and UN and international agencies.

The strategic framework is developed for achieving a shared

vision forged among countries of the region. The proposed shared vision reads:

***“The sustainable resource systems of the Seas of East Asia are a natural heritage for the people of the region, a medium of access to regional and global markets, and a safeguard for healthy food supply, livelihood, economic prosperity and harmonious co-existence for present and future generations.”***

Towards achieving the proposed vision, over 200 action programs have been formulated in the strategic framework under six strategies — Sustain, Preserve, Protect, Develop, Implement, and Communicate (Figure. 2). The rationales, principles, and objectives of each strategy are detailed in the draft framework document.

National governments using the SDS-SEA as a guide can develop and implement national coastal and ocean policies and national strategies for sustainable coastal and ocean development. Subnational governments of coastal states/provinces/municipalities can also

develop and implement their own local coastal strategies and action programs in line with the national policy and strategy.

To achieve effective coastal and ocean governance for the EAS, it is essential to ensure that each government is able to put the following in place:

- An institutional mechanism for coordinated actions;
- A national coastal/ocean policy;
- A national coastal/ocean sustainable development strategy;
- Coastal strategies and action plans at the local level; and
- A mechanism to finance the implementation of the national strategy and action plans.

## The Way Forward

To respond to the challenges and prepare for opportunities ahead, the participating PEMSEA countries are launching the following initiatives:

1. Adoption of the Sustainable Development Strategy for the Seas of East Asia by holding a Ministerial Forum and International Conference on Coastal and Ocean Governance for the Seas of East Asia in December 2003.
2. Assist national governments in the development of national coastal/ocean policies and strategies.
3. Establish working models on public-private sector partnerships for environmental investments and their duplication.
4. Build partnerships in the local implementation of coastal strategies and integrated management programs in the region.
5. Develop or strengthen appropriate regional coordinating and financing mechanisms to support the implementation of regional, national and subnational coastal and ocean strategies and action programs towards achieving the goals of Agenda 21 and WSSD.

PEMSEA invites partners to achieve these goals. ■

## References

- Burke, L., Y. Kura, K. Kassem, C. Revenga, M. Spalding and D. McAllister. 2001. Pilot Analysis of Global Ecosystems (PAGE). Coastal ecosystem. World Resources Institute. 77 p.
- Chia, L.S. and H. Kirkman. 2000. Overview of land-based sources and activities affecting the marine environment in the East Asian Seas. UNEP/GPA Coordination Office and EAS/RCU. Regional Seas Report and Studies Series No. 173. 74 p.
- Chou, L.M. 1997. Southeast Asia as the global center of marine biodiversity. *Tropical Coasts* 4(1):4-8.
- Chua T.-E. and S.A. Ross, 2002. Creating a shared vision for environmental management in the Straits of Malacca. *In Tropical Marine Environment: Charting Strategies for the Millennium*. F.M. Yusoff, M. Shariff, H.M. Ibrahim, S.G. Tan, & S.Y. Tai (eds.), Malacca Straits Research and Development Centre (MASDEC), Universiti Putra Malaysia. 19-33 p. Serdang, Malaysia.
- FAO. 1999a. FAO Yearbook. Fishery statistics capture production (1997). Vol. 84. Food and Agriculture Organization of the United Nations, Rome.
- FAO. 1999b. Aquaculture production statistics. 1988-1997. FAO Fisheries Circular No. 815, Revision 11. Food and Agriculture Organization of the United Nations, Rome.
- Globalast. 2003. GEF/UNDP/IMO Global Ballast Water Management Programme. July 2003. Avail from: <http://globalast.imop.org/index.asp?page=problem.htm&menu=true>
- Meyrick, S. 2000. Developments in Asian maritime trade. IGCC Policy Paper 33. Avail from: [http://www-igcc.ucsd.edu/publications/policy\\_papers/pp3302.html](http://www-igcc.ucsd.edu/publications/policy_papers/pp3302.html)
- WTO. 2002. World Tourism Organization Facts and Figures, June 2002. Avail from: [http://www.world-tourism.org/market\\_research/facts&figures/latest\\_data/tita01\\_07-02.pdf](http://www.world-tourism.org/market_research/facts&figures/latest_data/tita01_07-02.pdf).
- Talaue-McManus, L. 2000. Transboundary Diagnostic Analysis for the South China Sea. EAS/RCU Technical Report Series No. 14. UNEP, Bangkok, Thailand.
- Yu, H., R. Juliano and S. Teng, 2001, Technical Report, Scaling and Scoping for Global International Waters assessment (GIWA) Subregions 34 (Yellow Sea), 35 (Bohai Sea) and 36 (East China Sea). See GIWA Scaling and Scoping Reports, draft versions in [www.giwa.net](http://www.giwa.net).
- Veron, J.E.N., personal communication through L.M. Chou (2001).
- The World Bank Group, Millennium Development Goals. Avail from: <http://www.developmentgoals.org/Poverty.htm>



# T R A I N I N G

# 2003

## PEMSEA's training initiatives provide unique learning experiences through:

Involvement of multisectoral stakeholders in coastal and marine environmental protection and management

Field studies integrated into training courses, complementing theory with actual practice

Site-specific application of acquired new skills ensuring enhanced capability and confidence

Concrete plans for follow-on actions, encouraging participants to make a difference

**Effective environmental management requires trained and skilled people...**

- 8 - 12 September Port Safety and Environmental Management System (Port Klang, Malaysia)

---

- 15 - 19 September Port Safety Auditing (Bangkok, Thailand)

---

- 22 - 30 September Workshop on Integrated Coastal Management Leadership and Capacity Building (Manila, Philippines)

---

- 27 - 31 October Oil Spill Contingency Planning and Claims Recovery (Bohai Sea) (Qingdao, PR China)

---

*Note: The above schedules are subject to change.*

## ALUMNI NETWORK

Get involved... stay involved.

The Alumni Network offers:

- New and up-to-date information on PEMSEA activities
- Information on opportunities for professional upgrading and degree programs available on fields relevant to coastal and marine environmental management
- A chance to be a member of the PEMSEA roster of trainers

Information on PEMSEA - related training activities within the region

*To join, visit the PEMSEA website and complete the registration form.*

**KNOW MORE**  
[www.pemsea.org](http://www.pemsea.org)







# A C T I V I T I E S

## Port Safety and Environmental Management System (PSEMS)

Featured Training Course for This Issue

The course is designed to provide guidance and assistance to ports in establishing a management system that ensures safe and environmentally friendly port and cargo operations, while protecting the health of workers and the population living adjacent to

### Topics covered

- The Port Safety and Environmental Management (PSEM) Code
- International instruments related to Port Safety and Environmental Management
- Essential Elements of Port Safety and Environmental Management System (PSEMS)
- PSEM requirements
- Setting-up a PSEMS

### Who Should Participate?

The course is designed for health, safety and environment officers of ports, port operations personnel, quality management representatives, and internal auditors



For further information, please contact:

**The Regional Programme Director**  
GEF/UNDP/IMO Partnerships in Environmental Management  
for the Seas of East Asia (PEMSEA)

Mailing Address: P.O. Box 2502, Quezon City 1165, Philippines  
Tel.: (632) 920 2211 to 14 Fax: (632) 926 9712  
Website: <http://www.pemsea.org>



capacity building

enhanced sense of 'ownership' toward their respective regional seas programmes, leading to stronger political and financial commitment to their implementation.

**Participation.** The strategy calls for new partnerships, inviting an increase in the participation of civil society and industry in the development and implementation of the regional programmes.

**Sustainability.** The strategy invites member states to provide sound and lasting financial support to their programmes.

**Partnership.** The strategy foresees the use of the conventions and action plans as a platform for the regional implementation of MEAs and global programmes and initiatives.

To help realize these goals, the strategy calls for continued administrative support from UNEP to the Regional Seas Programme, and foresees a number of more specific objectives, including:

- increased horizontal cooperation between Regional Seas Conventions and Action Plans;
- strengthened links with international organizations such as IMO, UNESCO–IOC, FAO, CBD, and other MEAs;
- intensified monitoring and assessment activities, including participation in the new process of the UN General Assembly known as the Global Assessment of the State of the Marine Environment and of the GIWA; and
- participation in the Barbados Plan of Action on Small Island Developing States.

## Summing Up

Agenda 21, the WSSD Plan of Implementation, and the new global strategy have given the Regional Seas

Programme both a mandate and a roadmap for the years ahead. The programme's successes have been instructive. They offer a model for future programmes and a yardstick with which to measure progress.

These many successes have been accompanied by occasional setbacks. In a few regions, a great deal of time and energy were invested in the early stages of a regional programme that never 'caught fire,' owing to a lack of political will, insufficient financing, or competition with other, overriding concerns such as war or poverty.

But these cannot be called failures. A failure would have been not to try, to give up in advance simply because a challenge appeared too daunting. A programme in question might yet revive, when the time is right, and when outstanding conflicts are resolved and competing interests reconciled.

WSSD is still being analyzed and digested. As a new era of environmental action emerges, the focus is on the practical implementation of the principles of sustainable development. The Regional Seas Programme has had and continues to play an important role in sustainable development. Given its achievements built upon modest resources, the Regional Seas Programme has given excellent value for its money for all of its three decades. ■



Topham

**Ship-generated pollution is of particular concern in all the Regional Seas.**

# For the prosperous development of the Danube region it will be of utmost importance to enable socioeconomic innovation without endangering significant ecological resources and values.

## The Future - Challenges in a Changing World

Environmental protection is a community responsibility. To assure public participation in the assessment and governance of environmental measures, as well as in the decision-making processes, efforts were

undertaken to strengthen and develop the NGO community in the Danube Basin. These organizations and the private sector play an important role in environmental awareness and implementation of projects on environmental protection, wetland rehabilitation, ecological farming, and urban sanitation.

The challenging tasks of the ICPDR are not likely to decrease in the near future. They are expected to increase with the political changes and the consolidation of the EU. For the prosperous development of the Danube region, it will be of utmost importance to enable socioeconomic innovation without endangering significant ecological resources and values. This will only be possible if the international cooperation throughout the Danube Basin will be further developed and enhanced. The ICPDR strives to actively contribute towards this goal and to make the Danube Basin a showcase for sustainable water management in a changing world. ■

For more information please check [www.icpdr.org](http://www.icpdr.org).

# ERRATA

In the last issue of Tropical Coasts (December 2002 Issue), an error was made in Figure 3 of the article: "Giant Clam Conservation in Southeast Asia" by Mingoa-Licuanan and Gomez.

The correct figure is shown at right.

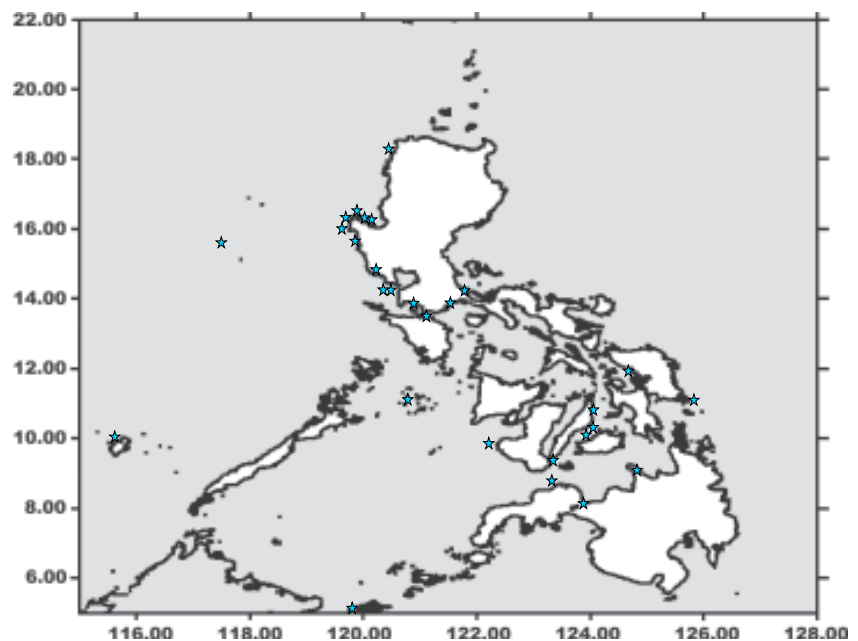


Figure 3. Map of the Philippines showing UPMSI's sites (blue star) for giant clam restocking.

FAO, this global program can mobilize worldwide knowledge and resources and help the regions adapt them to their own circumstances.

In the East Asian Seas region, the GEF/UNDP/IMO Regional Programme on Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) has already adopted a number of forward-looking elements in ocean management, setting the stage for further regional cooperation. When the Ministerial Forum on the Sustainable Development of the Seas of East Asia and the International Conference on the Sustainable Development of the East Asian Seas: Towards a New Era of Regional Collaboration and Partnerships convene in December 2003, the region will be in a position to leapfrog earlier regional developments and consider how to lay the groundwork for truly integrated approaches that:

- nest local ocean management and MCPAs within national and

sub-regional frameworks, within a Sustainable Development Strategy of the Seas of East Asia as a whole;

- set goals and priorities within an ecosystems framework;
- implement international conventions and programs in a synergistic and mutually reinforcing manner; and
- present agreed priorities for international cooperation set by and for those in the region.

In designing support arrangements, the ministerial forum and international conference during the East Asian Seas Congress 2003 should consider how to sustain and strengthen expert networks within the region, capture economies of scale through joint programs, pool available domestic and international resources through efficient partnerships, and stimulate widespread involvement and ownership by different government agencies and other stakeholders in ocean management. The Congress should explore how to link existing regional

organizations into a well-functioning system for cooperative ocean management.

This would be a major contribution to the long-term security and well-being of the peoples of the region. It would operationalize the five rationales for regional cooperation set out in the LOS Convention. ■

## References

- GESAMP (Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection). 1990. The state of the marine environment. UNEP Regional Seas Reports and Studies No. 115.
- Kimball, L. A. 2001. International ocean governance: Using international law and organizations to manage marine resources sustainably. IUCN.
- UNEP (United National Environment Programme). 2001. Ecosystem-based management of fisheries: Opportunities and challenges for coordination between marine regional fishery bodies and regional seas conventions. UNEP Regional Seas Reports and Studies No. 175.
- Trono, R. B. and A. B. Cantos. 2002. Conserving migratory species through ecoregion conservation approach: The case of sea turtles in Sulu-Sulawesi Marine Ecoregion. *Trop. Coasts* 9 (2): 44-49.

**Table 1. Regional Seas Programs and Regional Fishery Bodies Applicable to the East Asian Seas Region.**

Regional Seas	Regional Fisheries
<ul style="list-style-type: none"> <li>• 1983 Action Plan for the East Asian Seas (Australia, Cambodia, China, Indonesia, Malaysia, Philippines, Republic of Korea, Singapore, Thailand, Vietnam)</li> </ul>	<ul style="list-style-type: none"> <li>• 1948 Asia-Pacific Fishery Commission (FAO, formerly Indo-Pacific Fishery Commission)</li> </ul>
<ul style="list-style-type: none"> <li>• 1994 Action Plan for the North West Pacific (China, Japan, Republic of Korea, Democratic Republic of Korea, Russian Federation)</li> </ul>	<ul style="list-style-type: none"> <li>• 1992 Convention for the Conservation of Anadromous Stocks in the North Pacific Ocean</li> <li>• 1993 Convention for the Conservation of Southern Bluefin Tuna</li> <li>• 2000 Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean</li> </ul>

## NEWS



## Major Stakeholders to Gather at the East Asian Seas Congress 2003

**QUEZON CITY, PHILIPPINES -- A major international event for various stakeholders of the Seas of East Asia will be held from 8-12 December 2003 in Putrajaya, Malaysia.**

The East Asian Seas Congress 2003 is being organized by the GEF/UNDP/IMO Partnerships in Environmental Management for the Seas of East Asia (PEMSEA), and the Department of Environment Malaysia, and hosted by the Ministry of Science, Technology and the Environment Malaysia. The Congress is a response to the regional implementation of the World Summit on Sustainable Development Plan of Implementation.

Workshop co-organizers include the International Maritime Organization (IMO), United Nations Environment Programme-Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (UNEP-GPA), Ship and Ocean Foundation, UNDP-GEF Regional Service Center, and WorldFish Center.

The Congress features two main events: The International Conference on the Sustainable Development of the Seas of East Asia: Towards a New Era of Regional Collaboration and Partnerships, slated for 8-11 December, and the Ministerial Forum on the Sustainable Development of the Seas of East Asia, which is scheduled on 12 December.

Congress side events will include the 3rd Forum of the Regional Network of Local Governments Implementing Integrated Coastal Management, the Media Forum on Partnerships in Environmental Communication, and the Expert's Group Meeting on the Scientific Aspects of the Seas of East Asia.

### International Conference

The International Conference will gather concerned stakeholders - policy makers, economists, environmental and natural resource managers, NGO representatives, media practitioners, the academe, civil society and the private sector - to discuss ways to strengthen regional collaboration, promote synergies and linkages among existing regional and global programmes, and work towards achieving sustainable coastal and ocean development in the East Asian region.

The conference has two themes. Theme A focuses on a Review of International and National Efforts Towards Addressing the Main Sectoral Concerns Regarding the Seas of East Asia and Theme B on the Essential Cross-Cultural Approaches and Processes: Towards Achieving Sustainable Development.

There will be eight concurrent workshop sessions coordinated by the IMO, UNEP-GPA, WorldFish Center, UNDP-GEF (Kuala Lumpur), Ship and Ocean Foundation and PEMSEA. These sessions are on maritime transport;

land-based pollution; fisheries and aquaculture; biodiversity; local governance and alliances; skills and expertise; finance, investment, and corporate responsibility; and national coastal policies and regional collaborative arrangements.

International speakers will be invited to keynote the conference as well as present papers during the workshop sessions. Former Philippine President Fidel V. Ramos has confirmed his participation as keynote speaker for the conference.

In his confirmation letter, the former President said that the concern over the seas of East Asia is one that is timely and very much necessary in today's global environment. He added that it is imperative to work together on issues concerning natural resources, especially water, if a better life for future generations is to be ensured.

### Ministerial Forum

The Ministerial Forum is a regional response towards the sustainable development of coasts and oceans. It provides a venue to discuss the state of the region's environment and natural resources and to agree on a common framework of actions for the East Asian Seas. Ministers from 12 PEMSEA participating countries, namely Brunei Darussalam, Cambodia, PR China, DPR Korea, Indonesia, Japan, Malaysia, Philippines, RO Korea, Singapore, Thailand, and Vietnam will review the final draft of the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA) and consider a declaration of regional cooperation for adoption.

Prior to the Ministerial Forum, preparatory meetings attended by senior government officials would have been held in Thailand, and Malaysia, respectively, to review the final draft of the SDS-SEA.

Starting in 2001, the SDS-SEA evolved and developed through a process of local,

**Continued on page 62**

# NEWS

## PEMSEA and GPA Ink Knowledge-sharing Agreement

**QUEZON CITY, PHILIPPINES** — PEMSEA and the United Nations Environment Programme – Global Programme of Action (GPA) recently signed a memorandum of understanding for a collaborative partnership on sharing experiences and knowledge on the sustainable development of marine and coastal resources and in the governance of regional seas and oceans.

This new knowledge-sharing partnership includes the joint production of two issues of Tropical Coasts Magazine, and its online distribution; the sharing of good practices through the production and dissemination of case studies on national coastal policy development in PR China, and RO Korea; and case studies on good policy practices in Indonesia, Malaysia, Japan, the Philippines, PR China, and RO Korea. PEMSEA staff will also participate as resource persons in GPA-organized activities in South Asia.

The agreement was signed by PEMSEA Regional Programme Director, Dr. Chua Thia-Eng and GPA Coordinator, Dr. Veerle Vandeweerd and took effect March 2003. ■

## Sihanoukville Signs Up for Sustainable Development

**SIHANOUKVILLE, CAMBODIA** — The Sihanoukville Declaration for Sustainable Coastal Development was formally presented and approved by stakeholders in a declaration ceremony held 5 June during the World Environment Day celebration at Independence Beach of Sihanoukville. More than 1,000 representatives from local and national government agencies, international organizations, the private sector, and local communities witnessed the signing ceremony, which signified the stakeholders' concern for the environment.

The Sihanoukville Declaration for Sustainable Development was signed by H.E. Dr. Mok Mareth, Ministry of Environment Minister; H.E. Say Hak, Sihanoukville Governor; and the Governors of Mittapheap, Prey Nup and Stung Hav Districts. The declaration called for partnerships among stakeholders in the implementation of the Sihanoukville Coastal Strategy for the sustainable development of the province.

In his opening speech, Governor Say Hak emphasized that environmental protection and conservation is an important strategy for poverty reduction among the Cambodian people.

The strategy captures the peoples' vision of a "clean, pristine, healthy and peaceful environment" for the coastal areas of Sihanoukville, and identifies the strategies and actions for realizing that common vision. It serves as the guide to agreed goals for socioeconomic development and environmental conservation of Sihanoukville.

The Sihanoukville Coastal Strategy was developed through concerted efforts of local stakeholders during various consultation workshops held in collaboration with PEMSEA. ■

### Major Stakeholders to Gather at the East Asian Seas Congress 2003

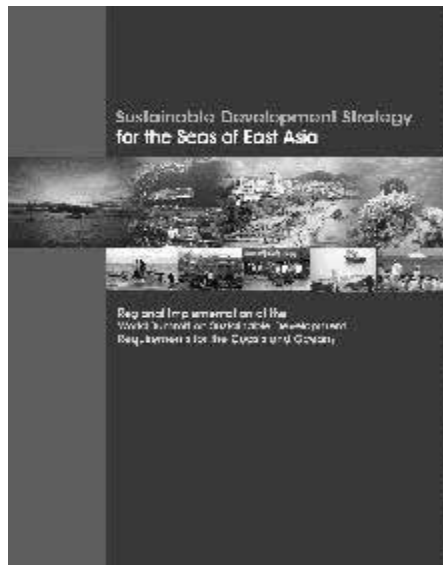
from page 61

national, and regional consultations and consensus building among participating governments and stakeholders.

Exhibits on the theme, "Regional Collaboration and Partnerships for the Sustainable Development of the Coasts and Oceans" will be set up by the PEMSEA Regional Office, its integrated coastal management demonstration/parallel sites, pollution hotspot project sites, and Congress co-organizers.

For more information about the East Asian Seas Congress 2003, please contact the Congress Secretariat at [congress@pemsea.org](mailto:congress@pemsea.org) or visit the congress website at <http://way.to/seascongress>. ■

## *Sustainable Development Strategy for the Seas of East Asia:* A Functional Framework for Regional Collaboration and Cooperation



**D**uring PEMSEA's intergovernmental meeting in July 2000 at Dalian, People's Republic of China, 11 countries agreed to prepare a regional strategy for forging cooperation in addressing the alarming degradation of the Seas of East Asia. The countries included Brunei Darussalam, Cambodia, People's Republic of China, Democratic People's Republic of Korea, Indonesia, Malaysia, Philippines, Republic of Korea, Singapore, Thailand and Vietnam. At the next Intergovernmental Meeting in March 2002, the countries, now joined by Japan, endorsed the strategy in principle and agreed to pursue intersectoral consultations at national, regional, and international levels.

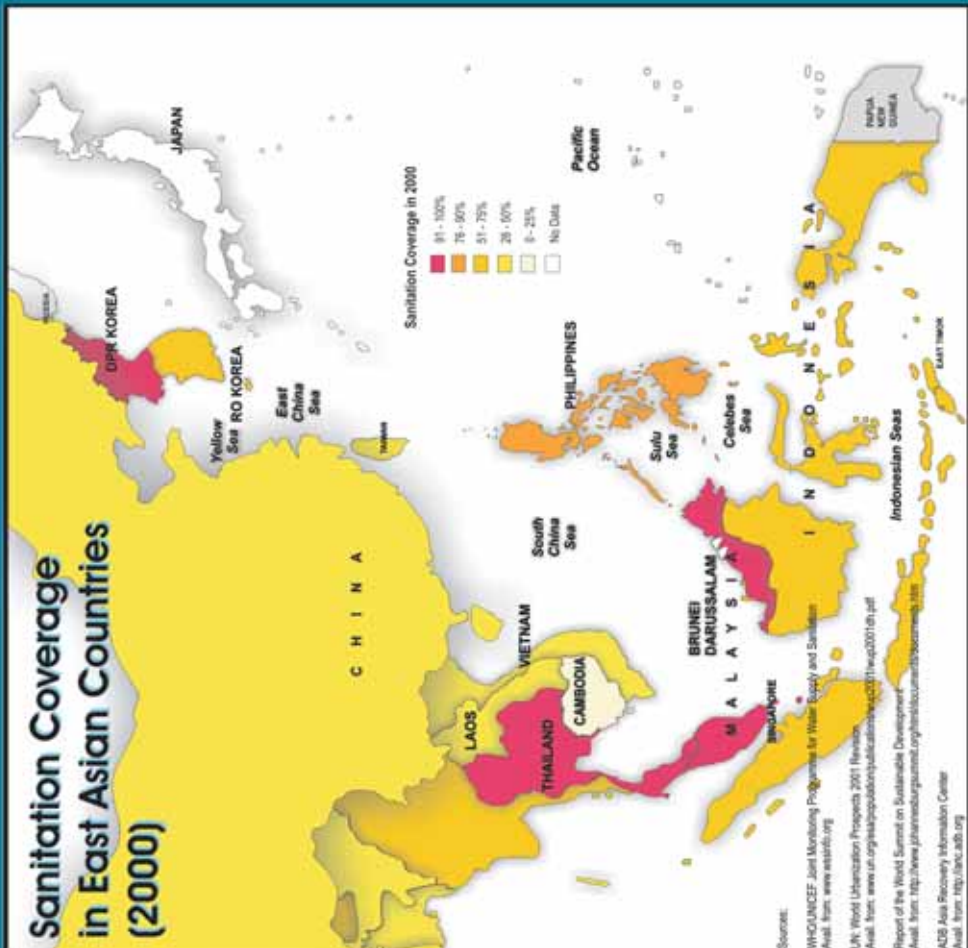
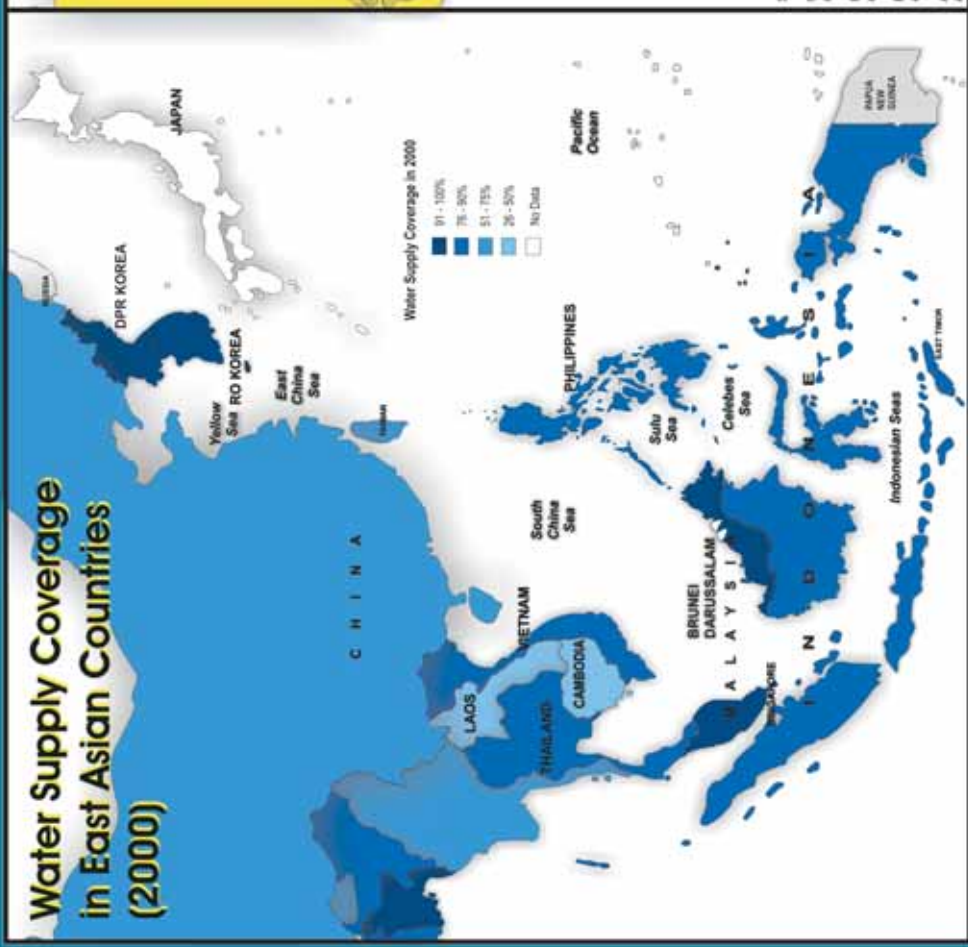
The Sustainable Development Strategy for the Seas of East Asia offers implementation approaches for the integrated management and sustainable use of the environment and the resources therein, by utilizing:

- Experiences and lessons learned from integrated coastal and marine management programs;
- Functional partnerships among governments, international agencies, civil society, and the private sector;
- Inter-linkages between the concerned multilateral agreements, regional programmes of action, national policies and programmes, and local operational activities; and
- Synergies that exist naturally within the global environment.

The strategy is a package of applicable principles, relevant existing regional and international action programs, agreements and instruments, as well as implementation approaches for achieving sustainable development of the Seas of East Asia. It offers a regional framework for the interested countries and other stakeholders to implement, in an integrated or holistic manner, the commitments they have already made. It addresses linkages among social, cultural, economic, and environmental issues. It embodies the shared vision of the countries and other stakeholders for the Seas of East Asia, and the ways by which they will achieve that shared vision.

In all these strategies, dynamic partnerships are indispensable.

For more information on the Sustainable Development Strategy for the Seas of East Asia, visit [www.pemsea.org](http://www.pemsea.org)



#### ACCESS TO SAFE DRINKING WATER

COUNTRY	POPULATION AS OF 2000 (MILLIONS)	% POPULATION WITH ACCESS (2000)	POPULATION FORECAST 2015 (MILLIONS)	% POPULATION WITH ACCESS (WSSD TARGET 2015)	INCREASED ACCESS (WSSD TARGET 2015) (MILLIONS)
CAMBODIA	13.1	30%	16.3	85%	8.1
PR CHINA	1,282.4	75%	1,418.7	87.5%	279.5
DPR KOREA	22.2	100%	24.3	100%	2.1
INDONESIA	212.0	78%	250.0	86%	57.1
MALAYSIA	22.2	95%	27.9	97.5%	8.1
PHILIPPINES	75.6	86%	95.8	93%	24.1
RO KOREA	48.7	90%	50.0	96%	3.8
SINGAPORE	4.0	100%	4.7	100%	0.7
THAILAND	62.8	84%	72.4	83%	13.9
VIETNAM	78.1	77%	94.4	88.5%	23.4

#### ACCESS TO BASIC SANITATION

COUNTRY	POPULATION AS OF 2000 (MILLIONS)	% POPULATION WITH ACCESS (2000)	POPULATION FORECAST 2015 (MILLIONS)	% POPULATION WITH ACCESS (WSSD TARGET 2015)	INCREASED ACCESS (WSSD TARGET 2015) (MILLIONS)
CAMBODIA	13.1	17%	18.5	58.5%	6.6
PR CHINA	1,282.4	40%	1,418.7	70%	480.2
DPR KOREA	22.2	99%	24.3	99.5%	2.2
INDONESIA	212.0	55%	250.0	77.5%	77.1
MALAYSIA	22.2	98%	27.9	99%	5.9
PHILIPPINES	75.6	46.7%	95.8	91.5%	25.0
RO KOREA	48.7	63%	50.0	81.5%	11.6
SINGAPORE	4.0	100%	4.7	100%	0.7
THAILAND	62.8	96%	72.4	98%	10.8
VIETNAM	78.1	47%	94.4	73.5%	32.6

#### A GLOBAL CHALLENGE: WATER AND SANITATION

It is estimated that more than 2.2 million people in developing countries die each year from diseases stemmed from a lack of access to safe drinking water and inadequate sanitation. The World Summit on Sustainable Development (WSSD) developed a plan of implementation that identified numerous global sustainable development goals, among which were access to safe water and basic sanitation. The plan called for the halving of the proportion of people who are unable to reach or afford safe drinking water and basic sanitation by 2015.

In the East Asian Region, the challenge is significant. To effectively address the access problem, East Asian countries must increase investment in numerous forms of water-related infrastructure to keep pace with the region's growing population, improve quality of service, ensure sustainability of existing and new services, minimize the coverage and service gaps, and provide affordable water and sanitation services to all sectors.