

# Tropical Coasts

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## **A CHALLENGING JOURNEY**

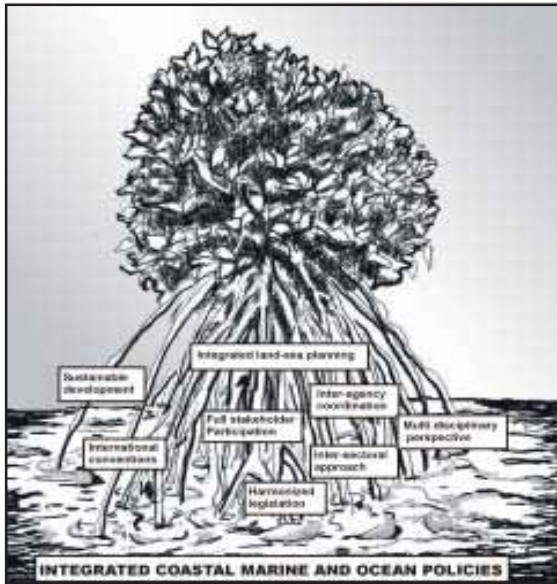
**Coastal and Marine  
Policy Making in East Asia**



■ concerns and analyses

# Developing National Coastal, Marine and Ocean Policies

**Ari Nathan**  
Issue Editor



This issue of Tropical Coasts is about new approaches in policies related to our marine environment. The focus is primarily on national efforts towards developing coastal, marine and ocean policies in the East Asian Seas region through an examination of recently enacted policies or efforts to develop them. As may be gathered from the articles, there are no clearly agreed upon definitions of what exactly a national "coastal," "marine," or "ocean" policy is. Despite semantic differences, the key is that these policies represent new integrative approaches towards the marine environment. They identify the major issues that need to be addressed and establish a process for treating them in an integrated, inter-sectoral, and inter-agency manner in order to promote sustainable development of the coastal and marine areas.

We begin this issue with an article outlining a new approach not to the policy of any specific country in the region but to a highly contentious issue involving many countries in the region competing claims in the South China Sea. The article suggests that jurisdictional disputes should not prevent countries from cooperatively working together. Cooperation should be based on recognition of the physical nature of a shared sea and its resources. Such an approach would be compatible with the Law of the Sea's encouragement to take practical measures pending the resolution of disputes and "without prejudice" to countries' positions on sovereignty and jurisdiction.

We then turn to consider the specific policies of two countries in the region that have enacted integrative laws on the marine environment: the Republic of Korea and the People's Republic of China. The articles examine the process that each country went through to develop its laws and the substantive reasons why they were needed.

Promulgated in 1999 to help preserve the coastal environment, ensure sustainable development and integrate ecological, cultural and economic interests in the coast, the Korean Coastal Management Act is the product of a process that took close to 15 years. The variety of activities preceding promulgation of the Act emphasizes the complexity of developing national coastal policy and suggests that it requires multidisciplinary input from academe and other experts, a favorable political environment and concerned public, and a government willing to consider new paradigms in environmental management such as that the coastal zone includes both land and sea components.

The year 1999 also saw the amendment of China's Marine Environmental Protection Law which is designed to protect the marine environment, conserve marine resources, control pollution, and promote sustainable economic and political development. The amendment ensures that the law has a strong ecosystem perspective, is compatible with international conventions, harmonizes legislation and the role of different government agencies involved in the marine environment, and includes appropriate penalties.

Not all countries in the region have developed such policies. Efforts in the Philippines, Malaysia, Indonesia and Japan, are examined to help explain the constraints faced in developing integrated policies at a national level.

Although the Philippines has had a national marine policy for over six years, governance of the country's marine resources and activities has remained fragmented and uncoordinated because the policy was too nebulous to provide effective guidance to governance and resolve conflict among marine environment users. In response to this, the government, academe, non-governmental organizations and affected sectors have begun a process to "overhaul" the existing policy.

Malaysia has fourteen ministries and twenty-seven departments responsible for sea and coastal zone management. This creates difficulties in effectively dealing with cross-sectoral and multiple-use conflicts. Recognizing the importance of coastal management, a national plan outlined the need for principles to resolve conflicting interests in the coastal zone, ensure resource sustainability, and reconcile the functions of responsible agencies. As a follow-up, the government is currently conducting an exercise to formulate a National Coastal Zone Policy for Malaysia.

In Indonesia, a new Department of Marine Affairs and Fisheries is now responsible for identifying core coastal and ocean management issues and devising an appropriate organizational structure to deal with such issues. This focus on coastal and ocean management suggests a departure from Indonesia's former emphasis, which was focused on jurisdictional issues and land-oriented development. The new approach is based on a growing recognition of the economic potential of Indonesia's marine resources and the serious environmental problems they face.

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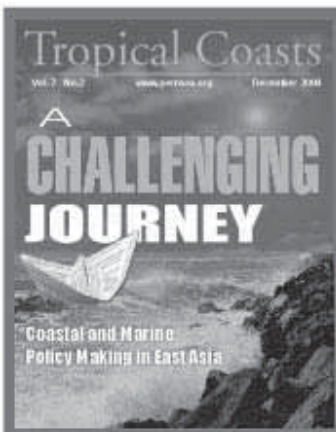
Recognizing the adverse effects of environmental degradation, the Bohai Sea Declaration was formulated to outline guiding principles for the protection and preservation of the sea's resources and environment.



## on the cover

### A Challenging Journey

Coastal and marine policy making in East Asia can go both ways—coordinated or fragmented, concrete or nebulous, cooperative or confrontational.



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## Introduction

The mere mention of the South China Sea conjures up in the minds of many people a range of thoughts and images. Most of these thoughts have to do with the long-standing dispute concerning sovereignty over the Spratly and Paracel Island groups and their adjacent areas of seabed, with supposedly huge deposits of oil and gas at stake. The images may include soldiers perched precariously (but quite artistically) on rocks, surrounded by the inhospitable sea. Other images (particularly for citizens of the littoral states) might include maps showing the extent of national claims—the famous Chinese “dotted line,” or the Philippine Kalayaan, for example.

## Background

The jurisdictional dispute in the South China Sea, like jurisdictional disputes everywhere, is hotly contested. The claimant states are doing everything they can to show how seriously they are taking their claims with respect to islands and adjacent ocean space. Sometimes the debate becomes rancorous, and other times it maintains a comparatively low profile. But it never goes away, and, in all likelihood, will not disappear for sometime.

# A Cooperative Approach to the South China Sea



Having said that sovereignty/jurisdictional disputes are nothing new, does it therefore follow that the *status quo* can be maintained indefinitely until such a time when the countries wish to engage in serious negotiations or resort to third party settlement? Arguably, the answer is no. The effects of the jurisdictional dispute are by no means neutral. Marine scientists tell us they would like to know more about the function of the reef systems in maintaining the fishery, for

example. Given that this fishery provides more than 75 percent of the protein needs of an estimated 485 million people, this is an important inquiry. Important, yes, but also one which is unlikely to be pursued because of the difficulties posed by the jurisdictional dispute. There are other problems: hydrography should be improved, search and rescue capabilities are questionable, rising piracy, questionable pollution monitoring and response – the list goes on.

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## Is There a Solution?

Most commentators and journalists tell us that the South China Sea question is “about” the rights to the rumoured vast resources of oil and gas lying in the seabed and subsoil in the area of the Spratly Islands. How many times have we come across the phrase “the oil rich Spratlys?” Anyone who knows anything about non-living resources is aware of the ease with which labels become attached to particular areas, and even if the expected resources fail to materialize, the label is slow to wear off. There is something about natural resources and the natural resource industries that seem to attract a certain type of myth, but myths are an insufficient basis for sound policy decisions. To put it very simply, a search of the literature reveals that there are no independent and verifiable statistics on the petroleum potential of the South China Sea beyond the established producing basins already discovered in coastal areas. Few of the major oil companies are interested in this part of the South China Sea: if they were, we would all know about it. The “oil rich Spratlys,” alas, may be a hydro-carbon *El Dorado*, a mythical natural resource fantasy.

If oil proves not at stake, are the islands worth fighting over in their own right? The littoral states are densely populated, nothing would be more logical than for them to wish to clutch at any means of solving related problems. Here again, reality brings

us down to earth. A great many people assume that the Spratly (and indeed Paracel) Islands more or less resemble tropical islands with which they are familiar in any of the littoral states, smaller than but more or less like, say, Bali or Phu Quoc. It comes as something of a shock, therefore, when people are confronted with the carefully composed and posed photographs of soldiers on rocks, and told that the rock, complete with sovereignty marker, is a not untypical Spratly Island. It is indeed an “island” because it fulfills the conditions set forth in Article 121 of the *United Nations Convention of the Law of the Sea of 1982* – it is naturally formed, surrounded by water, and above water at high tide.



**Map indicating the location of the Spratly Islands, Paracel Islands and Scarborough Reef.**

Source: Encarta 99

**Chinese military presence in the Spratly Islands.**

Photo source: <http://www.cia.gov/cia/publications/factbook/geos/pg.html>

## Under the Law of the Sea

There are approximately 140 named features in the Spratly group alone (named in all or some of the languages of the claimants and/or English). Of these, between 30 and 40 fulfill the conditions of Article 121 and are indeed islands. This point is relevant to the issue of maritime jurisdiction. Areas of territorial sea, exclusive economic zone and continental shelf (the major zones of maritime jurisdiction recognized by international law) can only be claimed from land or islands. Thus, the majority of the Spratly features do not generate any zones of maritime jurisdiction at all. The Law of the Sea Convention (and international law in general) draws a

**“ Areas of territorial sea, exclusive economic zone and continental shelf (the major zones of maritime jurisdiction recognized by international law) can only be claimed from land or islands. Thus, the majority of the Spratly features do not generate any zones of maritime jurisdiction at all.”**

careful distinction between islands and artificial islands. Building on a partially or totally submerged feature such as a reef cannot “create” an island. The resultant feature remains an artificial island, and cannot generate any zone of maritime jurisdiction. Thus, if the program of occupation and building on Spratly features is designed to increase the chances of claiming areas of maritime jurisdiction, this is a waste of time and money (as well as being criminally irresponsible from the environmental point of view).

The largest Spratly island, *Itu Abu* has a total area equivalent to three soccer pitches: only a handful of the islands have an extent even remotely comparable. Thus, whatever the value of these islands may be, it cannot be for the direct support of humans (there are references in the literature to some of the islands being “inhabited”—the authors presumably mean “occupied,” because the islands do not have and never have had a permanent population).

Article 121 paragraph 3 of the Convention states that “rocks” which are unable to support human habitation or an economic life of their own cannot generate an exclusive economic zone or continental shelf (but they are entitled to a territorial sea of 12



**Spratly Islands Press Conference: Strategically located on important shipping lanes, the 600 islets of the Spratly Islands are the subject of dispute between China, Taiwan, Vietnam, Brunei, Malaysia, and the Philippines. During April and May 1997, Chinese navy ships were sighted near Kota, one of the islands in the group. Here, a representative of the Philippine’s Western Command, (left), and a government representative give a press conference regarding their diplomatic protest.**

Photo source: Victoria Calaguian/AP/  
Wide World Photos

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nautical miles). In any event, international legal practice does not recognize “equality” between different sized landmasses. The International Court of Justice decision in the maritime delimitation case brought by Libya and Malta refused to allow Malta an area of sea and seabed equal to that of Libya because of the gross disparities in the respective landmasses of the parties. Again in simple terms, smaller gets less. Why? – because it would be completely inequitable to allow a lump of rocks to generate an area of maritime jurisdiction equivalent to the mainland (or a sizeable island).

### The *Status Quo* is Not an Option

Many students of international law and international relations hold that the best course to follow in an intractable dispute between states is simply to wait. Sooner or later, they contend, the circumstances will come about which will assist in the resolution of the dispute either by negotiation, arbitration, or in some other way. One does not have to be an expert on the marine biology of the South China Sea and its living resources to conclude that the South China Sea may not be in a position to wait until the claimant states, as the saying goes, “get their act together.” Information from the Food and Agriculture Organization (FAO) of the United Nations suggests that the fish stocks are under stress. Marine biologists inform us that they are worried about the marine environmental quality of the South China Sea. We know from all sides that piracy is on the increase. Mariners complain about the inadequacy of charts. Problems with search and rescue, and pollution response have already been referred to.

There are a number of frightening scenarios here. More than half of the world’s oil is shipped through an area where hydrography is inadequate, search and rescue and pollution response

**“The 485 million people living in the coastal zones of the South China Sea derive 75 percent of their direct and 85 percent of their indirect protein from its living resources: any significant deterioration in those resources would therefore have impact on food security and thus human security: can anyone doubt that the economic, social and therefore political consequences of such an eventuality would be anything other than catastrophic?”**

wanting, the marine environment fragile, and marine biodiversity is of international importance. The 485 million people living in the coastal zones of the South China Sea derive 75 percent of their direct and 85 percent of their indirect protein from its living resources: any significant deterioration in those resources would therefore have impact on food security and thus human security: can anyone doubt that the economic, social and therefore political consequences of such an eventuality would be anything other than catastrophic?

Only lawyers and diplomats could seriously look at the South China Sea problem with any degree of equanimity or could

“Some regions of the world cooperate very closely in marine affairs, and others not at all. The countries of the South China Sea have, for too long, been divided by political, ideological and other considerations.”

seriously counsel being patient and allowing time to do its work. The modern approach to environmental challenges incorporates what is known as the precautionary principle – action should be taken to prevent an environmental mishap or catastrophe, states should not (some would say must not) wait until one develops before taking action. But what can be done in the South China Sea?

### Approaches Rather Than Solutions

Many of the solutions proposed for the South China Sea seem too neat and tidy to be viable. This is not in anyway to deny the immense value of the contribution made by those who propose a way forward: anything which encourages creative thinking and a departure from stagnation is to be welcomed. For this really is the problem: the states concerned have not only locked themselves in an intractable dispute – they cling to ideas and concepts which have long outlived any purpose. Indeed, the states themselves have started this process of abandonment, whether they recognize it or not.



**South China Sea, Tioman Island: The South China Sea is dotted with many islands without dispute claims, including the small Malaysian island of Tioman.**

Photo source: Joel Rogers/  
ALLSTOCK Inc./Encarta 99



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In the introduction to this paper we touched briefly on the dotted line and the Kalayaan claim. Both China and the Philippines have ratified the Law of the Sea Convention of 1982 which calls on states to generate the zones of maritime jurisdiction based on distances from the coast. The Convention does not recognize historically-based claims. It is therefore reasonable to suppose that both countries have, albeit implicitly, abandoned their historical positions in favor of the regime laid down by the 1982 convention. The countries concerned cannot have it both ways. Adherence to a treaty is held to be the primary source of international obligations. We must conclude not that the historical concepts have been abandoned, but that their significance with respect to the zones of maritime jurisdiction has been reduced greatly. The littoral states must also accept the possibility that many of the named features in the South China Sea cannot generate zones of maritime jurisdiction because they do not qualify as islands. Building on them will not help. Furthermore, rocks which cannot sustain habitation or an economic life cannot be used to claim extensive sea areas.

This leaves us with competing claims to the islands themselves. It is true that the oil factor appears to be of less significance than had been thought, so the issue becomes one

primarily of national pride (and no one should underestimate the potency of this factor for one moment). But the significance of sovereignty is surely open to some questions.

### From Conflict to Cooperation

The 1982 Convention requires states to engage in cooperation in the interests of resource conservation, optimum exploitation, and environmental protection. These concepts replace the former offshore orientation of the law of the sea which endowed states with (more or less) exclusive rights within an offshore area. The cooperation requirement becomes stronger still with respect to the littoral states of semi-enclosed

seas, and the South China Sea is included in this category according to the category contained in the convention (quite apart from the functional requirements of single ecosystem management).

It is all very well to encourage or even to require cooperation: how is this to be made a reality? Part of the difficulty here stems from the relative unfamiliarity of what is involved. Some regions of the world cooperate very closely in marine affairs, and others not at all. The countries of the South China Sea have, for too long, been divided by political, ideological and other considerations. But the same could be said of the states of the Eastern Mediterranean and in the Baltic during the time of the Soviet Union: they manage to overcome some very serious divisions in the interests of the

**“ Cooperation is not so much a requirement, but most importantly, one stemming from the physical nature of a shared sea and its resources. The rules of international law reflect this reality. ”**

**“ It may well be that the best solution for the Spratly Islands is to leave them severely alone, not for aesthetic reasons, or simply because doing nothing will impact all the claimants equally, but in the interests of the South China Sea itself, an area with biodiversity of international significance and resources upon which millions of people depend and will continue to do so. ”**

common good. Without for one minute underestimating the magnitude of the difficulties one can only say that there are really no serious obstacles to cooperation. The jurisdictional dispute does not have to stand in the way of the countries working together. This is possible because states are able to do so “without prejudice” to their respective positions on sovereignty and jurisdiction. Britain and Argentina came to such an arrangement regarding cooperation in the area between the contested Falkland Islands and the mainland. Neither party in any way surrenders its position by cooperating. The Law of the Sea Convention also encourages states party to an intractable boundary dispute to institute provisional measures of a practical nature pending the resolution of their differences. Obvious examples of such provisional measures would be the various offshore petroleum joint development arrangements currently in place in the Gulf of Thailand and between East Timor and Australia.

There are various ways in which the states concerned can be encouraged to think in these terms. The present writer has, for the past ten years, been working with Ambassador Hasjim Djalal of Indonesia in organizing a series of informal workshops and technical meetings on Managing Potential Conflicts in the South China Sea. The purpose of this undertaking, funded by the Canadian International Development Agency (CIDA), is not to solve the problem of the Spratly Islands, but rather to identify areas where coopera-

tion is both functionally required and practically feasible, develop such ideas, and then seek international support for their implementation.

Cooperation is not so much a requirement, but most importantly, one stemming from the physical nature of a shared sea and its resources. The rules of international law reflect this reality. Throughout this article the writer has attempted to contrast old thinking with new approaches. This is not done simply to be up-to-date or trendy, but rather to show that the international community has managed to evolve models and approaches which can help to put the countries of the South China Sea on the road to resolving some of their differences. Much of these focus on science-based decision-making. It may well be that the best solution for the Spratly Islands is to leave them severely alone, not for aesthetic reasons, or simply because doing nothing will impact all the claimants equally, but in the interests of the South China Sea itself, an area with biodiversity of international significance and resources upon which millions of people depend and will continue to do so. Surely such considerations come closest to determining the true stakes?

International law stipulates that the goal of maritime delimitation exercises is to achieve an equitable result. Equity is a difficult term to

define, but implies justice, fairness, giving to everyone what is their due. This approach is completely at variance with claims justified by any country on the basis of what they think is fair for them, but which ignore the legitimate position of their neighbors. In a way, equity compels a

certain generosity of spirit, something somewhat lacking in the South China Sea in recent years, but an approach whose time has surely come. It may achieve results – the current policies of the claimant states are manifestly failing to do so. ■

## UNITED NATIONS CONVENTION ON THE LAW OF THE SEA

### Article 121 Regime of Islands

1. **An island is a naturally formed area of land, surrounded by water, which is above water at high tide.**
2. **Except as provided for in paragraph 3, the territorial sea, the contiguous zone, the exclusive economic zone and the continental shelf of an island are determined in accordance with the provisions of this Convention applicable to other land territory.**
3. **Rocks which cannot sustain human habitation or economic life of their own shall have no exclusive economic zone or continental shelf.**

### Article 123 Co-operation of States bordering enclosed or semi-enclosed seas

**States bordering an enclosed or semi-enclosed sea should co-operate with each other in the exercise of their rights and in the performance of their duties under this Convention. To this end they shall endeavour, directly or through an appropriate regional organization:**

- (a) **to co-ordinate the management, conservation, exploration and exploitation of the living resources of the sea;**
- (b) **to co-ordinate the implementation of their rights and duties with respect to the protection and preservation of the marine environment;**
- (c) **to co-ordinate their scientific research policies and undertake where appropriate joint programmes of scientific research in the area;**
- (d) **to invite, as appropriate, other interested States or international organizations to co-operate with them in furtherance of the provisions of this article.**

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## Introduction

In implementing the recommendations of Chapter 17 of Agenda 21, coastal states faced the difficult task of formulating appropriate institutional mechanisms to make integrated coastal management (ICM) workable. Korea is an interesting example of a country that carried out such a task through internal policy development.

## Background

Post-UNCED (United Nations Conference on Environment and Development) ICM efforts in developing coastal states have been strongly influenced by international organizations through financial and technical support (World Bank, 1993; Cicin-Sain & Knecht, 1998; Chua, 1998; Olsen, 1999). Thus, it is often difficult to clearly identify the internal mechanisms involved in the evolution of ICM policy. It is therefore worthwhile to consider the Korean case in which ICM implementation can be solely attributed to an internal domestic mechanism with no external assistance. Korea is a good example in which to examine how a coastal nation instituted a paradigm shift in coastal management.

# Evolution of National Coastal Policy in the Republic of Korea



Source: Yoon Jin Sook (KMI, 2001)

Before developing national policy on ICM, concerned government agencies and academic groups jointly undertook efforts to push the paradigm forward into an institutional arrangement. On 8 August 1996, Korea created the Ministry of Maritime Affairs and Fisheries (MOMAF) which integrated most marine related government functions including port and shipping, fisheries, marine environment, marine science and technology, and coastal management (Hong and Chang, 1997).

In December 1998, the Korean National Congress enacted the 'Coastal Management Act' as a legal mechanism for implementing ICM policy and strategies. Although enacting a law itself does not guarantee the successful implementation of ICM principles, the achievements made in Korea since the mid-1980s in terms of ICM policy evolution can be regarded as a remarkable example of national-level implementation (Hong and Lee, 1995).

<sup>1</sup> The contents of this article are based on researches conducted in the author's previous affiliations, Korea Ocean Research and Development Institute (1991-1997) and Korea Maritime Institute (1997-2000), Republic of Korea.

## Challenges in Managing Coastal Resources and Environment in Korea

Table 1 describes the basic characteristics of coastal zone utilization in Korea. For the past three decades, Korea has been primarily concerned with exploiting and developing coastal resources, and in the process, neglecting the consequences of such development. Two factors contributed to this. First, impacts were primarily modest and localized and were easier to ignore in terms of national policy. Second, the prevailing paradigm for coastal resources was based on a land-oriented perspective that did not take into account the unique value of the coastal and marine ecosystem.

“ Although enacting a law itself does not guarantee the successful implementation of ICM principles, the achievements made in Korea since the mid-1980s in terms of ICM policy evolution can be regarded as a remarkable example of national-level implementation. ”

**Table 1. Characteristics Related to Coastal Uses in the Republic of Korea (as of 2000).**

Characteristics	Data	Note
National Land	99,408 km <sup>2</sup>	
National Population	46,430 (thousands)	
GNP per capita	6,823 US\$	
National Territorial Sea	85,838 km <sup>2</sup>	
Exclusive Economic Zone	286,543 km <sup>2</sup>	
Continental Shelf	355,013 km <sup>2</sup>	
Coastal Extension	11,542 km	Mainland (6,227 km) Islands (5,315 km)
Artificial Coastline	1,632 km	
Coastal Wetland	2,393 km <sup>2</sup>	83% of coastal wetland distributed in west coast
Coastal Islands	3,153	Inhabited 464 Uninhabited 2,689
Coastal Cities, Counties and Districts	78 (31,802km <sup>2</sup> )	26 Cities, 34 Counties, 18 Districts (34% of national total)
Coastal Population	12,725 (thousands)	27% national total
Coastal Population Density	400 ind./km <sup>2</sup>	National Average 467 ind./km <sup>2</sup>
Employee in Coastal Area	30% of National total	
Gross Regional Product in Coastal Area	36% of GNP	
Industrial Parks in Coastal Area	65 industrial parks, 312 km <sup>2</sup>	65% of National total
Power Plants in Coastal Area	40 plants, 27.9 km <sup>2</sup>	60% of National total
Ports and Fishing Harbors	Commercial Ports 28 Coastal Ports 22 Fishing Harbors 2,266	
Port Management Area	1,387 km <sup>2</sup>	
Mariculture Area	1,092 km <sup>2</sup>	
Marine Parks	2,649 km <sup>2</sup>	
National Parks in coastal land	4,043 km <sup>2</sup>	
Coastal Environment Management Areas	Watershed 2,651 km <sup>2</sup> Seawater 2,121 km <sup>2</sup>	Including Special Management Areas and Marine Protected Areas
Coastal Reclamation and Infilling Area	1,872 km <sup>2</sup> , 3,247 sites	

Source: MOMAF (2000a)

**“ At present, more than 98 percent of the mariculture areas are concentrated in the southern and western coasts-in the same areas where massive reclamation of coastal wetlands has taken place and where a number of heavy industrial complexes have been built.”**

### **Impacts on Coastal Ecosystems**

High demand for land expansion led the Korean government to set a national policy on reclamation and infilling of tidal wetlands and mudflats (Huh and Lee, 1995). With numerous bays and small islands, the western and southern coasts of Korea attracted land developers and induced government decision makers to enact policies reclaiming bays and tidal wetlands. Although the reclamation of coastal areas provided more space for agricultural, industrial, and urban expansion, it also resulted in serious adverse environmental and social consequences including the destruction of traditional fishing and mariculture farming grounds, the disintegration of fishing communities, and the loss of marine habitats (Huh and Lee, 1995). As a consequence of these large-scale reclamation and infilling projects, mostly conducted during the past ten years, 25 percent of total coastal wetlands (810 km<sup>2</sup>) has been destroyed (MOMAF, 2000a).

Export-driven heavy industries and the growth of the chemical industry dominated Korea's economic development during the 1970s and 1980s. Large-scale industrial complexes were constructed, primarily on the southeastern coast, as so-called "polluting industries" were imported from developed countries. Industrial pollutants were discharged into the seas without proper treatment, leading to cumulative impacts on coastal ecosystems and causing serious problems such as eutrophication, red tide and mass mortality of cultured marine organisms.

With the oil crisis and the declaration of extended jurisdictional zones by coastal states in the late 1970s, Korea's distant-water fisheries suffered a setback (Hong, 1991). Coastal fisheries and mariculture farming began to play a more important role. The irony was that more than 98 percent of the

mariculture areas were concentrated on the southern and western coasts – the same areas where massive reclamation of coastal wetlands has taken place and where a number of heavy industrial complexes have been built. In other words, fishing and mariculture activities were being threatened by increasing habitat loss, coastal water pollution, red tide, and oil spills.

In Korea, sea water quality standards are divided into three categories. The 1<sup>st</sup> class standard sets for fisheries and mariculture, the 2<sup>nd</sup> class for swimming and other recreational purposes, and the 3<sup>rd</sup> class for the use of industries and ship harboring. Since 1991, coastal water quality, as measured by chemical oxygen demand, has been at the second class standard which is not suitable for fisheries and mariculture (Table 2).

Marine trash on beaches and in coastal waters, has also caused serious problems by reducing the amenities of the coastal areas, impairing human uses, and degrading coastal habitats. In 1997, the total production of solid waste from land- and sea-based activities was estimated to be 380 thousand tons, of which 50 thousand tons were being discharged into the marine environment. It was also reported that more than 1,000 old ships were being disposed in the sea annually (MOMAF, 2000a).

**Table 2. Seawater quality standards**

Category	pH	Chemical Oxygen Demand	Dissolved Oxygen (saturation %)	Suspended Solids (mg/l)	E.coli (MPN 100ml)	Normal Hexane Extracts (mg/l)	Total Phosphorous (mg/l)	Total Nitrogen (Mg/l)
I	7.8-8.3	≤1	≥95	≤10	≤200	ND	≤0.05	≤0.007
II	6.5-8.5	≤2	≥85	≤25	≤1000	ND	≤0.1	≤0.015
III	6.5-8.52	≤4	≥80	-	-	-	≤0.2	≤0.03

Source : MOMAF, 1999

### Increasing Pressures

Coastal areas in Korea have always been subject to high development pressures given an export-driven economy, limited natural resources, limited arable land area (26 percent of total land), and large population (Hong, 1991). As of 1999, various national and local governments prepared 1,115 coastal development plans which were based on various laws (MOMAF, 2000a). Without proper integration and coordination, it has often been the case that different ministries and agencies have developed conflicting policies and plans for the same coastal space. Sectoral approaches for coastal development have resulted in the application of a 'first-come, first-served' principle to coastal space without balancing environmental, economic and socio-cultural values in the long-term.

For example, public access to beach areas have been greatly limited due to the development of ports and industrial parks, construction of coastal roads, and for national security reasons. Restaurants and hotels have encroached upon coastal space in an unregulated and often

illegal manner. Such developments have undermined public access to the beach and reduced coastal amenities.

### Degradation of the Quality of Life in Coastal Communities

Single-sector or single-issue oriented coastal development, which does not usually consider the integrity of coastal ecosystems or communities, has seriously affected the quality of life. For example, large-scale reclamation projects simply

provide economic compensation to local fisherfolk for the loss of fishing grounds and fishing rights. This practice fails to recognize the importance of providing alternative livelihood to local fisherfolk over the long-term. This results in the demise of fishing communities, and the eradication of traditional lifestyles.

The example also illustrates Environmental Impact Assessments (EIAs), which are conducted at the project level. The cumulative limitations of environmental or social impacts of coastal development are not effectively dealt with as EIAs remain focused on a single sector or issue.



**Coastal development in Haewoondae Beach, Pusan.**

Source: <http://www.budacafe.com>



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### Coastal fishing activities in Korea.

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Source: Choi Choon-Il (Coastal Korea)

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## Stage II : ICM Policy Initiatives as International Mandates

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In 1992, one of the most influential events in terms of coastal management in Korea occurred when UNCED recommended the establishment of national ICM mechanisms. The Korean government subsequently proposed to enact the 1992 'Coastal Management Act.' Because the proposal was more of an *ad hoc* response to international obligations and domestic outcry than a well-planned policy directive, the strategy for effectively implementing an ICM program was lacking.

To address the need and applicability of the ICM paradigm in a more effective way, an ICM Pilot Project was initiated by KORDI in Chinhae Bay through funding from MOST. Influenced by international policy mandates, the Chinhae Bay Pilot Project played an important role in generating ICM policy in Korea. The project's outcomes were well accepted in the mid-1990s and ultimately developed into a governmental policy statement, 'New Marine Policy Direction toward the 21<sup>st</sup> Century' (1995). This policy statement was jointly formulated by marine policy researchers and government officials from the Prime Minister's Office and from MOST. In it, the Korean govern-

## Evolution of National Coastal Policy in Korea: From a Paradigm to an Institutional Mechanism

### Stage I: The ICM Paradigm as an Academic Proposal

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In the early 1980s, after two decades of intensive development and alteration, the Korean government began to face the serious problems and challenges relating to the management of the coastal environment and resources (KORDI, 1986). It was at this time that marine policy researchers introduced the innovative concept of coastal management while academic groups developed a conceptual proposal on ICM (Table 3).

In the mid-1980s, the first national research project on coastal zone management was carried out by Korea's Ocean Research & Development Institute (KORDI) with the

support of Ministry of Science and Technology (MOST). The Ministry of Construction (MOC, later changed into *Ministry of Construction and Transportation [MOCT]*), which was responsible for managing coastal development activities, then funded a National Shoreline Assessment Project (1987-1988). However, despite these initial project activities, there was no institutional response or policy change.

One reason for the lack of reaction was that coastal zone management was novel to the Korean government. Many of the concepts were unfamiliar to the concerned policy-makers, (*i.e.*, the coastal zone includes both land and marine components; coastal management is concerned with both development and conservation; and coastal management involves various sectors and disciplines). The Korean government was not ready for such an innovative management framework or ICM policy recommendations.



ment first seriously addressed the national need for an “integrated management mechanism” to improve the existing coastal management system. Specifically, it proposed that the Korean government should enact a ‘Coastal Management Act,’ formulate a ‘National Coastal Management Plan’ and carry out a ‘National Coastal Zone Assessment Project.’ The Marine Development Basic Plan, which was approved in 1996, reiterated such action plans. With the support of the Prime Minister’s Office, a policy directive on establishing a national ICM mechanism was actively implemented, and the first-year National Coastal Zone Assessment Project was carried out by KORDI with funding from MOCT in 1996.

**“The paradigm of coastal zone management was novel one to the Korean government, especially the concepts that the coastal zone included both land and marine components, that coastal management was concerned with both development and conservation and that it involved various sectors and disciplines.”**

### **The Shihwa Experience Turning Point**

In addition to international policy direction, the 1990s was a turning point in domestic appreciation of coastal issues. One critical component of this was the effect of coastal reclamation on the Shihwa Lake wetlands area.

Coastal reclamation at Shihwa involved the construction of a 12.7 kilometer sea dyke on the western coast between 1987–1994. The original purpose of the reclamation was to build a freshwater reservoir for agriculture and to convert the adjacent wetland into farmlands and urban areas. However, the water quality of

the freshwater reservoir became so degraded that it could not meet the standard for agricultural use. This also led to the destruction of traditional fishing activities, and disintegration of coastal communities. The environmental impacts of the Shihwa Reclamation Project became a lesson to the government, non-government organizations (NGOs), and the public on the danger of irrational coastal development. Shihwa provided a turning point in the perception and awareness of the general public on the importance of long-term integrated planning to prevent irreversible impacts on the coastal environment (MOMAF, 2000b).

### **Stage III: ICM Policy Development and Integrated Ocean Governance**

The next phase of ICM policy development in Korea was initiated in 1996 with the creation of an integrated ocean governance system, under the Ministry of Maritime Affairs and Fisheries (MOMAF) (Hong and Chang, 1997). The ‘Division of Coastal Zone Management (later changed to ‘Division of Coastal Planning)’ was set up in MOMAF, and ICM authority and responsibility moved from MOCT to MOMAF. This provided an organizational basis for treating coastal management issues from a marine-oriented perspective.

Stage III of ICM policy development entailed an active interaction between academic policy advocates and government officials in developing an effective national mechanism for ICM program implementation. A joint working group was created to draft a 'Coastal Management Act' in September 1997. The People's Government, led by President Kim Dae Joong, included the 'Coastal Management Act' as one of 100 urgent governmental tasks. In such a positive political environment, the 'Coastal Management Act' was approved by the National Congress in December 1998, promulgated in February 1999, and entered into force in August 1999.

#### **Stage IV : ICM Policy Implementation under the 'Coastal Management Act'**

Korea's 'Coastal Management Act' stresses the importance of comprehensive and futuristic perspectives in pursuing a balance between ecological, cultural and economic values for activities within the coastal zone (Lee, 2000). The Act defines the landward boundary of the coastal zone as from 500m to one km inland from the shoreline, and the seaward boundary as the outer limit of the national territorial sea. Primary components of the Act include:

- National policies and basic principles of coastal management;
- Definition of coastal management boundary;
- National plan on integrated coastal management;
- Local plan on integrated coastal management;
- Coastal zone improvement project; and
- Coastal management council at national and local levels.

Through the process of Integrated Coastal Management Planning, the Korean government has attempted to enhance integration especially in the following areas:

- between conservation and development;
- among different government agencies at the national level;
- among national, provincial and local governments;
- between land and water;
- among different sectors; and
- between present and future generations.

According to the Act, the Minister of MOMAF is required to formulate a national integrated coastal management plan based on the deliberations of the 'Central Coastal Management Council (chaired by the Vice-Minister of MOMAF)' and the



**Tidal mudflats on the west coast.**

Source: Choi Choon-Il (Coastal Korea)

'Environment Conservation Council (chaired by the Prime Minister).' Before a draft plan was submitted to the Central Coastal Management Council, it was subjected to extensive stakeholder consultation including various national government agencies, relevant local government units, NGOs, the private sector and experts. The plan shall cover the following issues:

- Coastal land boundaries;
- Planning areas;
- Basic policy statements of coastal management;
- Strategies for coastal conservation, sustainable use and development;
- Restriction on coastal use activities, and support for coastal communities according to other laws;
- Coordination of individual policies developed by relevant governmental agencies on coastal conservation, use and development; and
- Basic policy on coastal zone improvement projects.

The heads of provincial and local governments, including provincial governors, mayors, county governors and district heads, can formulate local ICM plans, provided that they acknowledge the need to plan for effective conservation, use and development of coastal resources. Local

ICM plans are subject to review by a 'Local Coastal Management Council (chaired by Vice-Governor or Vice-Mayor)' and approval of the Minister of MOMAF.

In formulating the national plan and local ICM plans, responsible agencies can request amendments to other plans or zoning provided these are necessary for conservation and sustainable development. Furthermore, the Coastal Management Act requires that all the activities relevant to coastal conservation, use and development shall be consistent with the national and local ICM plans.

Integrated Coastal Management planning in Korea involved a review of all the present coastal activities and future development plans, more than 1,000 projects of different scales and types along the national coast (MOMAF, 2000a). The following criteria were used to re-evaluate existing development project proposals:

- Conservation of important marine ecosystems and biodiversity;
- Carrying capacity of the marine environment to sustain coastal land development;
- Conflicts among coastal conservation, use and development;
- Conflicts among agencies and plans;

- Public access and coastal amenities; and
- 'Quality of life' for coastal residents.

The National Integrated Coastal Management Plan of Korea (National ICM Plan), formulated by MOMAF between 1998-1999 and approved in July 2000, provides a comprehensive set of guiding rules for coastal resource allocation. During the planning process, present uses and future development plans for the coastal zone (which are under the authority of different levels of various governments), were examined and re-evaluated in light of the goals and principles of ICM.

The National ICM Plan identified the following strategies for implementing national coastal policy:

- To develop coastal policy by dividing the national coastal zone into ten coastal sub-regions and by characterizing coastal uses into five basic functions such as 'ecological coast' (preservation-oriented), 'environmental management coast' (restoration-oriented), 'public-friendly coast' (recreational low-intensity use-oriented), 'economic coast' (multi-purpose industrial use-oriented) and 'fishery coast' (fishery and mariculture-oriented);
- To designate important coastal wetland and marine habitats as



**Port at Inch'ón, South Korea. Inch'ón is the main port for Seoul, the capital of Republic of Korea. Lying on the Yellow Sea and at the mouth of the Han River, it has been an international port for over 100 years.**

Photo Source: Charles Bowman/Scope

marine protected areas and prohibit any significant coastal alteration to them;

- To manage pollution loads considering the ecological and economic characteristics of the coastal environment;
- To evaluate the feasibility of existing plans on coastal development considering the carrying capacity of the coastal environment;
- To create public-friendly coastal spaces and improve public access to the beaches; and
- To facilitate the formulation of local ICM plans and develop local capacity for coastal management.

The main question regarding the implementation of the National ICM plan is whether it can change patterns of coastal resource

exploitation, investments, technological development, and institutional arrangements, to ensure that these are consistent with future as well as present needs.

It should be noted that the implementation of the National ICM Plan strongly relies on the effectiveness of implementing other legislation. Many pieces of existing legislation have also been amended to effectively address land-sea interface issues such as those related to coastal wetlands, land-based marine pollution, and the management of coastal watersheds. For example, under the amended 'Marine Pollution Prevention Act,' nine bays and their watersheds were designated as 'Coastal Environment Management Areas'

(which includes Marine Protected Areas and Special Management Areas). In addition, a 'Strategic Plan for Coastal Environment Management Areas' was formulated and approved in March 2000. Following the guidelines of the National ICM Plan, major amendments were made to the existing 'Coastal Reclamation and Infilling Plan.' MOMAF will be designating two wetland sites on the west coast as 'Wetland Conservation Areas' (MOMAF website, <http://momaf.go.kr>).

As a way of promoting the development of local ICM plans, MOMAF has applied an incentive system. Local governments that have developed their own ICM plan are given priority in fund allocation for coastal zone improvement projects.

## Conclusion

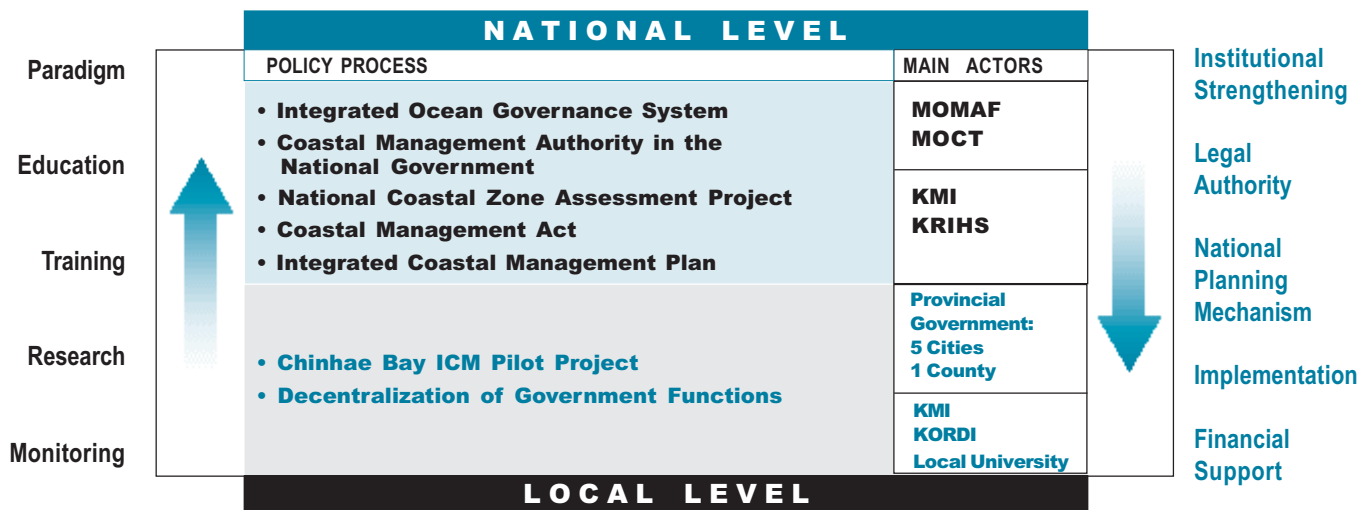
Korea's efforts to develop a national coastal policy and institutionalize an integrated management mechanism started with the recognition of the failure of past coastal governance, which had been sectoral and land-management oriented. The turning point was the occurrence of serious environmental disasters such as the Shihwa Lake water quality degradation after the construction of Shihwa dyke.

The recommendations under Agenda 21 enlightened

government policymakers, providing them with a management paradigm which integrated land and sea, relevant sectors, relevant government bodies, various disciplines, and present and future generations. This international mandate triggered a favorable political environment for policy advocates from the academe and government sectors to implement their long-awaited policy proposal for institutionalizing an ICM mechanism. The result was the creation of MOMAF and the enactment of

“ Korea’s efforts to develop a national coastal policy and institutionalize an integrated management mechanism started with the recognition of the failure of past coastal governance, which had been sectoral and land-management oriented.”

**Figure 1. Two-Tiered approach for establishing national ICM mechanism in Korea**



MOCT: Ministry of Construction and Transportation  
 MOMAF: Ministry of Maritime Affairs and Fisheries  
 KMI: Korea Maritime Institute

KORDI: Korea Ocean Research & Development Institute  
 KRIHS: Korea Research Institute for Human Settlements

**Table 3. ICM Mechanism development in Korea.**

	<b>Year</b>	<b>ICM Policy</b>	<b>Leading Agency</b>
<b>STAGE 1</b>	Early '80s	Conceptual Proposal	
	'85-'86	First Study on CZM	KORDI (MOST)
	'87-'88	National Shoreline Assessment Project	KRIHS, KORDI (MOCT)
	'91-'93	Coastal and Marine Information Database System	KORDI (MOST)
	'92	United Nations Conference on Environment & Development	
<b>STAGE 2</b>	'92	Korean Gov. Proposed to enact CZM Act	MOCT: no interest, no implementation MOST: interest, no authority
	'94	ICM Pilot Project in Chinhae Bay ('94-'97)	KORDI (MOST)
	'95	New Marine Policy Direction toward the 21st Century - proposed to establish institutional mechanisms of ICM	Office of Prime Minister MOST, KORDI
	Jan. '96	Marine Development Basic Plan - proposed to enact Coastal Management Act, to formulate ICM Plan	MOST, KORDI
<b>STAGE 3</b>	March-Dec.'96	National Coastal Zone Assessment Project (I)	KORDI & KRIHS (MOCT)
	Aug. '96	Creation of Ministry of Maritime Affairs & Fisheries	
	March '97	ICM responsibility moved from MOCT to MOMAF	
	April '97	KMI created	
	May '97	Division of Coastal Planning created in MOMAF	
	Aug. '97-Aug. '98	National Coastal Zone Assessment Project (II)	KMI and KRIHS (MOMAF)
	Sept. '97	Working Group for drafting Coastal Management Act	MOMAF, KMI, KRIHS
	Jan. '98	100 Tasks of New Government	MOMAF
	April '98	Inter-Ministerial Review of Draft Coastal Management Act	MOMAF
	Dec. '98	Coastal Management Act Approved	National Congress
<b>STAGE 4</b>	Feb. '99	Coastal Management Act Promulgated	MOMAF
	Dec. '99	Coastal Management Act enter into force	
	Feb. 2000	Designate Coastal Environment Management Areas	MOMAF
	March 2000	Strategic Plan for Coastal Environment Management Areas approved	MOMAF
	June 2000	National ICM Plan approved	MOMAF
	2001	Amend the National Plan on Coastal Reclamation and Filling	MOMAF
	2001	Wetland Conservation Areas to be designated	MOMAF

MOST: Ministry of Science and Technology  
 MOCT: Ministry of Construction and Transportation  
 MOMAF: Ministry of Maritime Affairs and Fisheries

KMI: Korea Maritime Institute  
 KORDI: Korea Ocean Research & Development Institute  
 KRIHS: Korea Research Institute for Human Settlements

the 'Coastal Management Act' (Table 3).

The observations made in this article suggest that Korea adopted a 'Two-Tiered Approach,' for ICM policy generation, after UNCED precipitated a favorable political environment (Figure 1). In a 'Two-Tiered Approach,' both top-down and bottom-up flows of feedback accelerated the momentum for generating ICM policy. The first-tier process is represented by the ICM Pilot Project in Chinhae Bay. The efforts made at the first tier strengthened the second tier process by providing a paradigm, education, training, research and monitoring. The second-tier process is characterized by the development of the National Coastal Zone Assessment Project and the formation of an integrated ocean governance system. Under the umbrella of an integrated ocean governance system, coastal management authority was institutionalized within the national government, which facilitated the formulation of a national ICM mechanism. The second-tier process, in turn, affected the first-tier process by providing institutional strengthening, legal authority, a national planning mechanism and administrative and financial support.

The establishment of a national ICM mechanism, (e.g. the enactment of the 'Coastal Management Act'), suggests that the 'first-tier' process in Chinhae Bay may serve as a model for other coastal zones in Korea. Similar institutional, organizational and technical structures can also be developed at the local level and linked to processes at the national level under the 'second-tier' process. ■



**Sunset on the west coast**

Source: Choi Choon-Il (Coastal Korea)

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## Introduction

The Marine Environmental Protection Law of the People's Republic of China (PR China) was adopted in 1982 (MEPL82) and has played a positive role in promoting marine environmental protection and maritime economy.

With the acceleration of the coastal economy and urbanization, nearshore marine pollution in particular has been worsening and amendment of the law was required.

## Background

In 1999, MEPL82 was amended in order to further protect and improve the marine environment, conserve marine resources, abate pollution and resulting damage, and ensure sustainable coastal and marine development.

# The New Marine Environmental Protection Law of the People's Republic of China



## Reasons for Revising the MEPL 82

The reasons for MEPL82 revision are manifold. Firstly, China ratified the United Nations Convention on the Law of the Sea in 1996 and promulgated the Law of Territorial Sea and Contiguous Zone of the People's Republic of China and the Law of Exclusive Economic Zone and Continental Shelf in 1992 and 1998, respectively. The jurisdictional sea areas of China cover the internal waters, territorial waters, contiguous zones, exclusive economic zone, continental shelf and all other areas under national jurisdiction. MEPL82 failed to cover all the areas.



## The Amended Marine Environmental Protection Law in 1999 (MEPL99): What's New?

Secondly, the emphasis of marine environmental protection in MEPL82 was to deal with individual sources of agricultural and industrial pollution but paid insufficient attention to ecological protection. With increased coastal use conflicts and continuous degradation and deterioration of the marine environment, there was a need to consider various sources of pollution as a whole and their cumulative effects from an ecosystem perspective.<sup>1</sup>

Thirdly, MEPL82 implementation involves various government agencies concerning environmental protection, oceanic administration, fishery management, maritime transportation, the armed forces, etc. Management systems for marine resources and environment were based on individual sectors. There was no effective mechanism for coordination and supervision of the policies and planning among the agencies. Further, 1998 saw the re-structuring of the national government and, accordingly, some changes in the mandates of various agencies regarding marine environmental protection. It was therefore proper to clarify mandates of various agencies involved and to develop effective mechanisms in law enforcement.

Fourthly, in MEPL82, as heavily colored by a centrally planned economy, administrative command and control measures were stressed and the provisions for legal liabilities

were too general. For example, only one article in MEPL82 (Article 41) covered major types of penalties for violations but did not provide the necessary basis for defining the degree of measures for different scales of violations. In addition, the use of market mechanisms deserved more attention.

Finally, there was a need to further implement concerned international conventions, particularly those adopted by P. R. China after MEPL82 enactment. The National People's Congress (NPC) Standing Committee sponsored a series of surveys and assessments regarding marine environment status, implementation effectiveness, and the experience and lessons learned. The results of these efforts called for MEPL82 improvement.

There were 48 articles in eight chapters in MEPL82. MEPL99 has two new chapters: Chapter II "Supervision and Management of the Marine Environment" and Chapter III "Marine Ecological Protection." Chapter VI of MEPL99 "Prevention and Control of the Pollution Damage to the Marine Environment by Offshore Engineering Construction Projects" is the revised version of Chapter III "Prevention of the Pollution Damage to the Marine Environment by Offshore Oil Exploration and Exploitation" in MEPL82. The national legal regimes for ocean dumping and pollution by ship sources have been amended to meet the requirements under concerned international conventions governing ocean dumping and pollution by



**Session of the National People's Congress, China**

There are almost 3,000 delegates at the Congress, from all over China. This picture from 1994 is from the eighth Congress.

Photo Source: China Stock Photo Library



**A Chinese junk fishes in the harbour near Hong Kong.**

Photo Source: Robert Harding Picture Library

**“Under MEPL99, governments at various levels in the coastal regions are held responsible for maintaining marine ecosystem health.”**

vessels, e.g., the 1972 London Convention and its 1996 protocol. Major legal regimes provided by MEPL99 are:

- System for “total quantity control” of contaminant discharges in major maritime zones;
  - Marine zoning and marine environmental protection planning;
  - Marine environmental quality standard and pollutant discharge standard;
  - Levy of discharge fees and dumping fees;
  - Contingency plan for oil-spill from offshore platform, vessel, and the coastal unit likely to cause marine pollution;
  - Marine nature reserve;
  - Report of quantity, type, content and installation of discharges;
  - Environmental impact assessment (EIA);
  - Dumping permit and zoning; and
  - Damage compensation.
- Chapter II “Supervision and Management of the Marine Environment” includes new elements such as:
- Drafting and implementation of marine zonation schemes in light of ecosystem functions;
  - Planning of marine environmental protection for major maritime zones;
  - Prevention and control of marine pollution and protection of marine ecosystems;
  - Formulation and implementation of marine environment quality standards, effluent discharge standards, measures for prevention and control of marine environmental pollution; and
  - Responsibilities and competence of concerned government agencies.

**Box 1: The Decision Making Structure for Marine Environmental Protection**

Responsibility	Mandate
Guidance, Coordination and Supervision	National Environmental Protection Administration(NEPA)
Management and Surveillance	State Oceanic Administration(SOA)
Marine Environment Protection Planning	SOA
Survey and Monitoring	SOA
Marine Zonation	SOA
Scientific Research and Assessment	SOA
Pollution by ocean engineering project	SOA
Pollution by ocean dumping	SOA
Pollution by non—military vessels	Harbor Superintendent
Pollution by fishing vessels and aquaculture	Fishery Administration
Pollution by warships	Armed forces

Protection of nature and ecological systems is taken as the basis for sustainable development in Agenda 21, China Agenda 21 and China Ocean 21. In MEPL99, protection of the marine ecological system becomes a legal requirement. The scope and measures for marine ecological protection include conditions for establishment of the nature reserves. Issues deserving close attention in the exploitation of marine resources are clearly defined. Under MEPL99, governments at various levels in the coastal regions are held responsible for maintaining marine ecosystem health.<sup>2</sup>

The past decade and before have witnessed the rapid development of marine exploitation, and the expansion of offshore engineering construction such as construction of submarine channels, submarine cables and

pipelines, and artificial islands. The potential for increased pollution and resulting damage to the marine environment caused by some offshore engineering projects is increasing. Chapter VI of MEPL99, therefore, establishes a special legal regime for regulating the impacts of offshore engineering projects and requires prevention and elimination of adverse effects and pollution damage to marine ecosystem health by construction projects.

### Special Features of the MEPL99

MEPL99 has adopted the sustainable development principle. Article 1 of MEPL99 clearly states the purpose of the law is “to protect and improve marine environment, protect marine resources, prevent pollution and

**“MEPL99 has adopted the sustainable development principle. Article 1 of MEPL99 clearly states the purpose of the law is ‘to protect and improve the marine environment, protect marine resources, prevent pollution and damage, protect ecological balance, safeguard human health and promote sustainable development of the economy and society.’”**

**Grand Canal of China: The Grand Canal of China, which connects the cities of Tianjin and Hangzhou, was built from the 6th century BC to AD 1327. The canal covers a distance of 1,782 km (1,107 mi) and is still in use today.**

Photo source: Marie Breton/Rapho/Photo Researchers, Inc.



**“Efforts were made in MEPL99 to define the scope of responsibilities of various concerned government agencies and to provide legal basis for joint enforcement by the agencies operating at sea.”**

damage, protect ecological balance, safeguard human health and promote sustainable development of the economy and society.” This brought the national legislation for marine environment in harmony with recent events and developments such as the adoption of Agenda 21 by the United Nations Conference for Environment and Development in 1992, as well as China Agenda 21 and China Ocean 21.

MEPL99 is an improvement over traditional regulations for marine environmental protection in China. It incorporates some proven and innovative concepts and practices such as:

- “Total quantity control” of contaminant discharges based on measured environmental carrying capacity;
- Emergency management of marine pollution incidents;

- Compensation for civil liability for oil pollution damage caused by ships and the elimination of backward equipment;
- Effluent discharge fees;
- Reporting of pollution incidents;
- On-site inspection at pollution sources; and
- Environmental impact assessment.

Efforts were made in MEPL99 to define the scope of responsibilities of various concerned government agencies and to provide legal basis for joint enforcement by the agencies operating at sea (Article 19). As shown in Box 1, the National Environmental Protection Administration (NEPA) is given the mandate to ensure the consistency of MEPL99 implementation with national environmental protection policy as a whole. Specifically, NEPA is held responsible for the prevention and control of onshore



**Shanghai Harbour, China:**  
**Shanghai has one of the largest ports in the world. The city’s importance as a centre of river and sea transportation stems from its location. The Huangpu River, left, links Shanghai to the East China Sea and the mouth of the Yangtze River, a major inland waterway. From there boats can travel north to Beijing via the Grand Canal.**

Photo source: Bruce Dale/National Geographic Society/Encarta 99

**Hangzhou, China:**  
**Hangzhou is a bustling port at the mouth of the Qiantang River, in south-eastern China. When Italian traveller Marco Polo arrived here in the 13th century, he called it the most beautiful city in the world.**

**Photo Source: Art Wolfe/Tony Stone Images**



source pollution that impacts the downstream marine environment. The State Oceanic Administration (SOA) is the operational arm for marine environmental protection and enforcement at sea, particularly including the supervision of pollution by offshore structures and ocean dumping.

MEPL99 strengthened the legal liability for marine pollution. Relevant provisions on legal liability were expanded from four articles in MEPL82 to 22 articles in MEPL99, accounting for 22 percent of MEPL99 text. Penalties for violations are more clearly defined. For example, in combination with administrative control measures, civil compensation liability has been added. Article 40 in MEPL82 concerning liability for marine environmental pollution and damage was too simplistic and was difficult to implement. This article was amended to deal with the different nature and scales of violations and to define agency responsibility in enforcement. New elements introduced into the article are:

- Compulsory administrative measure and penalties;
- Enhanced penalties for violations which sabotage marine ecosystems;
- Enhanced compensation liabilities for pollution causing damage to marine environment; and
- Right of the state for claiming compensation.<sup>3</sup>

In keeping with rights and obligations under concerned international conventions, MEPL99 has incorporated new features. In respect to the United Nations Convention on the Law of the Sea (UNCLOS82), MEPL99 clearly defines its scope of application as “internal waters, territorial waters, contiguous zones, exclusive economic zone and continental shelf and all other areas under jurisdiction of the People’s Republic of China.” According to the provision of UNCLOS82 that “States shall jointly develop and promote contingency plans for responding to pollution incidents in the marine environment,” MEPL99 (Article 54) includes a new legal requirement for

developing a marine contingency plan. In respect to the 1972 Convention on Prevention of the Pollution by Dumping Waste and Other Materials at Sea and its 1996 Protocol, new provisions regarding the inventory of wastes have been added to MEPL99.<sup>5</sup>

## Still Room for Improvement

MEPL99 is a significant improvement. Looking forward however, there is still room for further study and clarification in a number of areas. For example:

### A. Implementing agencies for the following should be clarified:

- “Total quantity control” of contaminant discharges in major maritime zones (Article 3);
- National planning for marine environmental protection, including major maritime zones (Article 7);
- Formulation of national standard



**Suzhou, China:**  
**A network of canals divides the city of Suzhou located near Shanghai in eastern China. Since the 7th century Suzhou has been linked by the Grand Canal to the Huang He (Yellow River).**

Photo source: Noburo Komino/Photo Researchers, Inc.

of public participation and non-governmental organizations (NGOs). Effective participation by public and NGOs will help prevent corruption and bureaucracy in the management of the marine environment. For example, the EIA review process should include public participation.

## Conclusion

MEPL99 is a step forward in developing an effective legal system for marine environmental protection in China. MEPL99 provides the legal basis for ecosystem-based management, pollution prevention and reduction in accordance with environmental carrying capacity, marine zonation, improved interagency coordination, the use of market mechanisms and better implementation of concerned international conventions. In view of future developments, there will be room for further improvement, particularly regarding the development of mechanisms for integrated coastal and marine environmental protection and management, and adequate procedures for stakeholder participation.



- for marine environmental quality (Article 9);
- Marine ecological protection (Chapter II); and
- Project review and approval concerning deep water discharge out-falls (Article 30).

### **B. *Modus operandi* for the following should be identified:**

- Implementing programme for “total quantity control” of contaminant discharges (Article 3);
- Regulations on the use of discharge fees and dumping fees (Article 11);
- Formulation of the national emergency plan for major pollution incident at sea (Article 18);
- Regulations on prevention, elimination and control of the marine environmental pollution via the atmosphere (Article 41);
- Determining the permissible level

- of radioactive matters (Article 61);
- Measures concerning insurance for oil pollution by ships and for damage compensation against oil pollution by ships (Article 66); and
- Measures and procedures for exercising the right of the State to claim damage compensation (Article 90).

### **C. Procedures for compensation claims by entities and individuals who have suffered damage caused by marine environmental pollution and related dispute settlement procedures should be further defined.**

### **D. More effective mechanisms for interagency coordination and collaboration should be worked out. In some areas of implementation, lead agencies are to be determined.**

### **E. Need to further define the role**

## Fact Box: China

Total Population <sup>1</sup>	1,261,832,482 (July 2000 est)
Urban Population <sup>2</sup> (% of total)	32 %
Coastal Population <sup>4</sup> (% of total)	24% 100 km from the coast
Land Area <sup>1</sup>	960 million sq km
Length of Coastline <sup>4</sup>	30,017 km
Climate <sup>1</sup>	extremely diverse, tropical in south sub arctic in north
Topography <sup>1</sup>	mostly mountains, high plateaus deserts in west, plains, deltas, and hills in east
Political System <sup>1</sup>	plural system with the Communist Party as the ruling element
Official Languages <sup>1</sup>	standard Chinese or Mandarin (Putonghua, based on the Beijing dialect), Yue (Cantonese) Wu (Shanghaiese) Minbei (Fuzhou) Minnan (Hokkien-Taiwanese), Xiang, Gan, Hakka dialects
Major Religions <sup>1</sup>	officially Atheist, Daoist (Taoist), Buddhist, Muslim 2% - 3% Christian 1%
Gross National Product <sup>3</sup>	GNP per capita (\$US/capita) US \$ 860 Global GNP (\$US million) US\$ 1,079,900 Part of Global GNP (%) 3.6%
Gross Domestic Product <sup>1</sup>	GDP purchasing power parity \$4.8 trillion (1999 est.) GDP real growth rate 7% (1999 est.) GDP per capita purchasing power parity \$3,800 (1999 est.)
Main Agricultural Commodities <sup>1</sup>	rice, wheat, potatoes, sorghum, peanuts, tea, millet, barley, cotton, oilseed, pork, fish
Major Industries <sup>1</sup>	iron & steel, coal, machine building, armaments, textiles and apparel, petroleum, chemical fertilizers, footwear, toys, food processing, automobiles, consumer electronics, telecommunications

<sup>1</sup> <http://www.odci.gov/cia/publications/factbook/geos/ch.html>

<sup>2</sup> <http://www.un.org/Depts/unsd/social/hum-set.html>

<sup>3</sup> [http://www.izitime.com/iziglobe\\_liste\\_pib\\_en.html](http://www.izitime.com/iziglobe_liste_pib_en.html)

<sup>4</sup> [http://www.wri.org/wri/wr-00-01/pdf/cmi3n\\_2000.pdf](http://www.wri.org/wri/wr-00-01/pdf/cmi3n_2000.pdf)

## Endnotes:

- 1 Bilan Du, "Carry out seriously the Marine Environmental Protection Law," Marine Development and Management, Issue 2, 2000, China Ocean Press.
- 2 Zhang Haiwen, "Research on the New Marine Environmental Protection Law," Research Report, CIMA, No. 3, 2000.
- 3 Bilan Du, "Carry out seriously the Marine Environmental Protection Law," Marine Development and Management, Issue 2, 2000, China Ocean Press.

\* Map and Fact Box prepared by Editor

## Editorial

from page 2

Despite an ongoing debate as to whether Japan should have a basic coastal and marine law, recent developments may lead to major changes in Japan's treatment of marine environmental issues. One administrative constraint in developing an integrated policy has been the fact that there were four major ministries which all had jurisdiction over the coastline. However, on January 6 2001, two of the ministries were merged and hence 70 percent of the coastline will now be under the jurisdiction of a single ministry.

Finally, we look at how a national ocean policy is being developed in Australia and some of the challenges it still faces. In 1997, the national government began preparing a comprehensive policy to cover marine issues beyond individual states' control. Australia moved rapidly in the development of this policy because it already had good scientific data on its marine environment, had prepared a strategy for sustainable development, and was able to build a constituency to support the policy. A remaining challenge is for the

national government to engage state governments in the policy in order for it to be truly integrated.

The articles in this issue make it clear that there is an on-going regional trend towards the development of national policies that ensure new approaches in the management of our oceanic heritage. They show that the disintegrated, multi-sector, and multi-agency policies of the past have been unable to halt environmental degradation, promote resource sustainability, and effectively address multiple-use conflicts. These articles highlight that the importance and complexity of the marine environment require an integrated, inter-sectoral, and inter-agency perspective.

As we move into the new century, projections indicate that the pressures and demands on the marine environment will continue to increase. We simply cannot afford to repeat the policy failures of the past, or wait too long before they are corrected. ■

## ANNOUNCEMENT

### CONFERENCE ON ENCLOSED COASTAL SEAS TO BE HELD

The 5<sup>th</sup> International Conference on the Environmental Management of Enclosed Coastal Seas (EMECS 2001) will be held on November 19-23 2001 in the City of Kobe and Awaji Island, Japan. The conference carries the theme: *Towards Coastal Zone Management that Ensures Coexistence between People and Nature in the 21<sup>st</sup> Century*. The languages to be used in the conference are English and Japanese (with simultaneous interpretation).

**For more information please contact:**  
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**IHD Building, 5-1 Wakinohama-**  
**kaigan-dori1-chome, Chuo-ku,**  
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By  
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## Introduction

The Philippines is one of the few countries in the Asia-Pacific Region that drafted a national marine policy document, which attempted to lay down some basic premises and principles for the management of its marine resources and environment.

## Background

On November 8, 1994, the Cabinet Committee on Maritime and Ocean Affairs, pursuant to a directive contained in Executive Order No. 186,<sup>1</sup> approved a document entitled "The National Marine Policy<sup>2</sup>" in anticipation of the entry into force of the 1982 United Nations Convention on the Law of the Sea (UNCLOS).

# Re-Inventing the National Marine Policy of the Philippines



In essence, the National Marine Policy (NMP) of the Philippines revolves around five key elements:

1. The archipelagic nature of the Philippines is to be emphasized in development planning;
2. Coastal marine areas are the locus of community, ecology, and resources;
3. The UNCLOS is to be implemented within the framework of a National Marine Policy;
4. Concerned and affected sectors are to be coordinated and consulted through the Cabinet Committee on Maritime and Ocean Affairs; and
5. The following priority concerns are to be addressed:
  - a. The extent of the national territory;
  - b. The protection of the marine ecology;
  - c. The management of marine economy and technology; and
  - d. The enhancement of maritime security.

As originally envisioned, this document was intended to comprise a comprehensive action plan to implement UNCLOS; and is to officially



introduce the concept of archipelagic development and consideration of the coastal marine areas as the locus of community and resources in the country—setting the stage for orienting development planning away from traditional land-focused strategies.

## Problems With The National Marine Policy

Unfortunately, the brief eight-page document approved for release fell quite short of what was required to guide the marine components of the archipelago. Despite the existence of the NMP, governance of the country's marine resources and activities remains much as it was before: fragmented and uncoordinated. The policy declarations of the NMP are still too few and too nebulous to provide any effective guidance to governance, and make no mention of the probability of conflict among the sectors that use the marine environment and the need for a mechanism for settling such.

The NMP did not elaborate on what comprised an “archipelagic development” model, and there is no evidence that the document made an impact even on agency-level policy-making subsequent to its approval. In the years since its reorganization, the Cabinet Committee itself had not committed to a clear agenda for policy coordination, management, and archipelagic development, and mostly met irregularly in response to high-profile incidents such as those involving the

“Despite the existence of the NMP, governance of the country's marine resources and activities remains much as it was before: fragmented and uncoordinated. The policy declarations of the NMP are still too few and too nebulous to provide any effective guidance to governance, and make no mention of the probability of conflict among the sectors that use the marine environment and the need for a mechanism for settling such.”



Maritime activities at Manila Bay, Philippines.

**“ Thus, on the whole, the governance of the marine environment of the archipelago is still primarily reactive rather than proactive; sectorially fragmented and uncoordinated. There is still no definable mechanism for integration and coordination of the various policies and programs that are being undertaken at all levels of government in response to the myriad issues and problems arising from the use of the marine environment.”**

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Spratly Islands, Scarborough Shoal, and intrusion of foreign vessels— reflecting the foreign policy priorities of the committee chair.<sup>3</sup> Thus, on the whole, the governance of the marine environment of the archipelago is still primarily reactive rather than proactive; sectorially fragmented and uncoordinated. There is still no definable mechanism for integration and coordination of the various policies and programs that are being undertaken at all levels of government in response to the myriad issues and problems arising from the use of the marine environment.<sup>4</sup>

### **Growing Interest in the National Marine Policy**

The NMP did not receive much attention outside of the Cabinet Committee circles until 1998, when the University of the Philippines (UP) held a series of meetings to define a new academic program on Archipelagic Studies and Ocean Policy. Participants from a wide range of disciplines and academic units met over the course of three months to discuss the issues concerning the impact of the archipelagic nature of the

country and the neglect of the oceans on prominent problems and issues in environmental protection, economic policy, national territory issues, and national unity.

These meetings culminated in the Agenda-Setting Workshop on Archipelagic Studies and Ocean Policy in March 18, 1998, at which a number of papers were presented by experts in various fields related to the marine environment, and attention was drawn to the scope and extent of issues that the University’s collective academic resources could be focused on. Among the issues raised was the need for a review and retooling of the National Marine Policy.<sup>5</sup>

### **Clarifying Fundamental Principles and Functions**

The following year, in 1999, Executive Order No. 132 was promulgated to set the stage for a more systematic implementation of marine policy in the country.<sup>6</sup> The executive order spelled out a clearer formulation of the fundamental principles of Philippine marine policy as follows:

1. In responding to the many challenges and opportunities presented by the archipelagic

nature of the country, decisions and actions with respect to national and international maritime and ocean affairs shall be in accordance with a national marine policy;

2. In the pursuit of sustainable development, the interactions of the terrestrial and marine resource uses in an archipelagic setting shall be recognized, and used as the basis for encouraging all resource users to mutually support and reinforce each other; and
3. In consideration of international trends and developments in the management of the maritime and ocean sectors, utmost

priority shall be given to the development and enhancement of the country's capabilities to control, utilize, protect, manage, and conserve its marine resources.

The first principle highlights the importance of institutionalizing a national marine policy that will act as an interface between national and international marine management. The second principle presents the concept of "archipelagic development," drawing directly from the initial ideas presented at the Agenda-Setting Workshop on Archipelagic Studies and Ocean Policy in UP the previous year. The third principle expresses the priority to be given

to proper management and conservation of the country's marine resources.

Exec. Order No. 132 also more clearly specified the functions of the Cabinet Committee on Maritime and Ocean Affairs, which had remained unclear under Exec. Order No. 186. These functions are as follows:

1. To formulate and recommend a national maritime policy to the President;
2. To coordinate the implementation of such policy and periodically evaluate and refine it as necessary;



**The busy port of Bauan, Batangas located in Batangas Bay, Philippines.**

**“This resulted in an agreement in principle for a multi-organizational effort geared towards an overhaul of the NMP. One issue that was perceived early on was the number of separate policy-making initiatives on the marine environment, being conducted at different levels and in various places.”**

3. To identify and develop policy options in implementing international agreements on the oceans, as well as non-binding instruments, to which the Philippines is a party or signatory;
  4. To recommend policies, programs, and special projects necessary to advance the national interest and fulfill international commitments relative to the sustainable use of ocean resources and marine environmental protection;
  5. To formulate and recommend programs, and special projects to enhance the integrated and coordinated management of the maritime and ocean interests of the Philippines, particularly in:
    - (a) the protection of the archipelago, including the defense of the national territory, and the development of national capabilities to protect its marine resources;
    - (b) the protection, conservation, and preservation of the marine environment and ocean resources through the proper management of human activities within its maritime jurisdiction; and
    - (c) the development and promotion of Philippine interests in shipping, seafaring, fishing, extraction of mineral and energy resources, and other ocean-based industries.
  6. To formulate programs, coordinate and/or undertake activities to promote the archipelagic consciousness in the country, especially among the coastal communities.
- The Cabinet Committee (CABCOM) is supported by a Technical Committee on Maritime and Ocean Affairs (MOA), composed of representatives of all departments in the Cabinet Committee, which may be augmented by members of the academe, non-government organizations, and the private sector, and having the following functions:
1. to oversee the implementation of the decisions and policies set by the CABCOM-MOA;
  2. to formulate and recommend decision, policies, projects and programs with respect to the maritime and ocean affairs of the country, for consideration by the CABCOM-MOA;
  3. to coordinate the activities of all the concerned agencies in the implementation of international agreements on maritime and ocean affairs, as well as non-binding instruments, to which the Philippines is a party or signatory; and
  4. to formulate and recommend positions and strategies for maritime boundary delimitation, as well as fisheries and maritime

disputes settlement and other international maritime and ocean agreements.

The Technical Committee is convened primarily by the Maritime and Ocean Affairs Center of the Department of Foreign Affairs, which is also provided with responsibilities to ensure the proper functioning of the CABCOM and its Technical Committee, as well as the conduct of activities such as research, information dissemination, networking, and others needed for policy-making. Among the primary tasks of the CABCOM is to review the NMP and provide an updated and revised NMP if necessary. This is the responsibility of the Core Group on the NMP, a sub-committee of the Technical Committee.

## **A New Approach Towards Development of the National Marine Policy**

The Philippine Center for Marine Affairs, Inc. (PhilMar), the first non-government member of the Technical Committee convened a meeting on August 3, 2000 in the University of the Philippines with representatives of other non-government organizations and government projects on the marine environment with policy-making components. This resulted in an agreement in principle for a multi-organizational effort geared towards an overhaul of

the NMP. One issue that was perceived early on was the number of separate policy-making initiatives on the marine environment, being conducted at different levels and in various places.

Rather than waste financial and intellectual resources in redundant activities, PhilMar proposed the integration of the separate work of the various projects and agencies into a broader policy document that would serve less as a piece of government legislation and more as a basic reference document for the public. This is based on the assumption that the ultimate source of policy is basic information, and a much greater strategic impact could be made by presenting a reference document for marine policymaking rather than the law or executive issuance usually expected.

The current difficulty in reformulating the Philippines' marine policy is the fact that the archipelagic configuration of the country makes such a policy extend to practically all aspects of the nation. The range of sectoral policies and interests that need to be reconciled and integrated into the revised policy is daunting on account of the complex interrelationships between them. This complexity made it obvious from the beginning that any effort towards reinventing Philippine marine policy needed broad

**“ The current difficulty in reformulating the Philippines' marine policy is the fact that the archipelagic configuration of the country makes such a policy extend to practically all aspects of the nation. The range of sectoral policies and interests that need to be reconciled and integrated into the revised policy is daunting on account of the complex interrelationships between them. ”**

participation and a wide range of inputs from experts and representatives of the affected sectors.

At present, the Core Group on the NMP is taking a slow and cautious approach to the effort, conscious of the rapid pace of developments in the marine environment, and the extensive work already being undertaken by other groups and organizations in the academe and non-government circles. But it is expected that major developments will take place in the coming year, when policy proposals in coastal and marine resource management, fisheries, and seafaring will be released for discussion. These will be joined with existing documents on shipping and port development. Major policymaking initiatives will also have to begin with marine scientific research, and the exploration of the exclusive economic zone and continental shelf.

Re-inventing the National Marine Policy is not going to be an easy task. In other countries, marine policies were the result of the collective energies of a large number of experts from the government and private sectors, expended over a number of years of discussion and relying upon years of research. But at least the country now has an existing venue and forum for the revision activity. Hopefully, the Philippines will soon see the adoption of a revitalized policy that will better guide its management of the marine environment in the years to come. ■

## Fact Box: Philippines

<b>Total Population<sup>1</sup></b>	81,159,644 (July 2000 est)
<b>Urban Population<sup>2</sup> (% of total)</b>	59 %
<b>Coastal Population<sup>4</sup> (% of total)</b>	100% 100 km from the coast
<b>Land Area<sup>1</sup></b>	298,170 sq km
<b>Length of Coastline<sup>4</sup></b>	33,900 km
<b>Climate<sup>1</sup></b>	tropical marine, north east monsoon, Nov. - Apr. south west monsoon May - Oct.
<b>Topography<sup>1</sup></b>	mostly mountains with narrow to extensive coastal lowlands
<b>Political System<sup>1</sup></b>	Republic
<b>Official Languages<sup>1</sup></b>	Pilipino (based on Tagalog) English (official)
<b>Major Religions<sup>1</sup></b>	Roman Catholic 83%, Protestant 9%, Muslim 5%, Buddhist & others 3%
<b>Gross National Product<sup>3</sup></b>	GNP per capita (SUS/capita) US \$ 1,200 Global GNP (SUS million) US\$ 87,533 Part of Global GNP (%) 0.29%
<b>Gross Domestic Product<sup>1</sup></b>	GDP per capita purchasing power parity \$3,600 (1999 est.) GDP purchasing power parity \$282 billion (1999 est.) GDP real growth rate 2.9% (1999 est.)
<b>Main Agricultural Commodities<sup>1</sup></b>	rice, coconuts, corn, sugarcane, bananas, pineapples, mangoes, pork, eggs, beef, fish
<b>Major Industries<sup>1</sup></b>	textiles, pharmaceuticals, chemicals, wood products, food processing, electronics assembly, petroleum refining, fishing

<sup>1</sup> <http://www.odci.gov/cia/publications/factbook/geos/rp.html>

<sup>2</sup> <http://www.un.org/Depts/unsd/social/hum-set.html>

<sup>3</sup> [http://www.izitime.com/iziglobe\\_liste\\_pib\\_en.html](http://www.izitime.com/iziglobe_liste_pib_en.html)

<sup>4</sup> [http://www.wri.org/wri/wr-00-01/pdf/cmi3n\\_2000.pdf](http://www.wri.org/wri/wr-00-01/pdf/cmi3n_2000.pdf)

## Endnotes:

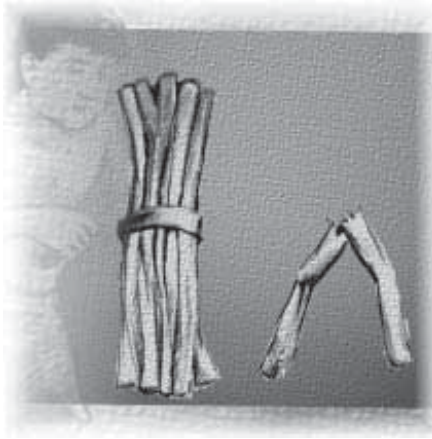
- Exec. Order No. 186, Series of 1994, Expanding the Coverage of the Cabinet Committee on the Law of the Sea and Renaming it the Cabinet Committee on Maritime and Ocean Affairs, dated July 12, 1994.
- The National Marine Policy*. Department of Foreign Affairs, Manila, 1994.
- Sec. 2, Exec. Order No. 186. The Department of Foreign Affairs is the appointed chair of the Cabinet Committee on Maritime and Ocean Affairs.
- A more comprehensive critique of the NMP is found in "Karagatang Pilipino: A Review and Critique of the National Marine Policy of the Philippines" in *Ocean Law and Policy Series*, Vol. 3, UP Institute of International Legal Studies, UP Diliman, Quezon City, 1999.
- Complete documentation of the workshop is contained in *Archipelagic Studies: Charting New Waters*. J. Batongbacal (Ed.), UP-CIDS, Diliman, Quezon City, 1998.
- Exec. Order No. 132, Series of 1999, Strengthening the Cabinet Committee on Maritime and Ocean Affairs and its Supporting Mechanisms, Establishing its Technical Committee, and For Other Purposes, dated July 30, 1999.

*\*Map and Fact Box prepared by Editor*

# P a r t n e r s h i p s .

## C a n Y o u J o i n U s ?

**Have you ever heard of the boy who proudly can break each single wooden stick but crestfallen when unable to do so with a tied bundle of sticks? Being together gives the bundle its strength.**



**Likewise in our seas, there are existing projects, hundreds of strategies and approaches, and numerous stakeholders, mostly on their own but really with one urgent commonality - ensuring the sustainable use and management of our coastal and marine resources.**

**The seas and issues are too big for anyone and everyone. But not for a bundle. Whether you are an individual, a group, or an organization - joining forces, pooling energies, and sharing resources will give us the capacity to achieve a shared vision - a safe and healthy sea.**

**Be A Partner**

w w w . p e m s e a . o r g

# The Bohai Sea Declaration

The Bohai Environmental Protection Declaration was signed during PEMSEA's 7<sup>th</sup> Programme Steering Committee meeting held in Dalian, People's Republic of China last 26–29 July 2000. Representatives of the State Oceanic Administration (SOA), the Liaoning, Shandong and Hebei provinces and the Municipality of Tianjin signed the Bohai Sea Declaration, inaugurating the commencement of activities under the Bohai Sea Environmental Management Project (BSEMP).

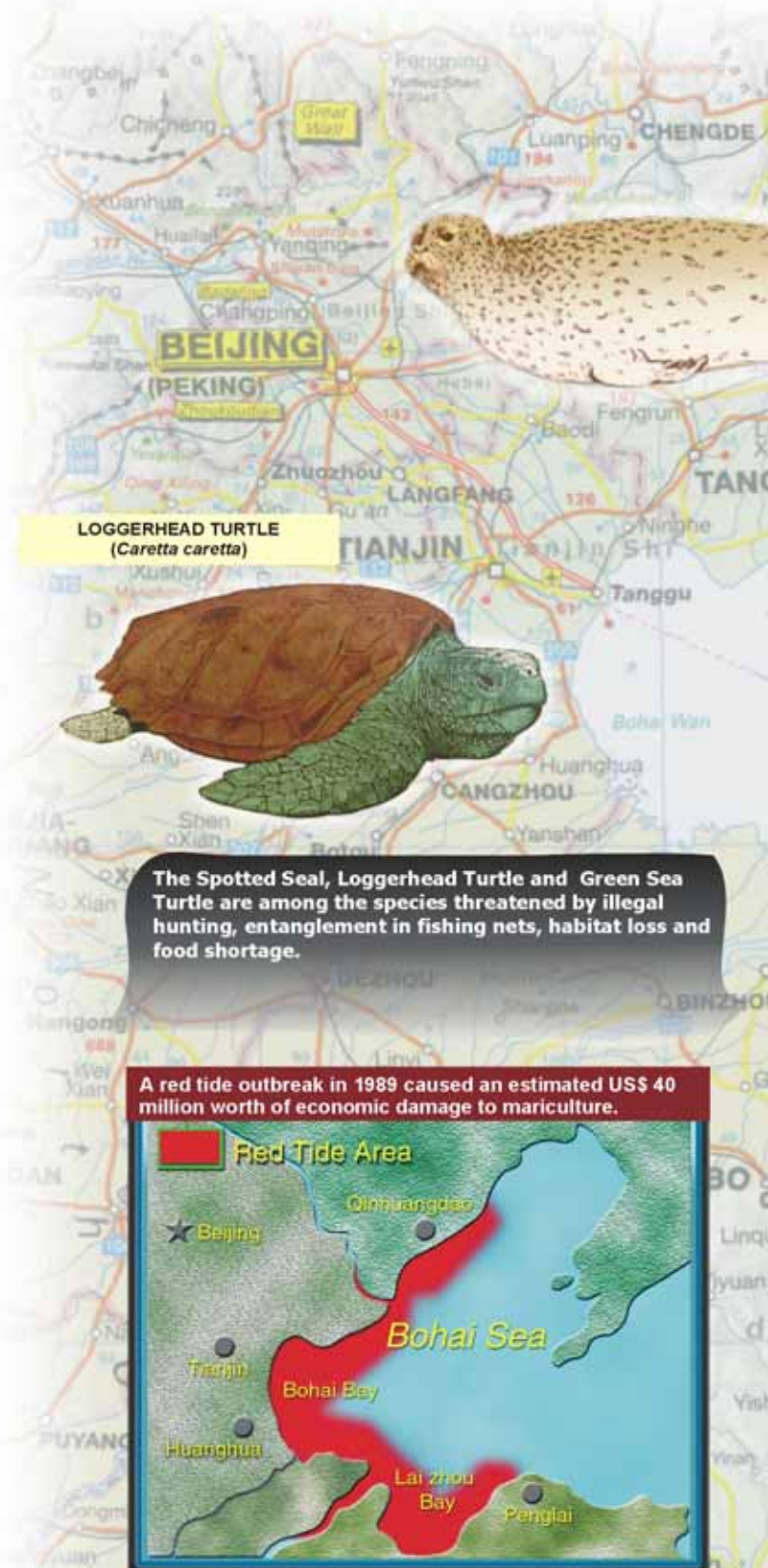
A Memorandum of Agreement for the development and implementation of the BSEMP was also signed between the People's Republic of China, represented by the SOA, and the International Maritime Organization, represented by PEMSEA.

The Bohai Sea Declaration recognizes the importance of the Bohai Sea to the development of the entire Northeast, North and Northwest China and the adverse effect that the worsening of the Bohai Sea environment will have on the development of the national economy as a whole. The Declaration outlines guiding principles for the protection and preservation of the Bohai Sea's resources and environment.

Actions planned under the Declaration include the setting up of a transregional coordination organ for the integrated management of Bohai Sea, the formulation and implementation of the Bohai Sea Management Law, and the possible establishment of a special fund for Bohai Sea to be used to increase public awareness and build capacity in marine environmental protection.



Signing the Memorandum of Agreement for the Bohai Sea Environmental Management Project



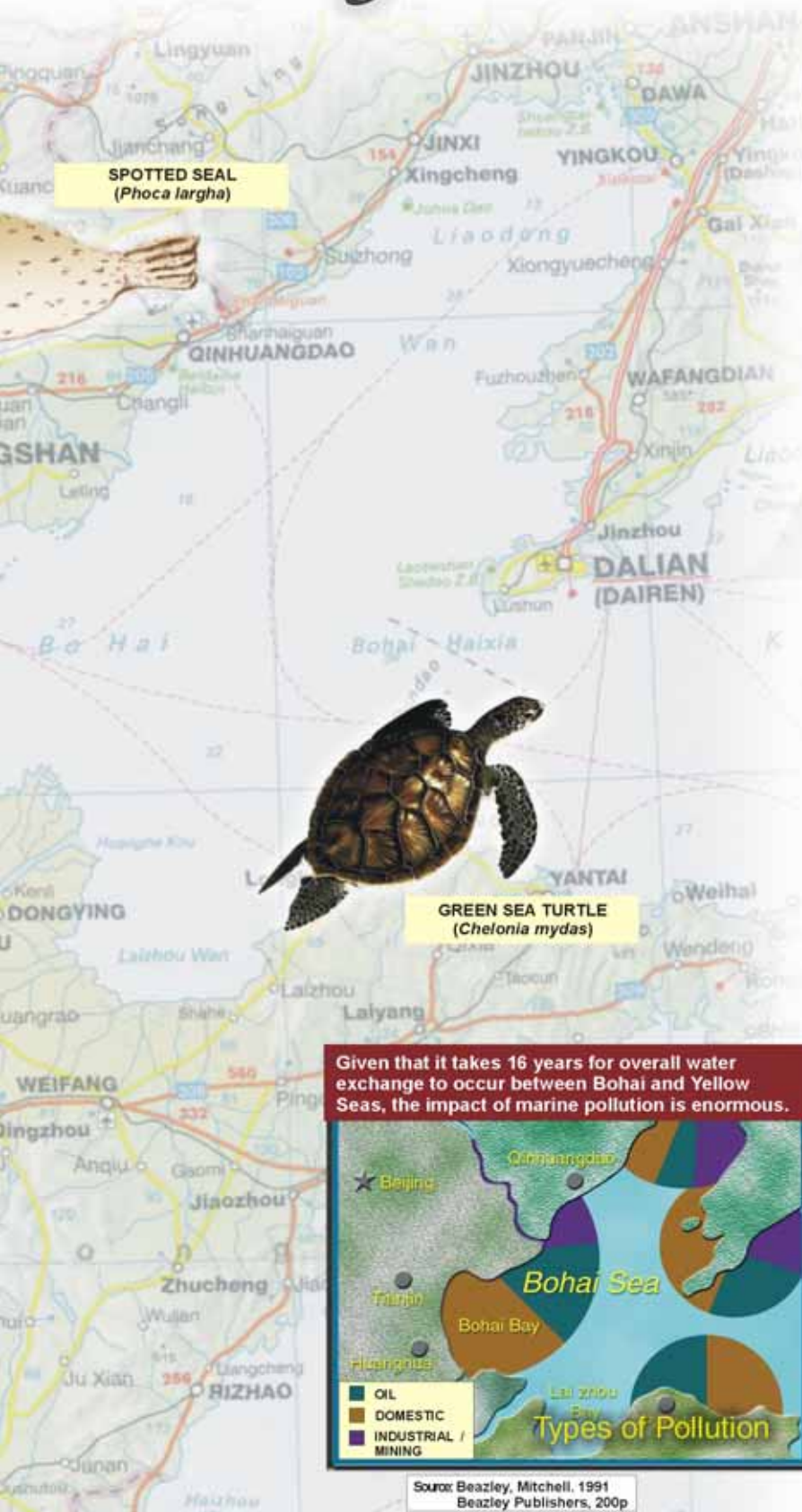
The Spotted Seal, Loggerhead Turtle and Green Sea Turtle are among the species threatened by illegal hunting, entanglement in fishing nets, habitat loss and food shortage.

A red tide outbreak in 1989 caused an estimated US\$ 40 million worth of economic damage to mariculture.

(Source: ADB and Ministry of Agriculture, 2000)



# on: Policy at Work



**SPOTTED SEAL**  
(*Phoca largha*)

**GREEN SEA TURTLE**  
(*Chelonia mydas*)

Given that it takes 16 years for overall water exchange to occur between Bohai and Yellow Seas, the impact of marine pollution is enormous.



Source: Beazley, Mitchell, 1991  
Beazley Publishers, 200p

## Gifts of Bohai Sea

The Bohai Sea, China's only internal sea, has an area of approximately 180,000 km<sup>2</sup>, with an average depth of 18 meters. It is bordered by land on three sides and has three bays: Laizhou, Bohai and Liaodong. It has high productivity and is the main nursery and feeding ground for many economically valuable fishes and prawns.

The Bohai Sea coastal zone also includes several significant urban and industrial communities, with a total population of around 46 million people. Although the population of the Bohai Sea coastal provinces only account for 3.8 percent of China's total population, they contribute over 10 percent to the country's total Gross Domestic Product.

The discovery of 20,000 year old necklaces on the shores of Bohai Bay attest to the Bohai Sea's long standing history as an important Chinese coastal settlement and socio-cultural hallmark.

Source: ADB and Ministry of Agriculture, 2000  
Mitchell Beazley, 1991,  
Mitchell Beazley Publishers, 200p

### Effects of Pollution:

- Disappearance of Species
- Increased Occurrences of Red Tide
- Concentration of pollutants on organisms

Source: She, Jun, 1999, Pollution in the Yellow Sea large marine ecosystem: monitoring research and ecological effects. In: Large marine ecosystems of the Pacific Rim; Massachusetts, United States of America: Blackwell Science, Inc. 465 p

### Pollution Sources of Bohai Sea

- About 90% of pollution in the Bohai Sea originates from land-based sources.
- Annual Pollution Discharges into the Bohai Sea

ELEMENT	Amount (Metric Ton/Year)
Nitrogen	94,622
Oils	15,333
Phosphate	3,592
Arsenic	466
Lead	267
Chromium	136
Cadmium	73
Cyanide	34
Mercury	6

- In 1994, over 800 tonnes of oil was released due to vessel collision in the Bohai Strait alone.

(Source: ADB and Ministry of Agriculture, 2000)

# The Bohai Declaration on Environmental Protection

**On the occasion of the Seventh Meeting of the Steering Committee of the GEF/UNDP/IMO Regional Programme on Building Partnerships for Environmental Protection and Management of the Seas of East Asia held in Dalian, July 26–29, 2000 and the formal launching of the Programme's Bohai Demonstration Project, the State Oceanic Administration, the Bohai coastal provinces of Liaoning, Shandong and Hebei and the municipality of Tianjin, realizing the severity of the state of marine pollution and resource depletion as well as the present and future challenges; exploring possible appropriate remedial measures for natural resource development and management as well as for the protection and preservation of the marine environment in achieving sustainable development of the economy and well being of the society; recognizing the significant role of the Bohai region in China's economic and social development and considering the present state of legislation, management and protection in respect of the Bohai marine environment, hereby unanimously make the declaration as follows:**

## I. Importance of the Bohai Environment

1. Bohai is a large-sized internal sea of China. The peripheral area of the Bohai is an economically and socially developed region. The conditions of the ecological environment of the Bohai relate not only to the continued prosperity of the Bohai economic circle but also to the economic and social development of the entire Northeast, North and even the vast Northwest of China. Therefore, the health of the Bohai ecological environment plays a very important strategic role in China.
2. Along with the rapid development of Bohai economy, the rate of discharge of land-based pollutants into the sea remains high. The marine ecological environment is currently facing and coping with the enormous impacts of increasing pollution pressure. The aggravation of the Bohai environmental degradation and the damage to the natural resources therein have already led to the sharp decline of the service functions of the sea area and increasingly eroding the Bohai's capacity for sustainable development and utilization. The worsening of the Bohai environment and its resource condition not only threaten the development prospects of the economic circle of Bohai region but could also drag down national economic development as a whole.
3. Ensuring sustainable development of the Bohai is an issue of vital importance to the overall well being of China's national economy and social development. Bohai environ-

mental improvement is a major task requiring systematic and programmatic approach, joint efforts of the coastal and other concerned provinces, municipalities and all walks of life in the whole society, and the application of effective measures over a long period of time. For promoting the sustainable development of the economy, society and culture of the Bohai region, we hereby solemnly declare: During the Tenth Five-Year Plan, keeping in mind the general goal and direction for action enumerated below and being committed to our common responsibilities, we pledge to take actions immediately and to launch activities for the protection and rehabilitation of the Bohai natural ecosystems and the environment.

## II. Concept, Principles and Objectives for Saving the Bohai

4. The "1996 China Ocean Agenda 21", the White Paper entitled "China's Ocean Policies" published by the Chinese Government, and the "Law of the People's Republic of China on Marine Environmental Protection" which came into force on April 1, 2000, provide the overall concept, principles and objectives as well as policy and legal framework for us to undertake improvements of the Bohai environment.
5. The worsening Bohai environment is also closely related to the economic and social activities in the periphery area surrounding the sea. The environmental issue of the Bohai is not isolated. It is therefore necessary to combine the need for environmental protection with the demand for economic growth and development and to solve the environmental problems in the process of development. It is imperative to emphasize and implement the concept concerning coordination of environmental protection and resource development.
6. It is essential to give full consideration to the natural processes and characteristics of the Bohai; fully understand its current environmental and natural resource development problems and future trends. The guiding principles for the protection and preservation of the Bohai resources and environment should include the principle of integrated planning on the use of land and the sea resources; the principle of moderate development and rational environmental protection; the principle of equal importance to administrative and legislative management; and the principle of environmental protection and sustainable development of natural resources.
7. The initial target of the protection and the preservation of the Bohai environment are that damage to the ecological environment is under control and improvements in environmental quality. The ultimate goal is to realize the overall coordination of the Bohai economic and social development towards sustainable development of its natural resources and the environment.

## III. Measures and Actions

8. We realize that establishing a highly efficient management mechanism is one of the solutions for realizing the improvement of the Bohai environment. We propose that a trans-regional coordination structure for the integrated management of the Bohai be established, comprising the

staff members from both the central and local governments for jointly undertaking marine resources conservation, ocean environmental monitoring, marine supervision and law-enforcement in the Bohai area.

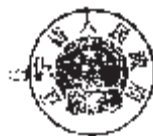
9. The Bohai is a subregional sea with cross-administrative boundaries and possesses unique socio-economic and physiographical features. Efforts for the improvement and recovery of the Bohai environment should follow the relevant policies, general principles, standards and requirements of the laws and regulations of the State concerning marine environment. At the same time, considering the specific characteristics of the Bohai, it is imperative to enact and implement the "Bohai Management Law" so as to provide the legal basis for the implementation of various activities pertaining to the development, management, protection and rehabilitation of the Bohai.
10. The Bohai is a focal sea area along China's coast. In accordance with the Law of the People's Republic of China on Marine Environmental Protection, it is necessary to implement as soon as possible the quota system of "total quantity control" for major pollutants discharged into the sea and allocate the controlled amount and quota of discharge for the main pollution sources.
11. Study and establish a model in the form of a special "Blue Fund" or "Save the Bohai" Fund for Bohai environment management. The relevant international organizations, the central and local governments, public and private enterprises, societal organizations and individuals will be invited to jointly fund and manage the Special Fund. The fund will be used mainly for public education and awareness campaigns, marine environmental protection, related scientific and technological researches, capacity building and human resources development.
12. Solutions to the Bohai marine environmental problems require the support of marine scientific research, availability of environmental technologies, financial inputs, and extensive international cooperation. We are aware of the vital importance of the dissemination and interchange of marine environmental information to effective resolution of the Bohai environmental problems. We support and promote the regional dissemination and interchange of marine information. We are willing to exchange experiences in marine environmental protection with the relevant international organizations and other coastal countries in the world and strengthen mutual technological cooperation and transfer so as to make contributions to the improvement of marine environment in the region and the world at large.
13. We propose that governments at all levels in the Bohai region and the society as a whole pay attention to and maintain the ecosystem health of Bohai; develop, utilize and protect the marine resources and environment in a scientific and rational way so that the state and all sectors of the society could benefit from the sustainable use of the sea.
14. We stress once again that, in making relevant policy decisions and taking specific actions in the future, we shall always bear in mind and follow the above-mentioned principles and, conscientiously protect the marine environment and natural resources of the Bohai for a brighter future of the contemporary and coming generations.

Signed and sealed on the 25<sup>th</sup> day of the month of July in the year 2000 at Dalian, Peoples Republic of China.

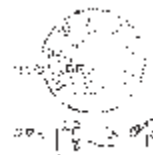
On behalf of:



Mr. Wang Shuguang  
**Administrator**  
The State Oceanic Administration



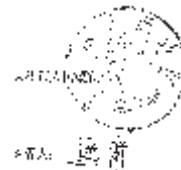
Mr. Yang Xinhua  
**Deputy Governor**  
The People's Government  
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Mr. Chen Yanming  
**Deputy Governor**  
The People's Government  
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Mr. He Shaocun  
**Deputy Governor**  
The People's Government  
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# The Development of a Coastal Zone Management Policy for Malaysia

## Introduction

This paper describes the state of affairs in Malaysia's coastal zone and the policy remedies taken by the Government to address some of the problems in the coastal zone. In summary, the many steps taken could be seen as a process that has changed from being sectoral in nature to being more integrated in approach.

## Background

Malaysia's coastal zone has undergone tremendous changes in terms of its uses, services and pressures exerted upon it. This is largely the result of economic and physical development and the need to conserve or protect parts of the coastal zone for environmental purposes. Many actions have been taken to address this conflict. The earlier activities in coastal zone management, for example, were aimed at addressing specific problems such as coastal erosion while more recent ones are geared towards providing an integrated solution to the many problems in the coastal zone.



Malaysia's coastal zone is the hub of the country's economic, social and conservation activities. The stretch of land from the seafront to the hinterland plays host to a myriad of activities ranging from ports/industries, coastal towns, and conservation areas. This mix of activities has resulted in the coastal zone being at the center of multiple use conflicts involving the country's economic and social ambitions, and its environmental protection aspirations.

The coastal zone without doubt is Malaysia's most productive area. It

provides invaluable services and functions to natural and man-made systems operating within its confines. In environmental terms, the coastal zone is where some of the country's most important and fragile ecosystems (mangroves, coral reefs and seagrass beds) exist.<sup>1</sup> This, in turn, relates to the productivity of the coastal zone in terms of fisheries and, to a lesser extent, forestry resources. These environmental services and functions, however, are being diminished as a result of development initiatives. Activities such as construction of infrastructure and coastal land

reclamation could dramatically alter the physical, biological and ecological nature of the coastal zone. Industrial activities and human settlements generate pollutants and waste that impact on the environmental quality of coastal waters and land.

Many actions have been taken to address the conflict between the environment and development in Malaysia's coastal zone and with varying results. This paper intends to examine some of these actions in relation to the present and past state of affairs in Malaysia's coastal zone.

## Two Perspectives on Malaysia's Coastal Zone

The state of affairs in Malaysia's coastal zone could be viewed from two perspectives; namely the physical/spatial issues and institutional issues. The physical/spatial issues concern are what some authors refer to as the ecological effects and multiple-use conflicts in the coastal zone.<sup>2</sup> The institutional issues relate to how the coastal zone is being managed. This section describes Malaysia's coastal zone from both perspectives and is intended to provide a setting for the discussion on how coastal zone management initiatives have developed in Malaysia over the years.

## Physical Issues: Multiple-Use and Cross-Sectoral Conflicts

A number of authors have put forward models of ocean and coastal uses (Table 1).<sup>3</sup> These models, while emphasizing different uses of the coastal zone, generally point out that many activities conflict with one another. To a certain extent, Malaysia's coastal use profile could easily be derived from any of these models with consideration given to details such as description and location of ecosystems as well as

“The coastal zone without doubt is Malaysia's most productive area. It provides invaluable services and functions to natural and man-made systems operating within its confines.”



**Klang, Malaysia.** The port city of Klang is located in west-central Selangor state in Peninsular Malaysia, on the Klang River. It is the administrative centre of a rubber- and fruit-producing district.

Photo source: Picture Library.

economic and social activities. This was the approach taken in the 1999 review of Malaysia's coastal zone and coastal zone management undertaken by the Economic Planning Unit of the Prime Minister's Department (EPU) with assistance from the Danish Cooperation on Environment and Development (DANCED).<sup>4</sup> The review described in some detail the different types of multiple-use conflicts in Malaysia's coastal zone and categorizes the conflicts as cross-sectoral conflicts and sectoral conflicts.

Cross-sectoral conflicts in Malaysia's coastal zone are a function of there being at least twelve use categories identified by the EPU in 1999. These use categories are navigation and shipping, communications, environmental protection and ecosystems conservation, exploration and exploitation of minerals and hydrocarbon resources, fishery, aquaculture and mariculture, tourism and recreation, research and education, human settlements, coastal land reclamation, military and naval defense, and waste disposal and pollution. In theory, multiple-use conflicts

could occur between any two or more of these use categories. But, in reality, many of the conflicts observed in Malaysia's coastal zone and sea result from the conflict between the environment and development or human use of the coastal zone.<sup>5</sup>

In a nutshell, the conflict between environment and development in Malaysia's coastal zone relates to two very important environmental considerations – conservation of biological diversity

**Table 1. Examples of Oceans and Coastal Use Methods.**

Couper's Global Marine Interaction Model (Couper 1983)	Sorensen and McReary (1990)	Pido and Chua (1992)	Vallega Coastal Use Framework (Vallega)	Hawaii Ocean Resources Management - example of coastal zone management approach (1991)
<ol style="list-style-type: none"> <li>1. Navigation and communication</li> <li>2. Mineral and energy resources</li> <li>3. Biological resources</li> <li>4. Waste disposal and pollution</li> <li>5. Strategy and defense</li> <li>6. Recreation</li> <li>7. Marine environment quality</li> </ol>	<ol style="list-style-type: none"> <li>1. Fisheries</li> <li>2. Natural area and protection systems</li> <li>3. Water supply</li> <li>4. Recreation development</li> <li>5. Tourism</li> <li>6. Port development</li> <li>7. Energy development</li> <li>8. Oil and toxic spill contingency planning</li> <li>9. Industrial siting</li> <li>10. Agriculture</li> <li>11. Mariculture</li> </ol>	<ol style="list-style-type: none"> <li>1. Agriculture</li> <li>2. Fisheries</li> <li>3. Infrastructure</li> <li>4. Mining</li> <li>5. Ports and harbors</li> <li>6. Industry</li> <li>7. Tourism</li> <li>8. Urban development</li> <li>9. Forestry</li> <li>10. Shipping</li> </ol>	<ol style="list-style-type: none"> <li>1. Agriculture</li> <li>2. Shipping</li> <li>3. Sea pipelines</li> <li>4. Cables</li> <li>5. Air transportation</li> <li>6. Biological resources</li> <li>7. Hydrocarbons</li> <li>8. Metalliferous renewable resources</li> <li>9. Renewable energy resources</li> <li>10. Defense</li> <li>11. Recreation</li> <li>12. Waterfront structural development</li> <li>13. Waste disposal</li> <li>14. Research</li> <li>15. Archaeology</li> <li>16. Environmental protection and preservation</li> </ol>	<ol style="list-style-type: none"> <li>1. Research</li> <li>2. Recreation</li> <li>3. Harbors</li> <li>4. Fisheries</li> <li>5. Marine ecosystem protection</li> <li>6. Beaches and coastal protection</li> <li>7. Waste management</li> <li>8. Aquaculture</li> <li>9. Energy</li> <li>10. Marine mammals</li> </ol>

and pollution prevention, the so-called 'green' and 'brown' environmental issues. Conservation issues in Malaysia's coastal zone often relate to the loss and degradation of coastal ecosystems and habitats such as coastal mudflats, mangroves, coral reefs, and seagrass beds, as a result of human activities such as port construction, coastal land reclamation and conversion of land from forests to other uses such as human settlements or agriculture. There are many examples of this type of conflict but the most often cited one is the effect of development on one of the country's premier marine parks, Pulau Redang. Development on this island severely affected the mangroves and corals of Pulau Redang due to mangrove clearing and subsequent sedimentation that damages corals in nearby waters.<sup>6</sup>

One fast emerging cause of multiple-use conflict in Malaysia's coast zone is land reclamation. The

coastal zone is increasingly being seen as a *de facto* land bank, which is readily available for development purposes. The trend can be seen in Table 2 that shows the size of ongoing and proposed coastal land reclamation activities in Malaysia.

**Table 2.**  
**Size of Planned and Ongoing Coastal Reclamation Projects in Malaysia<sup>7</sup>**

STATE	SIZE (acres)
Kedah	42,000
Perak	16,800
Selangor	10,000
Melaka	5,800
Pulau Pinang	5,000
Negeri Sembilan	4,900
Sarawak	3,970
Perlis	3,500
Johore	3,075
Sabah	1,019
Terengganu	720
Pahang	600

Source Economic Planning Unit (EPU), 1999.

“ In a nutshell, the conflict between environment and development in Malaysia's coastal zone relates to two very important environmental considerations - conservation of biological diversity and pollution prevention, the so-called 'green' and 'brown' environmental issues. ”

**Tasek Cini, Malaysia:**  
Tasek Cini is an area of 13 freshwater lakes in the Pahang region of Malaysia, and is the scene of spectacular displays of red and white lotus flowers between June and September each year. The lakes and their surrounding hill country are considered sacred by the indigenous Malay people, who have many legends of spirits and underwater cities connected with the lakes.

Photo source: Picture Library.



The impact of land reclamation on the coastal zone is manifold. While the impact has not been thoroughly examined in Malaysia, it is generally understood that land reclamation, when carried out in the vicinity of environmentally sensitive areas such as breeding and nursery grounds, can adversely affect marine and coastal ecosystems.<sup>8</sup> The question that needs to be asked regarding coastal land reclamation is whether the benefits outweigh the potential damage to the coastal and marine environment and the conflicts it generates between coastal land reclamation and other coastal use activities such as traditional fisheries.

Cross-sectoral conflicts also occur between different development and economic activities. In addition to conflicts regarding coastal land

reclamation, there are also incompatibilities between activities such as ports and harbors, and recreation; waste disposal and human settlements; and between tourism and industrial activities.

Intra-sectoral conflict, or conflict occurring within a particular sector of the economy, continues to occur in Malaysia's coastal zone. While there is less publicity about such issues they are nonetheless of great concern to the agencies and individuals involved in sectors such as fisheries and tourism. The fisheries sector, for example, continues to be an area of conflict between small-scale and commercial fisherfolk due to violations of zoning regulations as commercial fisherfolk encroaching onto artisanal fishing grounds.<sup>9</sup>

Intra-sectoral conflicts have also been reported within the tourism sector where incompatible recreation activities, *e.g.*, recreational swimming or bathing and jet ski riding, occur in the same beach areas. Several fatalities have occurred in the resort town of Port Dickson and on Pulau Pinang as a result of this type of conflict. Another conflict that is recurring, but has not been studied, are the results of resort or hotel operators limiting public access to beaches. Intra-sectoral conflicts in coastal zone, however, are not a major source of concern within the overall context coastal zone management. This is partly because intra-sectoral conflicts can be resolved within the particular sector by a single responsible agency.

## Fact Box: Malaysia

Total Population <sup>1</sup>	21,793,293 (July 2000 est)
Urban Population <sup>2</sup> (% of total)	57 %
Coastal Population <sup>4</sup> (% of total)	98% 100 km from the coast
Land Area <sup>1</sup>	328,550 sq km
Length of Coastline <sup>4</sup>	4,809 km
Climate <sup>1</sup>	tropical annual south west Apr.-Oct. and north east Oct.-Feb. monsoon
Topography <sup>1</sup>	coastal plains rising hills and mountains
Political System <sup>1</sup>	Constitutional Monarchy
Official Languages <sup>1</sup>	Bahasa Melayu, English, Chinese
Major Religions <sup>1</sup>	Islam, Buddhism, Daoism, Hinduism, Christianity
Gross National Product <sup>3</sup>	GNP per capita (\$US/capita) US \$ 4,530 Global GNP (\$US million) US\$ 96,987 Part of Global GNP (%) 0.33%
Gross Domestic Product <sup>1</sup>	GDP purchasing power parity \$229.1 billion GDP real growth rate 5% (1999 est.) GDP per capita purchasing power parity \$10,700 (1999 est.)
Main Agricultural Commodities <sup>1</sup>	Peninsular Malaysia: rubber, palm oil, rice, timber coconuts, pepper,
Major Industries <sup>1</sup>	petroleum production and refining, rubber and oil palm processing and manufacturing, light manufacturing industry, electronics, tin mining and smelting, logging and processing timber

<sup>1</sup> <http://www.odci.gov/cia/publications/factbook/geos/my.html>

<sup>2</sup> <http://www.un.org/Depts/unsd/social/hum-set.html>

<sup>3</sup> [http://www.izitime.com/iziglobe\\_liste\\_pib\\_en.html](http://www.izitime.com/iziglobe_liste_pib_en.html)

<sup>4</sup> [http://www.wri.org/wri/wr-00-01/pdf/cmi3n\\_2000.pdf](http://www.wri.org/wri/wr-00-01/pdf/cmi3n_2000.pdf)



## Institutional Issues: A Structure for Coastal Zone Management in Malaysia

There are fourteen ministries and twenty-seven departments involved in sea and coastal zone management in Malaysia.<sup>10</sup> The responsibilities of these organizations cover all components of coastal zone and sea management including policy formulation, coordination, administration and enforcement, development, and international relations. While the coverage appears to be comprehensive, the truth is that these agencies are responsible for only a part of the overall coastal zone management picture. The sectoral arrangement works well on single-issue matters, but does not accommodate cross-sectoral or multiple-use conflicts. Inter-agency groups are created on an *ad hoc* basis to address a particular problem at a particular time.<sup>11</sup> However, these *ad hoc* arrangements are not sustainable in the long-term and, more importantly, they are not guided by an overall coastal zone management policy framework. This policy vacuum has often hampered the resolution of multiple-use conflicts in the coastal zone.<sup>12</sup>

However, this problem has not gone unnoticed. Since 1984 the Government of Malaysia has undertaken many activities to address different problems in the coastal zone. A chronology of coastal zone management activities is provided in Table 3, and a brief analysis of these events is given.

It is evident from Table 3 that early coastal zone management initiatives in Malaysia were aimed at coastal resource management. The National Coastal Erosion Study (1984–1985) was intended to protect coastal land resource and economic resources from erosion. The South Johore Coastal Resource Management Project (1986–1992) and the Coastal Resource Management Policy (CRMP) Initiative (1991–1996) addressed the issue of coastal resource management within a wider

“The sectoral arrangement works well on single-issue matters, but does not accommodate cross-sectoral or multiple-use conflicts.”

**Table 3. Chronology of Coastal Zone Management Initiatives in Malaysia 1984 – 2000**

DATE	INITIATIVE
1984 - 1985	National Coastal Erosion Study
1987	Government of Malaysia circular on coastal development
1987	Establishment of National Coastal Erosion Council and Coastal Engineering Technical Centre at the Department of Irrigation and Drainage.
1986 - 1992	United States Agency for International Development (USAID) South Johore Coastal resource management project
1991 - 1996	National Coastal Resource Management Policy
1997	Town and Regional Planning Department guidelines on coastal development
1997	Department of Irrigation and Drainage guideline on coastal zone management
1997 - 2000	Pilot integrated coastal zone management project in Sabah, Sarawak and Pulau Pinang
1999	Department of Environment guideline for environmental impact assessment in coastal zone
1999 - Present	National coastal zone policy initiative

Source: EPU, 1999

context but the focus remained the same. There was no clear direction as to how these initiatives were to be placed within the overall context of national development and coastal zone management. As a result, neither initiative reached implementation stage (although there were other reasons preventing the implementation such as, in Johore's case, the possible loss of economic opportunities if the recommendations of the study were implemented).

Apart from these policy initiatives, there have also been important sectoral guidelines produced by government departments involved in coastal zone management. In practice, these guidelines have been more relevant and successful in addressing the coastal zone management and are widely used by government agencies at the national and state level.

Much needed policy direction and impetus were provided by the Seventh Malaysia Plan (7MP) which stated clearly the intention of the government to formulate a national coastal zone management policy in order *"to provide clear principles and guidelines for resolving the conflicting interest among different types of development in the coastal zone as well as to take into account environmental considerations to ensure sustainability of coastal resources..."*

The 7MP emphasized the need to reconcile the functions of the many agencies responsible for managing the coastal zone in Malaysia by streamlining existing policy, legislative and administrative provisions.<sup>13</sup> As a follow-on to the 7MP policy statement, EPU is presently conducting an exercise to formulate a National Coastal Zone Policy. Given the 7MP statement on the need to address multiple-use conflicts in the coastal zone, it can be assumed that the policy document being prepared will go beyond the resource use emphasis of previous initiatives and focus more on issues such as institutional capacity building, conflict resolution mechanisms, the physical planning process and conservation of ecologically sensitive areas.

Running in parallel with the national level process are three pilot integrated coastal zone management projects in Sabah, Sarawak and Pulau Pinang. These projects are intended to provide the experience of developing integrated coastal zone management plans at state level to complement the national policy initiative. Ultimately these three pilot projects are seen as examples that can be replicated by other states in the country taking into account local conditions and institutional arrangements. As of this writing, the three projects have more or less, been completed and are now entering their implementation stage.<sup>14</sup>

## Applying Coastal Zone Management Policy Principles

In addition to the draft national coastal zone management policy, there are a number of principles that can be used as guidelines. These principles are contained in documents such as Agenda 21 and international guidelines on the development of integrated coastal zone management plans. In general these principles consist of.<sup>15</sup>

- i) Agenda 21 principles relating to environment and development: interrelationship and integration; inter and intra-generational equity; the right to develop; precautionary principle; "polluter pays" principle; transparency principle, and environmental safeguards principle; and
- ii) Principles relating to the unique characteristics of oceans and coasts which take into account the maintenance of public access to the coast and the biophysical characteristics of the coastal zone.

In the case of the initiative on developing a coastal zone policy for Malaysia, the EPU status document further refined and elaborated these internationally accepted principles. The Status Report suggested the incorporation of elements such as:

- i) Recognizing diversity and integration;
- ii) Providing for continuity of the present arrangements but providing room for change;
- iii) Fulfilling Malaysia's international obligations and national commitments;

- iv) Cognizance of Federal–State relations and local responsibilities;
- v) Need for spatial planning;
- vi) Participatory planning and management;
- vii) Transparency in decision making;
- viii) Equity; and
- ix) Innovation and originality.<sup>16</sup>

The influence of Agenda 21, in particular Chapter 17,<sup>17</sup> on the suggested principles for Malaysia's coastal zone policy is indeed interesting as it represents a departure from the national-based approach of the previous initiatives.

## Conclusion

Malaysia's coastal zone is undergoing changes in its utility, biophysical conditions and administration. These changes are the result of both ecological effects and multiple-uses. Changes in use category and intensity have led to conflicts between environment and development as well as between different development activities. Malaysia has taken many steps to address these changes and resulting problems since 1984. Some of these steps have been successful while others have been less so. What is important to note, however, is that there appears to be a shift from resource-based single-sector initiatives to a more integrated and holistic approach. This shift is also influenced by the general acceptance of key international environmental and coastal zone management principles.

Notwithstanding these initiatives, and the changing trends they represent, the challenges to coastal zone management in Malaysia remain daunting, especially as the need for environmental protection and conservation continues to compete with economic interests for scarce coastal resources. ■

## End notes

- <sup>1</sup> Via Natura Malaysia Sdn. Bhd. 1995. Conservation of marine and coastal ecosystems in Malaysia. Unpublished draft.
- <sup>2</sup> Cicin-Sain, B. and Knecht, R.W. 1998. Integrated Coastal and Ocean Management: Concepts and Practices. Washington D.C. Island Press.
- <sup>3</sup> Vallega, A. 1996 as cited in Cicin-Sain and Knecht, R.W. 1998. Integrated Coastal and Ocean Management: Concepts and Practices. Washington D.C. Island Press.
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- <sup>5</sup> Miles, E.L. 1995. A consultant's report on ocean governance in Malaysia. Kuala Lumpur. Maritime Institute of Malaysia.
- <sup>6</sup> Mohamed Ibrahim Hj. Mohd and Jaapar Sidik Bujang. 1991. Impact of Development on Mangroves and Coral Reefs in Pulau Redang. Petaling Jaya. World Wide Fund for Nature Malaysia.
- <sup>7</sup> Ibrahim, A.A. 1997 as cited in EPU. 1999. Integrated Coastal Zone Management: Status Document. Kuala Lumpur. EPU.
- <sup>8</sup> Hong, S.Y. 1995. A Framework for emerging new marine policy: The Korean Experience. *Ocean and Coastal Management*. 25(2): 77 – 101. Cicin-Sain and Knecht also noted similar conflict occurring in Bangladesh.
- <sup>9</sup> Raja Mohamed Nordin Omar. 1994. Status and Contribution of Fisheries Sector to the National Economy. Paper presented at the MIMA Seminar on the Contribution of the Maritime Sector to the National Economy, 1994.
- <sup>10</sup> Wong Hin Wei. 1997. MIMA Report on a Survey of Public Maritime Institutions and Agencies in Malaysia. Kuala Lumpur. Maritime Institute of Malaysia.
- <sup>11</sup> EPU. 1995. National Conservation Strategy. Volume 2. Administration. Kuala Lumpur. EPU.
- <sup>12</sup> Mohd Nizam Basiron. 1998. The Implementation of Chapter 17 of Agenda 21 in Malaysia: Challenges and Opportunities. *Ocean and Coastal Management*. 41:1-17.
- <sup>13</sup> Government of Malaysia. 1996. Seventh Malaysia Plan 1996-2000. Kuala Lumpur. Government of Malaysia.
- <sup>14</sup> Both the state pilot projects and the national policy initiative is partly funded by the Danish Cooperation on Environment and Development (DANCED).
- <sup>15</sup> Cicin-Sain, B. and Knecht, R.W. 1998. Integrated Coastal and Ocean Management: Concepts and practices. Washington D.C. Island Press.
- <sup>16</sup> Economic Planning Unit, Prime Minister's Department. Malaysia. 1999. Integrated Coastal Zone Management: Status Document. Kuala Lumpur. Economic Planning Unit.
- <sup>17</sup> Chapter 17 of Agenda 21 is titled "Protection of the oceans, all kinds of seas, including semi-enclosed seas, and coastal areas and the protection, and rational use and development of their living resources." In summary, the chapter outlines salient principles and action programmes for the protection the sea and coastal areas under national, regional and international jurisdiction.

*\*Map and Fact Box prepared by Editor*

By  
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## Introduction

Indonesia's maritime development has largely been directed toward the strengthening of national sovereignty and jurisdiction based on the archipelagic outlook (*Wawasan Nusantara*), which has been recognized as the national strategy for development. However, this strategy has not been implemented fully with regard to oceanic issues. In addition, policymakers in the past have taken a more continental approach to development, and have been unaware of the economic importance and potential of Indonesia's marine resources.

## Background

Prior to 1999, about 14 ministerial and six non-ministerial agencies were involved in the management, development and administration of coastal and ocean activities. In 1999, following the political upheaval that led to the downfall of the *New Order* regime, a new Department of Sea Exploration and Fisheries was established, which in November 2000 became the Department of Marine Affairs and Fisheries. A new Maritime Council (*Dewan Maritim*) has been established under the coordination of the Department of Marine Affairs and Fisheries. Governmental and non-governmental organizations have an increasing role in environmental issues providing important input to public debates on environmental management.

# Indonesia's Approach to Coastal and Ocean Management within the Department of Marine Affairs and Fisheries



### Bamboo Boats, Indonesia

**The Republic of Indonesia consists of more than 13,600 islands, almost half of which are inhabited. Because it is a scattered island nation, many Indonesian communities rely on boats, such as these bamboo rafts in Java, for transport, communication, and commerce.**

Photo source: Noburo Komine/Photo Researchers, Inc.

Indonesia's new Department of Marine Affairs and Fisheries faces critical challenges. It must identify core coastal and ocean management issues and devise an appropriate organizational structure to deal with such issues. Complicating this daunting task is the current era of reform and decentralization, which has led to the reshaping of the central government's role. To meet these challenges, the department has set out nine basic strategies, as follows:

1. optimum, efficient, and sustainable use of marine and fishery resources;
2. rehabilitation of damaged coastal and marine ecosystems, and the establishment of spatial planning for coastal areas;
3. development and strengthening of marine and fisheries product and services market access and network;

4. establish and develop a marine and fisheries information system;
5. use of appropriate science and technology, together with professional coastal and marine management;
6. contribute to the creation of an environment conducive for appropriate fiscal and monetary policy;
7. improve the socio-economic welfare of coastal communities;
8. management of marine and fisheries development through legal and institutional mechanisms; and
9. promoting the community's maritime awareness.

These strategies are to be implemented through various programs and activities of the Directorate General for Fisheries; Directorate General for Ocean Research and Exploration; Directorate General for Capacity Building and Institutional Development; Directorate General for Coastal, Beaches and Small Island Affairs; and Directorate General for Sea Surveillance and Marine Protection. The Directorate General for Fisheries is in the process of being divided into two directorate generals for capture and for aquaculture, while the Directorate General for Ocean Research and Exploration will be transformed into a special body.

## Other Related Activities

### Enactment of New Laws and Regulations

To support its marine and fisheries development programs, Indonesia has enacted new laws and regulations, such as Law No. 6 of 1996 on Indonesian Territorial Waters; Government Regulation No. 61 of 1998 concerning the List of Geographical Coordinates of the Base points of the Indonesian Straight Archipelagic Baselines in the Natuna Sea; Law No. 23 of 1997 concerning Basic Provisions for the Management of the Living Environment; Law No. 24 of 1992

**“Policymakers in the past have taken a more continental approach to development, and have been unaware of the economic importance and potential of Indonesia’s marine resources.”**



**Ujungpandang, Indonesia. Ujungpandang is the largest port on Sulawesi Island in central Indonesia. It is also a commercial centre for shipping goods to and from the eastern Indonesian islands.**

Photo source: Tony Stone Images



**Medan, Indonesia**  
**The streets around the busy bus terminal are congested in the city of Medan, a trade centre and primary port in western Indonesia on the island of Sumatra.**

*Photo source: David Moore/Black Star/PNI*

concerning Spatial Planning; and Law No. 22 of 1999 concerning Regional Government.

### **Establishment of Archipelagic Sea-Lanes**

Based on thorough surveys and consultations with some states, Indonesia, and the International Maritime Organization (IMO), reached an agreement for a cooperative legislative competence, by adopting three archipelagic sea-lanes, using the routes of Strait of Sunda – Java Sea – Strait of Karimata – Natuna Sea – South China Sea; Strait of Lombok – Makassar – Celebes Sea; and Pacific Ocean to the south (with three optional routes).

These sea-lanes will come into force six months after the enactment of the relevant regulations by Indonesia. Because of the

independence of East Timor, the sea-lanes connecting the Pacific Ocean, Maluku Sea, Seram Sea, Banda Sea, Strait of Leti, and Timor Sea will be adjusted.

### **Major Marine Affairs Projects**

Indonesia has also carried out several programs in marine and fisheries development, some in cooperation with foreign agencies, such as:

#### **1. Marine Resources**

##### **Evaluation and Planning**

**(MREP):** MREP is an integrated and multi-sectoral approach in site-specific coastal areas at ten provinces consisting of ten marine and coastal management areas and three special marine areas. The Asian Development Bank (ADB) supports this project.

#### **2. Coral Reef Rehabilitation and Management Program**

**(COREMAP):** COREMAP's aim is to rehabilitate the damaged coral reef habitats in 35 sites throughout Indonesia. The World Bank, Global Environment Facility (GEF), ADB, Australian Aid, and Japan International Cooperation Agency (JICA) support this program. Under this program, a community-based management approach was adopted as a basic management strategy.

#### **3. Integrated Coastal Zone**

**Management Plan:** With the assistance from the ASEAN-USAID Coastal Resource Management Project, an integrated management plan for Segara Anakan was approved. This plan is geared toward the promotion and implementation of integrated and interdisciplinary coastal zone management.

#### **4. Designation of Marine Protected**

**Areas:** The designation of a marine area of 2.8 million hectares into 24 Marine Protected Areas.

#### **5. Less Developed Village**

**Program:** As part of a broader government program to alleviate poverty, this program was created to promote economic development in fishing and farming villages through decentralization and active participation by the local community.

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## Indonesia's Marine Resources

### Fisheries

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Indonesia's fishery resources are supposed to be the most abundant and diverse in the world. However, overfishing and the use of destructive fishing practices have resulted in a severe decline in the fisheries population. Illegal fishing by foreign and domestic vessels has also resulted in millions of dollars in lost revenues. In addition to open-sea fishing, Indonesia has enormous areas for coastal aquaculture, estimated at 830,000 hectares, of which less than half, approximately 300,000 hectares, are currently being utilized. This creates the potential for an increase in fisheries earnings for the country. However, because the viability of coastal aquaculture depends on clear and clean water, management of the coastal zone is especially important.

### Non-Living Resources

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Geographically Indonesia is the meeting place of three of the earth's tectonic plates. As such, it has many volcanoes and is rich in mineral resources, such as gold, silver, bronze, nickel, lead, etc. It is

**“ The new Department of Marine Affairs and Fisheries faces critical challenges. It must identify core coastal and ocean management issues and devise an appropriate organizational structure to deal with such issues. Complicating this daunting task is the current era of reform and decentralization, which has led to the reshaping of the central government's role. ”**

estimated that there are 60 oil and gas basins in Indonesia with a total of 9.1 billion barrels of oil reserve, 70 percent of which are located offshore.

### Economically and Culturally Valuable Underwater Treasures

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As an archipelago that lies between the continents of Asia and

Australia, and connects the Indian and Pacific oceans, Indonesia has played host to a long history of maritime exploration and transport. It is believed that within the Indonesian territorial waters lie sunken vessels of economic and cultural value. Some sites have been found and but others have yet to be located.

**“ Despite the promising prospects offered by its potential resources, Indonesia’s marine environment faces serious problems from land and sea-based pollution, over fishing, degradation of physical coastal habitats, conflicts in maritime space and resource utilization, illegal fishing and illegal dumping of wastes, and the challenge of poverty among fish-farmers and traditional fisherfolk. ”**

### **Non-Conventional Energy Potentials**

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Within the Indonesian archipelago there are also a number of non-conventional energy resources, which are not yet in broad commercial use. These resources are available in the forms of kinetic energy from relatively strong waves and currents; ocean thermal energy conversion (OTEC) produced from the difference in temperature between the sea surface and the waters deep below; and salinity-based energy located at estuaries where water with different salinities mix at constant temperature.

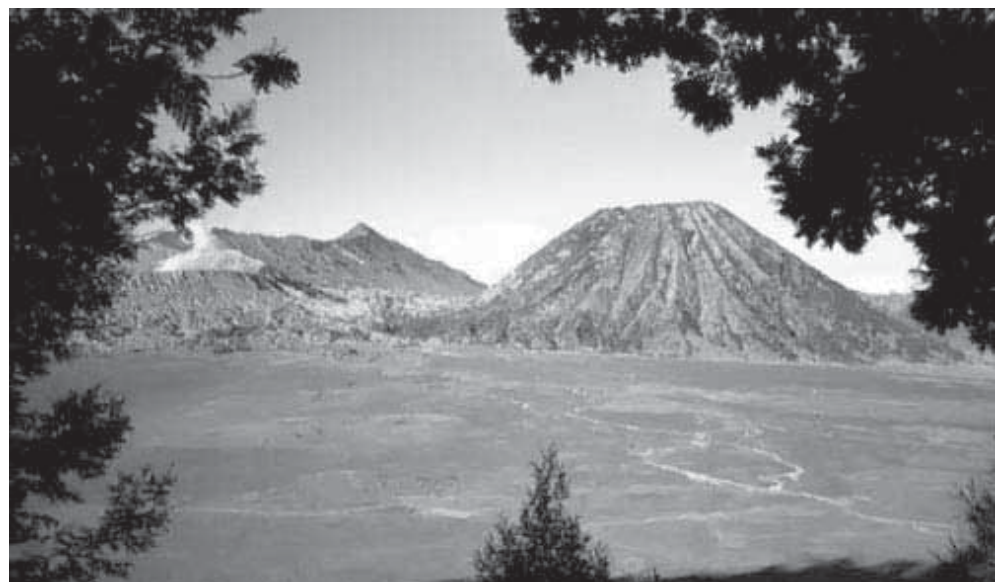
### **Services and other Ocean Uses**

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Maritime services have great potential for Indonesia. Shipping and other marine-related sectors such as coastal tourism, can make important contributions to national economic growth and livelihood.

**Mount Bormo in the Tengger highlands of East Java, Indonesia is known for its frequent volcanic activity**

**Photo source: Aztech New Media Corp.**





## Fact Box: Indonesia

National Territory	7.8 million sq km, 17,508 islands
Land Area	1,826,440 sq km
Length of Coastline	over 81,290 km
Land Area	1,826,440 sq km
Total Sea Area:	more than 5 million sq km
Territorial Sea	0.3 million sq km
Archipelagic Waters	2,905,743 sq km
Exclusive Economic Zone*	2,707,092 sq km

\*Based on information given by the Naval Hydro-Oceanographic Office

Marine scientific research is especially important since the seas within the Indonesian territory play a significant role in global weather patterns.

Currently 62 percent of the Indonesian population resides in the islands of Java and Bali. It is estimated that the total population of Indonesia will reach 276 million by 2020. This population growth will make it difficult for land resources to sustainably develop, and increasing the importance and the role of coastal and ocean resources.

## Postscript

Despite the promising prospects offered by its potential resources, Indonesia's marine environment faces serious problems from land and sea-based pollution, over fishing, degradation of physical coastal habitats, conflicts in maritime space and resource utilization, illegal fishing and illegal dumping of wastes, and the challenge of poverty among fish-farmers and traditional fisherfolk. Marine and fisheries development, therefore, cannot be based solely on economic growth, but should be part of a general development policy that promotes economic prosperity that is both sustainable and equitable. ■

# Visit the PEMSEA Website

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



The PEMSEA website contains information on news and events relating to marine and coastal environmental management in East Asia - Brunei Darussalam, Cambodia, China, DPR Korea, Indonesia, Japan, Malaysia, Philippines, RO Korea, Singapore, Thailand and Vietnam.

It also boasts of a wide variety of online references and databases regarding the practice of two tried-and-tested management approaches - Integrated Coastal Management (ICM) and Risk Assessment/Management.

For information about PEMSEA, visit the website at [www.pemsea.org](http://www.pemsea.org) or e-mail [info@pemsea.org](mailto:info@pemsea.org).

By  
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## Introduction

In March 1997, the Australian government released a consultation paper on developing an integrated and comprehensive Oceans Policy. On December 23, 1998, the Australian Oceans Policy (AOP) was published as two volumes (AOP, Commonwealth of Australia 1998a and b). The development from the first public consultation phase to the completion of the comprehensive policy had taken remarkably only 18 months. How did this occur?

This brief article describes the process by which Australia's Ocean Policy was prepared with particular emphasis on the key role community participation played in its development and acceptance. Wescott (2000) has described the development of the AOP in detail.

## Background

With the completion of the United Nations Convention on the Law of the Sea (UNCLOS), Australia found that the convention was the impetus for the preparation of an oceans policy. Within the Australian Marine Jurisdiction the nation actively searches for oil and gas, fishes a wide range of species, uses many navigational routes for coastal and international shipping, deposits most of the wastewater produced on the land and uses the area for recreation and tourism. In the mid-1990s, these activities were estimated to have a domestic value of approximately \$A 24 billion (McKinnon, 1993).

# The Development and Implementation of Australia's Oceans Policy



The Australian Marine Jurisdiction is between 8.6 and 16.1 million square kilometers (3.3 and 6.2 million square miles) or approximately twice the Australian landmass. Hence, these current economic benefits are seen as only a fraction of potential benefits. There is also a strong support in the Australian community for protection of biodiversity and ecological processes within this massive area. Therefore, there was a perceived need to develop an oceans policy to balance these possible competing outcomes.

Fortunately for Australia, the development of such a policy did not occur in a vacuum and the

nation possessed several distinct advantages in the development of an oceans policy.

The first significant advantage for the preparation of the AOP was the existence of the State of Marine Environment Report (SOMER; Zann, 1995), which collated existing marine data. This gave a database for the policy itself.

The second significant advantage was the earlier preparation of the National Strategy for Ecologically Sustainable Development (Commonwealth of Australia, 1992), which provided a framework for marine policy.

Hence the AOP was prepared against the backdrop of an existing (but incomplete) marine database and an existing framework for marrying development and conservation. This certainly meant the preparation of the Oceans Policy was able to get off to a rapid start as Table 1 illustrates.

## Developing a “Constituency”

The third significant factor supporting the rapid preparation and acceptance of the AOP was the development of a ‘constituency’ for the policy. By a ‘constituency’ the paper means a community support base for the policy as a whole (*i.e.* as an integrated strategy for planning and management of human use of the Australian Marine Jurisdiction) as distinct from a series of support bases for sections of the policy from sectoral interests *i.e.* the commercial fishing industry supporting aspects covering fisheries management, the oil industry supporting the mining policy sections *etc.*

This constituency for the integrated and comprehensive Oceans Policy was greatly aided by the work of the Marine and Coastal Community Network (MCCN). The Network is a non-government body sponsored under a contract from the Federal Environment Department, Environment Australia, currently with funding under the Oceans Policy.

The network is non-partisan and individuals and groups join the network as ‘participants.’ This entitles them to bi-monthly newsletters and invitations to seminars and workshops on marine and coastal matters.

The network now has approximately 7,000 participants from across all the states and territories of Australia and from across all sectors: government, industry, conservation and general community. The network employs a Regional Coordinator in most of the states and territories in Australia and the job of these coordinators is to act as a clearing house for any

**Table 1. Milestones in the Development of Australia’s Oceans Policy:**

<b>1997</b>	
<b>March</b>	Ocean Policy Consultation Paper released by the Federal Government.
<b>September</b>	Responsible Minister establishes a specialist Advisory Group.
<b>December</b>	Stakeholder’s Forum held with a series of discussion papers as a basis.
<b>1998</b>	
<b>May</b>	Oceans Policy Issue Paper and Ministerial Advisory Group discussion paper released.
<b>December</b>	Australia’s Oceans Policy released to the public for consultation.

“The third significant factor supporting the rapid preparation and acceptance of the AOP was the development of a ‘constituency’ for the policy. By a ‘constituency’ the paper means a community support base for the policy as a whole (*i.e.* as an integrated strategy for planning and management of human use of the Australian Marine Jurisdiction) as distinct from a series of support bases for sections of the policy from sectoral interests.”



**Wildlife protection is an important aspect of the Australian Oceans Policy.**

Photo source: Geoff Westcott

inquiries from anyone in the community (including government agencies) about marine and coastal matters. They also provide information to schools and other institutions, and aid and encourage the media to publish stories on marine and coastal matters – although they do not take a policy stance or partisan view on any controversy. In these cases, they refer the media to experts with differing views.

In effect, the aim of the network is to raise general awareness on marine and coastal matters.

The Network was established in 1993 and hence was in existence and operational prior to the development of the Oceans Policy. The Network was ideally placed to publicize the various

discussion and issues papers concerned with the development of Oceans Policy.

Most notably, after only 63 submissions had been received on the original (March 1997) consultation paper, the Network was provided with extra resources to increase the response rate to the 1998 Issues Paper. Over 660 submissions were received for this stage of consultation (over a ten-fold increase on the previous consultation round) after a series of workshops organized across the nation between the Network and Environment Australia. These submissions added a great deal to the quality of the final Oceans Policy released in December 1998, at the end of the International Year of the Ocean.

## The Australian Oceans Policy

On 23 December 1998, the Australian Oceans Policy was released.

The policy consisted of two volumes, one describing the vision, goals, context and overall structure and implementation of the Oceans Policy, the other covering “specific sectoral measures.”

In the Oceans Policy, the vision for Australia’s oceans is stated to be:

*Healthy oceans: cared for, understood and used wisely for the benefit of all, now and in the future.*

The goals for Australia’s oceans are:

1. To exercise and protect Australia’s rights and jurisdiction over offshore areas, including offshore resources;
2. To meet Australia’s international obligations under the United Nations Convention of the Law of the Sea and other international treaties;
3. To understand and protect Australia’s marine biological diversity, the ocean environment and its resources and ensure ocean uses are ecologically sustainable;

4. To promote ecologically sustainable economic development and job creation;
5. To establish integrated oceans planning and management arrangements;
6. To accommodate community needs and aspirations;
7. To improve expertise and capabilities in ocean-related management, science, technology and engineering;
8. To identify and protect natural and cultural marine heritage; and
9. To promote public awareness and understanding.

The policy commits the government to implement it through an integrated and ecosystems-based oceans planning and management system aimed at ensuring the maintenance of ecological process, biological diversity and viable functioning populations of native species.

This ecosystems-based approach is to be implemented through a Regional Marine Planning process outlined in the policy with one of the prime aims being to improve linkages between different sectors and across different jurisdictions (*i.e.* state and other boundaries). These Regional Marine Plans (RMPs) are based on Large Marine Ecosys-

tems (LMEs) derived from the Interim Marine and Coastal Regionalization for Australia (IMCRA Technical Group, 1998).

## The Implementation of the Australian Oceans Policy

The implementation of the Australian Oceans Policy is dependent on the institutional arrangements established in its first volume. Many of these arrangements are associated with one of the major challenges of the AOP – the problematic Commonwealth Government – State Government relations in Australia.

There is no legislation envisaged to implement the policy

although it is binding on all Commonwealth (Federal) government agencies. The State Governments are not currently bound to implement the Australian Oceans Policy inside their jurisdictions (*i.e.* inside three nautical miles from the shore for most activities) but the Commonwealth attempts to engage their binding cooperation through Memoranda of Understanding (MOUs).

The key elements of the institutional arrangements to implement the Australian Oceans Policy are as follows:

**1. The Australian and New Zealand Environment and Conservation Council (ANZEC)** is a Ministerial Council composed of the State, Territory, Commonwealth and New Zealand Ministers of the Environment (or conservation) and will



**Tourism is a fast growing industry and one of the most contentious covered in the Australian Oceans Policy.**

Photo source: Geoff Wescott

“The policy commits the government to implement it through an integrated and ecosystems-based oceans planning and management system aimed at ensuring the maintenance of ecological process, biological diversity and viable functioning populations of native species.”

oversee the entire process of implementation of the AOP and particularly Commonwealth-State coordination

**2. The National Oceans Ministerial Board (NOMB)** is chaired by the Commonwealth Minister for the Environment and includes the Ministers responsible for industry, resources, fisheries, science, tourism and shipping. It may coopt other Ministers as required. Its major responsibility will be to oversee the Regional Marine Planning process, and will ultimately approve each plan.

**3. The National Oceans Advisory Group (NOAG)** is to advise the NOMB. NOAG is essentially

made up of non-government members representing the stakeholders in Australian Oceans Policy. There are sixteen members from a diverse range of sectors including science, conservation, the seafood industry, recreational fishing, petroleum industry, tourism, shop owners, ports, mineral industry, education and indigenous groups.

**4. The Regional Marine Plan Steering Committees (RMPSC)** will include key government and non-government stakeholders and will oversee the preparation of the Regional Marine Plans. At the time of writing, the NOMB advised by NOAG was considering the membership and terms of reference of these Steering Committees (one per Regional Marine Plan).

**5. The National Oceans Office (NOO)** has been established to support the NOMB, NOAG and RMPSCs and will draft the actual Regional Marine Plans. The NOO will employ approximately 30 people.

Volume 1 of Australia's Oceans Policy states the Government will commit \$A50 million over three years for implementation of the policy and that the first Regional Marine Plan will be prepared for southeastern Australia (one of ten regions). The area includes Commonwealth jurisdictional waters as well as jurisdictional waters of the most populous states (Victoria and New South Wales) and the states of South Australia and Tasmania, *i.e.* five government jurisdictions. It includes Bass Strait, a treacherous stretch of water between Victoria and Tasmania, which is probably the busiest shipping lane in Australia, as well as being the location of oil and gas offshore wells. The southeast is by far the most densely populated area of Australia.

The Policy stated that a detailed “implementation schedule” for these actions would be developed within six months of the release of the policy (p.5), coordinated by the National Oceans Office. This ambitious schedule was not met but a number of further developments have occurred, as outlined in Table 2.

## A Process for Regional Marine Planning

The development of the Regional Marine Planning process is at the center of the implementation of the Oceans Policy. A two-day workshop was conducted on 6 and 7 May 1999 in Canberra to discuss draft papers on developing a regional marine planning framework. Over 60 people, mainly from Commonwealth government departments, attended at some stage with a core group of approximately 30 people, with significant non-government representation, attending all of the sessions over two days. Two major draft papers were discussed: one on the planning phases and public consultation processes proposed for the development of regional marine plans and one on the draft structure of the Preliminary Options Paper that would initiate the public consultation phase of a regional marine plan development.

The Steering Committee for the Southeast Regional Marine Planning process was set to be announced in late December 2000 with the Scoping Paper for this region to be released shortly afterwards. So, in summary, 18 months after the release of the policy:

- the NOMB, NOAG and NOO have been established and are operational;
- the first Regional Marine Plan has commenced although its Steering Committee has yet to be established; but
- there has been little progress on a

**Table 2. Further Developments in Implementing Australia's Oceans Policy:**

<b>1999</b>	
<b>May</b>	Workshop held on the development of Regional Marine Plans
<b>May</b>	First Meeting of National Oceans Ministerial Board (NOMB)
<b>July</b>	First Meeting of National Oceans Advisory Group (NOAG)
<b>December</b>	National Oceans Office (NOO) established in Hobart
<b>2000</b>	
<b>April</b>	Director of NOO appointed
<b>14-16 April</b>	National Oceans Forum held in Hobart and South East Regional Marine Planning process commenced
<b>September</b>	National Oceans Office: full staff complement appointed
<b>December</b>	Expected release of Scoping Paper on the Southeast Regional Marine Plan

MOU between the various levels of government with marine jurisdiction in Australia.

Although the implementation of the Australian Oceans Policy has been behind its ambitious schedule, nevertheless the original policy was developed in only 18 months and two years later (or 3 ½ years since the process began) the first tangible implementation documents are about to be released.

## Challenges Remaining

In conclusion, the major reason for such a rapid development and implementation of the Australian Oceans Policy appears to be the broad community support for the integrated and comprehensive policy which has consequently received strong backing from the Government

Minister leading the process, Senator Robert Hill. This combination of a carefully nurtured constituency for the policy and political will to achieve its development has served the marine environment very well in Australia in the past four years. But some significant challenges still remain. Although the space available does not allow for a detailed discussion of these challenges a brief review of these may be useful to readers.

The Federal Government has said that it will not proceed with legislation to back the Australia's Oceans Policy at this stage. Rather, it has taken the approach that the policy is to be binding on all Federal government agencies, as a matter of government policy. Nevertheless, the recent Environmental Protection and Biodiversity Conservation Act of 1999 names Commonwealth marine



**Shipping is a critical matter for an island nation such as Australia and hence is covered by the Australian Oceans Policy.**

Photo source: Geoff Wescott

waters as one of the specific areas over which the act will operate. In effect, this means that government agencies in the first instance are being instructed to abide by the AOP but if there is a dispute then this Act might be bought into play. This approach is consistent with the current Coalition government's philosophy of minimal regulation and encouragement to abide by policy, rather than compulsion to comply.

Cross-sectoral issues are, of course, at the heart of the AOP. The resolution of these is meant to be by negotiation between the individual ministers using the AOP's objectives as guiding principles. If not resolved individually, one would expect the National Oceans Ministerial Board to rule on them and failing, this it would

go to the full Cabinet. A dispute that would lead to this process has yet to occur.

The major challenge remains in the area of agreements with the state and territory governments. With these governments in charge of coastal matters out to three nautical miles (generally), a truly integrated oceans policy requires their involvement. The negotiation of this involvement has been continuing in fits and starts for two and one half years. It was hoped that this would be resolved in the preparation of the first Regional Marine Plan where the cooperation of the States would be necessary to cover coastal and nearshore matters. But with the discussion paper on the first plan to be released in February 2001 and the steering committee

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(including state representatives) formed already, no Memorandum of Understanding (MOU) or agreements have been signed. At this stage the first regional marine plan will cover only Commonwealth waters (from three nautical miles seaward and excluding Bass Strait). Hence, it will not be a fully integrated plan as originally intended by the Minister.

These circumstances of tensions and poor cooperation between the State and Federal governments are unfortunately relatively common in Australia. The same situation existed with the Commonwealth Coastal Policy which covered only the Federal agencies activities in the coastal zone. In this case, the Federal Government obtained state cooperation through MOUs and the inducement of the Coastcare matching grant schemes for the states. This approach has yet to be attempted in the oceans environment. Incidentally, the issue of integration between the fairly weak Commonwealth Coastal Policy and the Ocean Policy is unresolved with the opportunity of using the Regional Marine Planning process to cross the three nautical mile jurisdictional boundary not being taken advantage of, at least so far in the first Regional Marine Plan.



“The major challenge remains in the area of agreements with the state and territory governments. With these governments in charge of coastal matters out to three nautical miles (generally) a truly integrated oceans policy requires their involvement. The negotiation of this involvement has been continuing in fits and starts for two and one half years.”

These challenges probably highlight two matters: one, that the speed at which the process has occurred has meant some outstanding issues are still to be concluded; and two, the Minister has determined not to let these challenges derail the production and at least partial implementation of Australia's Oceans Policy. Only history can judge if this approach of putting off some of the difficulties inherent in oceans policy will be justified. ■

### Fact Box: Australia

Total Population <sup>1</sup>	19,169,083 (July 2000 est)
Urban Population <sup>2</sup> (% of total)	85 %
Coastal Population <sup>4</sup> (% of total)	89.8% 100 km from the coast
Land Area <sup>1</sup>	7,617,930 sq km
Length of Coastline <sup>4</sup>	66,530 km
Climate <sup>1</sup>	generally arid to semi arid, temperate in south and east tropical in north
Topography <sup>1</sup>	mostly low plateaus with deserts, fertile plains in south east
Political System <sup>1</sup>	Democratic, federal-state system recognizing the British monarch as Queen of Australia
Official Languages <sup>1</sup>	English, native languages
Major Religions <sup>1</sup>	Anglican 26.1%, Roman Catholic 26%, other Christian 24.3% non-Christian 11%
Gross National Product <sup>3</sup>	GNP per capita (\$US/capita) US \$ 20,650 Global GNP (\$US million) US\$ 382,438 Part of Global GNP (%) 1.3%
Gross Domestic Product <sup>1</sup>	GDP purchasing power parity \$416.2 billion (1999 est.) GDP real growth rate 4.3% (1999 est.) GDP per capita purchasing power parity \$22,200 (1999 est.)
Main Agricultural Commodities <sup>1</sup>	wheat, barley, sugarcane, fruits, cattle, sheep, poultry
Major Industries <sup>1</sup>	mining, industrial and transportation equipment, food processing, chemicals, steel, tourism and education

<sup>1</sup> <http://www.odci.gov/cia/publications/factbook/geos/as.html>

<sup>3</sup> [http://www.izitime.com/iziglobe\\_liste\\_pib\\_en.html](http://www.izitime.com/iziglobe_liste_pib_en.html)

<sup>2</sup> <http://www.un.org/Depts/unsd/social/hum-set.html>

<sup>4</sup> [http://www.wri.org/wri/wr-00-01/pdf/cmi3n\\_2000.pdf](http://www.wri.org/wri/wr-00-01/pdf/cmi3n_2000.pdf)

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*\*Map and Fact Box prepared by Editor.*

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## Background

Japanese coastal and ocean policy is entering a new stage, involving dramatic changes in its management scheme, and its legal and administrative framework.

One of the changes is, of course, the impact of Japan's ratification of the United Nations Convention on the Law of the Sea (UNCLOS) as the 95<sup>th</sup> state party in the world which entered into force on July 20, 1996. For example, in accordance with UNCLOS, Japan has enacted new laws, such as the Law on Exclusive Economic Zone (EEZ) and Continental Shelf, pursuant to which a 200-mile EEZ replaced the previous 200-mile Fisheries Zone. Another vital change was the reorganization of Japan's government structure and downsizing which started on January 6, 2001. One cabinet office and 22 ministries were re-organized into one cabinet office and 12 ministries. The reorganization resulted in the merger of two big ministries on coastal management, the Ministry of Construction (MOC) and the Ministry of Transport (MOT), into the Ministry of Land, Infrastructure and Transport (MLIT). This means that more than 70 percent of the Japanese coastline fell under the jurisdiction of one single ministry. In addition, amendments of coastal management-related laws, such as the Shoreline Law, and Port and Harbor Law, have taken place, and even the Basic Law on Fisheries is under examination to be amended in 2001.

# Japan's Coastal and Ocean Policy in the Beginning of the 21st Century



## JAPANESE 200-MILE EEZ (Exclusive Economic Zone)

In 1975 the Research Institute for Ocean Economics (RIOE), decided to make a hypothetical 200-mile EEZ map for Japan. At that time, it was calculated that the area of Japan's EEZ would be approximately 4.51 million square kilometers (adopting the principle of equidistant line between adjacent nations). However, the Japanese govern-

ment didn't set up a 200-mile EEZ, but enacted the Provisional Law on 200-mile Fisheries Zone in 1977 (with exceptional areas in the western part of the 135 degrees of east longitude in the Sea of Japan and the East China Sea). This law was largely in response to the negotiations on fishery resource management with the then USSR and USA, which had already enacted 200-mile zone laws.

Although Japan's EEZ was set up by a new law along with the ratification of UNCLOS in 1996,

there still exists boundary disputes among neighboring countries including the northern four islands with Russia, Takeshima Island with Korea and the Senkaku Islands with China. These disputes are essentially related to fishery resource management matters in the relevant areas. Recently, bilateral agreements on tentative fishery management schemes with Korea and China have been concluded. The map of the Japanese EEZ is shown in Figure 1. Adopting the straight baseline starting January 1, 1997, Japan's total EEZ area is 4.47 million square kilometers, which includes 430,000 square kilometers of the territorial sea.

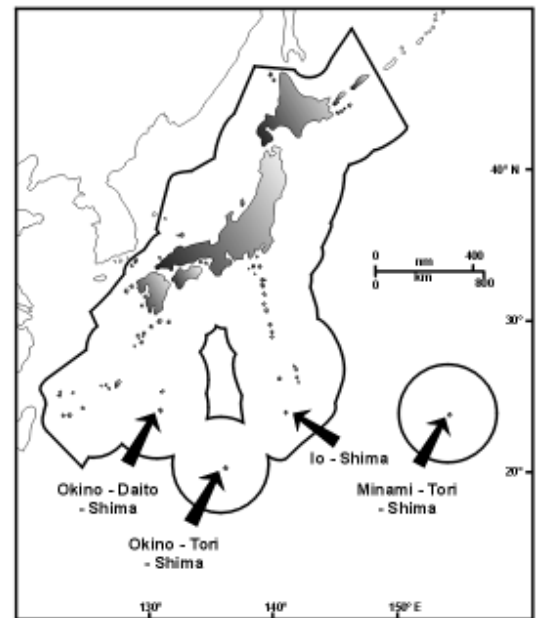
## Jurisdictional Structure of the Coastline

One characteristic of Japanese coastal management is that there are four major ministries with jurisdiction over the coast-

line. Of Japan's total coastline of 34,480 km, 47.2 percent are under the jurisdiction of the Ministry of Construction (MOC). Since the shoreline, other than the legally designated areas, described below, is treated as a national property, it must be protected from natural disasters and erosion to avoid the loss of national land. In addition, 24.8 percent of the coastline are under the jurisdiction of the Port and Harbor Bureau and the Ministry of Transportation (MOT), since this portion of the shoreline is in the Port Area designated by the Port and Harbor Law. Finally, 18.1 percent are under the Department of Fishing Port, Fisheries Agency, since this portion belongs in the Fishing Port Area designated by Fishing Port Law, and 5.2 percent are under the Structural Improvement Bureau of the Ministry of Agriculture Forestry and Fisheries, which is responsible for agricultural matters since this part of the shoreline is facing agricultural land use.

“ One characteristic of Japanese coastal management is that there are four major ministries with jurisdiction over the coastline. ”

Figure 1. Japanese 200-mile EEZ (Exclusive Economic Zone) after July 20, 1996.



Source: Research Institute for Ocean Economics, Japan

Table 1. Area of Japanese sea.\*

	Before July 20, 1996	After January 1, 1997*
Territorial Sea	380,000 km <sup>2</sup>	430,000 km <sup>2</sup>
Contiguous Zone	-	320,000 km <sup>2</sup>
Fisheries Zone	3,600,000 km <sup>2</sup>	(Replaced by EEZ)
EEZ + Contiguous Zone	-	4,050,000 km <sup>2</sup>
Territorial Sea + EEZ	-	4,470,000 km <sup>2</sup>

\*Straight baseline is to be adopted.

Source: Hydrographic Department,  
Maritime Safety Agency,  
Japan

**“However, from January 6, 2001 more than 70 percent of the Japanese coastline now comes under the jurisdiction of one single ministry, although no change in the legal framework occurred. However, despite the many changes related to the coastal zone in Japan, there is of yet no single coastal zone management law in Japan.”**

**Hakodate, Japan.** Hakodate is the chief seaport of Hokkaido, the northernmost island of Japan, with an excellent harbour on the Tsugaru Strait. A rail tunnel links the city with the main island of Honshu.

Photo source: Michael S. Yamashita/Corbis

## **Efforts to Develop a Coastal Zone Management Framework**

Prior to its merger, the Land Agency had been responsible for amending the National Comprehensive Development Plan. In its Third Plan in 1977, the concept of the coastal zone as an independent category first appeared. In accordance with its Fourth Plan (1987), a Tentative Guideline for the Comprehensive Planning of the Coastal Area (mainly for local governments) was issued in May 1990.

Subsequently, the Land Agency continued efforts to develop a more effective framework for coastal zone management. After the Fifth Plan (the “Grand Design of Land in the 21<sup>st</sup> Century”) was issued in 1997, the Land Agency published a revision of the tentative “Guideline for Comprehensive Planning of Coastal Zone Areas” in April, 2000. Under this new guideline, the

definition of the coastal zone was clarified and public involvement procedures were recommended.

There have been, and continue to be, government efforts to revise basic laws on ocean and coastal management. For example, the Ministry of Construction revised the Shoreline Law in 1998, amending the focus of the law from being limited to erosion control to environmental improvement and the promotion of rational use. In 1999, the Ministry of Transport amended the Port and Harbor Law. The Fisheries Agency is now trying to amend the Fishing Port Law, and enact a new fundamental law on fisheries. These amendments are expected to result in a stable supply of seafood by ensuring rational resource management of the coastal waters, and a 200 mile EEZ within the next couple of years. Despite these efforts, no recommendation was made with regards to the enactment of a Basic Law on Coastal Zone Management.



“Some conservatives say that there is no need for a new basic law, because it would just be a roof constructed over an existing roof. Others argue that as conflicts between different ocean and coastal uses increase, and as recognition of the impact of global environment issues at the local level rapidly grows, so do the need for a new basic umbrella law which will provide a compass for rational and sustainable management of the coastal zone as a whole.”

Accordingly, after intensive study for more than one year, in December 2000, an academic Society, Japan's Society of Coastal Zone Studies (JACZS), issued the "Year 2000(Y2K) Appeal." The appeal made a strong argument for the need for a Basic Law on Coastal Zone Management and a national goal of environmental quality and sustainable use of the ocean and coastal zone. Currently, there is an ongoing discussion as to whether or not Japan should have a basic law on this topic, like that of the Coastal Zone Management Act in the USA, France and other nations. Some conservatives say that there is no need for a new basic law, because it would just be a roof constructed over an existing roof. Others argue that as conflicts between different ocean and coastal uses increase, and as recognition of the impact of global environment issues at the local level rapidly grows, so do the need for a new basic umbrella law which will provide a compass for rational and sustainable management of the coastal zone as a whole. This discussion, together whether the concept of mitigation should be included in the Japanese coastal management scheme, will continue into the 21<sup>st</sup> century.

**Fact Box: Japan**

<b>Total Population<sup>1</sup></b>	126,549,976 (July 2000 est)
<b>Urban Population<sup>2</sup> (% of total)</b>	79 %
<b>Coastal Population<sup>4</sup> (% of total)</b>	96.3% 100 km from the coast
<b>Land Area<sup>1</sup></b>	378,000 sq km.
<b>Length of Coastline<sup>4</sup></b>	34,400 km.
<b>Climate<sup>1</sup></b>	varies from tropical in south to cool temperate in north
<b>Topography<sup>1</sup></b>	mostly rugged and mountainous
<b>Political System<sup>1</sup></b>	Constitutional Democracy
<b>Official Languages<sup>1</sup></b>	Japanese
<b>Major Religions<sup>1</sup></b>	Shinto & Buddhist 84% other 16% including Christian 0.7%
<b>Gross National Product<sup>3</sup></b>	GNP per capita (SUS/capita) US \$ 38,160 Global GNP (SUS million) US\$ 4,818,883 Part of Global GNP (%) 16%
<b>Gross Domestic Product<sup>1</sup></b>	GDP 2.95 trillion (1999 est.) GDP real growth rate 0.3% (1999 est.) GDP per capita purchasing power parity \$23,400 (1999 est.)
<b>Main Agricultural Commodities<sup>1</sup></b>	rice, sugar beets, vegetables, fruit, pork, poultry, dairy products, eggs, fish
<b>Major Industries<sup>1</sup></b>	among world's largest & technologically advanced producers of motor vehicles, electronic equipment, machine tools, steel and non-ferrous metals, ships, chemicals, textiles, processed foods

<sup>1</sup> <http://www.odci.gov/cia/publications/facebook/geos/as.html>

<sup>3</sup> [http://www.izitime.com/iziglobe\\_liste\\_pib\\_en.html](http://www.izitime.com/iziglobe_liste_pib_en.html)

<sup>2</sup> <http://www.un.org/Depts/unsd/social/hum-set.html>

<sup>4</sup> [http://www.wri.org/wri/wr-00-01/pdf/cmi3n\\_2000.pdf](http://www.wri.org/wri/wr-00-01/pdf/cmi3n_2000.pdf)

## Proposals for Future Policy Making

Under the initiative of the administration, former ocean related ministries studied a "Technical Strategy for New Industrial Creation" in the late 1990s. Included in the strategy was the identification of ocean resource development as a promising area. The Ministry of International Trade and Industry was responsible for energy and resource aspects of the strategy, the Fisheries Agency for seafood supply and aquaculture development, and the former MOT for new development of various offshore structures as tools for various ocean and coastal uses. However, since this strategic study varied over 15 fields, national goals were not necessarily identified explicitly.

Taking into account Japan's long economic depression, Keidanren, the Federation of Economic Organizations, a high-level industrial association in Japan, held a series of discussion on national policy and ocean development programs based on strategic studies by the Ocean Resource Committee. In June 2000, Keidanren issued a proposal, the "Grand Design for Oceans in the 21<sup>st</sup> Century." The title was apparently made after the Fifth "National Comprehensive Development Plan of the Land," to emphasize that Japan also needs a comprehensive national policy for another national

**“ Integration of conventional coastal management policies may be the most significant goal for the future. Increasing public awareness plays a major role to achieve this goal. ”**

property, the ocean. The proposal includes setting national goals for an offshore-based network of construction to activate industrial activities within the 200-mile EEZ, from winter ice-covered northern areas to coral reef areas in the south and remote isolated islands in the northwest Pacific.

## Conclusion

Japan is now facing a new era of ocean and coastal zone management focused on wise and rational use. Integration of conventional coastal management policies may be the most significant goal for the future. Increasing public awareness plays a major role to achieve this goal. Not only the administrative officers but also the industrial and academic communities have to recognize the importance of coastal zone management, exchanging information and experience, which is indispensable for this kind of effort.

It is also necessary that closer attention be paid to recommendations by the Organization for Economic and Cooperation and Development, Food and Agriculture Organization and other relevant agencies, which have issued reports on Integrated Coastal

Zone Management (ICZM) and AGENDA 21 (especially Chapter 17) which was adopted by the Earth Summit in 1992. In the new century, we must move forward, both domestically and internationally, in the integration of various ocean and coastal uses in order to sustainably coexist with our environment. ■

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*\*Map and Fact Box prepared by Editor.*

# NEWS



## DPR Korea Establishes Coastal Management Demonstration Project in Nampo

DPR Korea signed a Memorandum of Agreement (MOA) with PEMSEA during the visit of the Regional Programme Director, Dr. Chua Thia-Eng, to Pyongyang last September 8, 2000. PEMSEA committed US\$ 450,135 GEF funding for implementing an integrated coastal management program in Nampo. DPR Korea committed US\$ 698,435 as co-financing. Mr. Lim Gyong Man of the General Bureau for Cooperation with International Organizations (GBCIO) signed the MOA on behalf of his government. The Deputy Resident Representative of UNDP, Ms. Christen Jensen, witnessed the signing ceremony.

Integrated coastal management is relatively new in DPR Korea. The project is a bold step in promoting interagency coordination at the local government level. Nampo city is 45 km away from the capital city of Pyongyang. The Taedong river passes through the Nampo district. A huge dam was constructed at the mouth of the river as it enters into the West Sea. The dam effectively divides the mouth of the Taedong river, creating a freshwater supply for the cities and for irrigation purposes. The West Sea Barrack as it is called, is confronted with sedimentation and pollution problems from land-based sources.

The project will be implemented by central and local agencies. The People's Committee of Nampo will be actively involved. This is the first foreign assisted project involving the participation of several agencies and stakeholders.

## New Initiative to Improve Navigation and Environment in the Straits of Malacca

The Governments of Malaysia, Indonesia and Singapore have endorsed a Marine Electronic Highway (MEH) project aimed at improving the navigational safety in the Straits of Malacca. The MEH project is being submitted to the Global Environment Facility for funding support. It is a spin-off of the Malacca Straits Demonstration Project undertaken by the GEF/UNDP/IMO Regional Programme for Marine Pollution Prevention and Management of the East Asian Seas, a pilot phase of PEMSEA.

The MEH is an integrated database management system. It links three information technologies: electronic navigational charts (ENC), electronic chart display and information systems (ECDIS), and Geographic Information System (GIS), thereby serving a cross-section of land- and sea-based users including vessels owners and operators, port operators and maritime authorities and coastal resource managers. The benefits that may be derived from the MEH include: enhanced navigational safety and efficiency among vessels transiting the Straits, dissemination and use of environmental information for enhanced protection and management of coastal and marine resources of the Straits, and compensation to the data providers and supporting operations.

If approved by GEF, the project will be implemented through World Bank and executed by the International Maritime Organization (IMO).



Vietnamese government officials tour a sewage treatment plant in Xiamen, China during a nine-day Integrated Coastal Management (ICM) Study Tour jointly organized by PEMSEA and the Coastal Management Center.

## Vietnamese Delegation Visit ICM Sites in Batangas and Xiamen



Seven Vietnamese senior government officials led by Dr. Thac Can, Director General, Department of International Relations, Ministry of Science, Technology and Environment, visited PEMSEA's Regional Programme Office in the Philippines on November 30, 2000 as part of a nine-day Integrated Coastal Management (ICM) Study Tour jointly organized by PEMSEA and the Coastal Management Center (CMC). PEMSEA Regional Programme Director Dr. Chua Thia-Eng and other PEMSEA staff, briefed the visiting officials on the various activities of PEMSEA in support of the ICM program. During the discussions, potential areas of cooperation vis-à-vis data exchange among the ICM demonstration sites including the ICM Demonstration Site in Danang, Vietnam were identified.

Accompanied by Dr. Teng Seng-Keh and Mr. Ronald Bonifacio, of CMC, the participants toured the Batangas ICM demonstration site where they observed the achievements of the province in its integrated waste management program and interacted with the various stakeholders involved in the implementation of the ICM site in the Philippines. To them, the idea of the public-private sector partnership mechanism as a means of addressing environmental problems in the province was innovative and appealing. The participants were then brought to Xiamen, China where they made visits to the Environmental Science Research Center of Xiamen University, the Maluan Bay, Yuandang Lake, Tongfu Sanitary Landfill and a boat trip around the coast of Xiamen. During the trip, they saw more examples of where scientific information coupled with well-developed institutional arrangements and mechanisms have been utilized for effective marine and coastal area management and development.

Study tours are part of the PEMSEA's campaign to stimulate interest in adopting the ICM concept and motivate government authorities to replicate the practice in their respective countries.

## Youth Involved in Beach Clean-up in Chonburi



Boy and girl scouts from high schools all over Thailand participate in a beach cleanup in Koh Loi, Sriracha.



More than a thousand boy and girl scouts from high schools all over Thailand who were camping at the Vachiravute Boy Scout Camp in Sriracha, Chonburi participated in a beach cleanup in Koh Loi, Sriracha last July 25-27, 2000. The beach clean-up was part of the scouts' social work activities. The boy and girl scouts were grouped into teams and competed to come up with the cleanest beach zone. Other activities to increase the

awareness in coastal and marine resources protection included a briefing on the integrated coastal management (ICM) demonstration project, games and quizzes.

Sriracha is one of the municipalities of the Chonburi National ICM Demonstration Site. The beach clean-up was organized by the Project Management Office of PEMSEA's ICM Demonstration Site in Chonburi, Thailand.



# NEWS

## Stakeholders Successfully Develop a Coastal Strategy for Bataan ICM Parallel Site

On 17-18 October 2000, a workshop was jointly organized by the Project Management Office (PMO) of the Bataan Integrated Coastal Management Project and PEMSEA. The result of the two-day event was the formulation of the coastal strategy for Bataan, Philippines. The coastal strategy aims to provide stakeholders and policymakers with a framework for action in developing and managing their shared coastal area.

Participants from the different local government agencies, industries, fisherfolk and NGOs put together common vision and mission statements. The participants also tackled the identification of respective values for the coastal area, including: (a) natural resources/habitats; (b) cultural/historical/religious sites; (c) tourism and recreation; (d) fisheries/aquaculture; (e) commercial/industrial/shipping and ports; (f) residential/institutional/agricultural areas. For each value identified in the coastal area, the stakeholders then determined the various threats to those values, along with the strategies, objectives, action programs and the roles and responsibilities of the various agencies and sectors to achieve a set of desired outcomes.

The workshop was a follow-up on a series of public consultations that were carried out by the Bataan PMO in August 2000 with individual coastal municipalities of Bataan.



Participants from the different local government agencies, industries, fisherfolk and NGOs put together common vision and mission statements for the coastal strategy for Bataan ICM parallel site in the Philippines.



## Bali Stakeholders Conduct Environmental Profile Workshop

The Project Management Office of the National Integrated Coastal Management (ICM) Demonstration Project in Bali, Indonesia has organized the 'Stakeholders Workshop on Coastal Environmental Profile' on November 21-22, 2000.

Over 70 participants, from four regencies (Badung, Gianyar, Klungkung and Karang Asem) and one municipality (Denpasar) within the ICM site as well as the Provincial Government of Bali, shared their views on the value and threats of the Bali coast. The participants represented government agencies, local parliament members, multi-disciplinary team of experts, fisherfolk, traditional village leaders, women associations, researchers, private companies and other NGOs.

The main purpose of the workshop was to inform and learn from stakeholders in developing the 'Bali Coast Environmental Profile' which will include information on natural and socio-economic characteristics, coastal uses, and threats due to human impacts. Following the presentation by multi-disciplinary team of experts, several group discussions were organized by localities to identify stakeholder's perception on the priority values of Bali coast and the priority problems threatening the identified values, and to recommend potential solutions for identified problems.

The results of this workshop will be used for refining the Environmental Profile and as a basis for later project activities such as coastal strategy and initial risk assessment.



# T R A I N I N G

# 2001

## Training at ICM Demonstration Sites

29 Jan - 2 Feb 2001 IIMS / Coastal Strategy (Bali)

5 - 9 February 2001 IIMS / Coastal Strategy (Danang)

## Regional Training Courses

5 - 6 September 2001 Damage Claims, and Compensation for Oil Pollution Workshop (Singapore)

8 - 20 October 2001 Project Development Management for Coastal and Marine Environmental Projects

12-30 November 2001 Integrated Coastal Management

*\* The above schedule is subject to change.*

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- Project Document and Proposal Development
- Project Document, Proposal Review and Approval
- Project Funding
- Work Plan Development and Budgeting
- Human Resource Development and Decision Making
- Project Monitoring, Evaluation and Reporting: Concepts, Tools and Techniques
- Overview of Integrated Coastal Management

#### Who Should Attend?

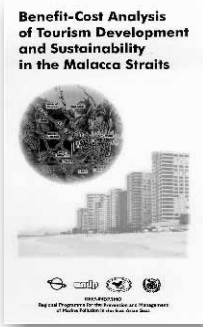
- Government officials and personnel involved in planning and management of coastal and marine environmental projects
- Coastal planners at national or local level
- Private sector officials engaged in development planning with a high interest in environmental conservation/ management
- Environmental specialists with responsibility for planning and management of environmental projects

#### Entry Requirements

- Must be directly involved in coastal-marine environment programs and/or projects
- English language proficiency



capacity building



## Benefit-Cost Analysis of Tourism Development and Sustainability in the Malacca Straits

**US\$ 12.00** (MPP-EAS Technical Report number 17, 1998, 44 p.)

Postage : Asia: +US\$ 1.50 Outside Asia: +US\$ 2.50

In the Malacca Straits, coastal tourism is a major industry. This study shows the costs and benefits of management actions for resource preservation and pollution prevention, particularly those which affect tourism. The economic analysis shows positive net returns for coral reef protection and beach zoning programs.



## Malacca Straits: Refined Risk Assessment

**US\$ 15.00** (MPP-EAS Technical Report No.23/PEMSEA Technical Report No. 1, 1999, 89 p.)

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The refined environmental risk assessment for the Malacca Straits delves into two targets of interest, namely the Straits ecosystem and the health of the people living in the coastal areas. The report provides information on the rationale, methodology and results of the work, along with recommendations for improving risk assessment as a management tool in the Malacca Straits.

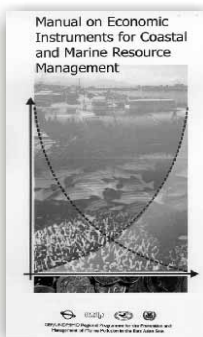


## Water Use Zoning for the Sustainable Development of Batangas Bay, Philippines

**US\$ 15.00** (MPP-EAS Technical Report No.25/PEMSEA Technical Report No. 3, 1999, 50 p.)

Postage : Asia: +US\$ 1.50 Outside Asia: +US\$ 2.50

The issues arising from the multi-layered claims over and multiple uses of Batangas Bay, are analyzed in this study. The rationale for water use zonation is built upon the need to address issues and to avert possible escalation into open conflicts or disasters. Linkages between water use zoning and land use plans of the coastal communities are highlighted.

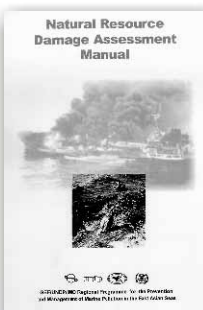


## Manual on Economic Instruments for Coastal and Marine Resource Management

**US\$ 16.00** (MPP-EAS Technical Report No. 19, 1999, 89 p.)

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Current issues related to coastal and marine environments and prevailing economic policies are presented in this manual. Due to increasing environmental problems, there is a need to introduce a system that will give people an incentive to search for ways to conserve resources and reduce waste. Examples of economic or market-based instruments and key design issues are discussed to help countries develop implementation strategies.



## Natural Resource Damage Assessment Manual

**US\$ 18.00** (MPP-EAS Technical Report No. 22, 1999, 121 p.)

Postage : Asia: +US\$ 2.75 Outside Asia: +US\$ 4.25

Oil spills and other discharges of marine pollutants can result in extensive damage to the coastal and marine environment. This manual reviews the concepts and stresses practical applications and procedures that can be used to implement Natural Resource Damage Assessment methods. Examples and exercises illustrate these methods.

## Sharing Lessons and Experiences in Marine Pollution Management

(MPP-EAS Technical Report No. 20, 1999, 94 p.) **US\$ 10.00**

Postage : **Asia: +US\$ 2.75 Outside Asia: +US\$ 4.25**

In 1993, the East Asian Seas nations launched a regional initiative aimed at addressing the social, environmental and economic consequences of the continuing trend of degradation of their regional sea. This publication shares the lessons learned from the initiatives of the Regional Programme on Marine Pollution Prevention and Management in the East Asian Seas. Lessons include information on creating sustainable marine pollution management programs as well as enhancing the implementation of marine pollution-related international conventions in the East Asian Seas region and beyond.

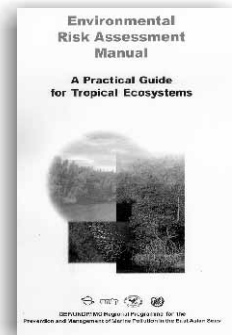


## Environmental Risk Assessment Manual: A Practical Guide for Tropical Ecosystems

(MPP-EAS Technical Report No. 21, 1999, 88 p.) **US\$ 18.00**

Postage : **Asia: +US\$ 1.50 Outside Asia: +US\$ 2.50**

Environmental risk assessment provides the basis for identifying and prioritizing risk as a result of human activity and their effect on ecosystems and human health. This manual provides policy makers, regulators and technical personnel with an understanding of the key principles and practices of environmental risk assessment. The methodology is illustrated by examples and exercises.

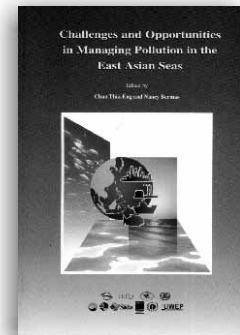


## Challenges and Opportunities in Managing Pollution in the East Asian Seas

(MPP-EAS Conference Proceedings 12/PEMSEA Conference Proceedings 1, 1999, 567 p.) **US\$30.00**

Postage : **Asia: +US\$ 7.75 Outside Asia: +US\$ 12.00**

Proceedings and key papers from the "Conference on the Challenges and Opportunities in Managing Pollution in the East Asian Seas," held in Manila, Philippines on March 22-24, 1999. This multisectoral-participated conference was convened as part of an effort to consolidate and accelerate innovative approaches in marine pollution prevention and management. The five themes of the meeting, as summarized in the book, include: integrated management of marine pollution; opportunities and developments in environmental investments; ratification and implementation of marine pollution-related international conventions; techniques and technologies in environmental and resources assessment, GIS, remote sensing, and modeling among others; participation of active stakeholders in integrated management of marine pollution.

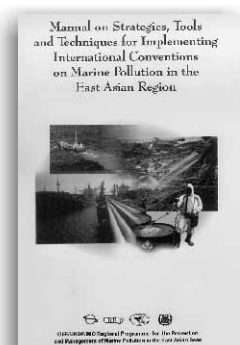


## Manual on Strategies, Tools and Techniques for Implementing International Conventions on Marine Pollution in the East Asian Seas

(MPP-EAS Technical Report No. 26, 1999, 184 p.) **US\$ 18.00**

Postage : **Asia: +US\$ 2.75 Outside Asia: +US\$ 4.25**

This manual is a compendium of lessons learned regarding implementation of international conventions on marine pollution at the local, national and regional level in the East Asian Seas region. It is designed to be an easy reference for legal and other relevant practitioners and for developing and conducting other regional, national and local training exercises.



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## RATIFICATION OF MARINE RELATED CONVENTIONS

COUNTRY	CLC Conventions/ Protocols	FUND Conventions/ Protocols	OPRC	MARPOL/ Annexes	London Convention	Basel Convention	GPA on LBS	Ramsar	World Heritage	CITES	Bonn Convention	CBD	UNCLOS	UNFCCC	Agenda 21 Chapter 17
Brunei	92	92		86						90			96		
Cambodia	94			94			Y		91	97		95		95	
China	86,99		98	83,88,94		92	Y	92	85	81		93	96	93	Y
DPR Korea				85	85				98			94		94	
Indonesia	99			86		93	Y	92	89	78		94	86	94	Y
Malaysia	95	95	97	97		93	Y	95	88	77		94	96	94	Y
Philippines	97	97			73	93	Y	94	85	81	94	93	84	94	Y
Rep. Of Korea	92,97	97	99	84,96	93	94	Y		88	93		94	96	93	Y
Singapore	81,97	97	99	90,94,99,00		96				86		95	94	97	Y
Thailand			00			97	Y	98	87	83				94	Y
Vietnam				91		95		89	87	94		94	94	94	Y

### CONVENTIONS RELATED PRIMARILY TO OIL SPILLS

**International Convention on Civil Liability for Oil Pollution Damage 1969 and 1992 (CLC)** to ensure prompt and adequate compensation to persons who suffer damage caused by pollution resulting from the escape or discharge of oil and provide uniform international rules and procedures for determining questions of liability.

**International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971 and 1972 (FUND)** to provide supplementary compensation even where no liability for damage arises under the CLC, or where the ship owner is financially incapable of meeting his obligations under the CLC.

**International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990 (OPRC)** to facilitate international co-operation and mutual assistance in preparing for and responding to a major oil pollution incident and to encourage states to develop and maintain an adequate capability to deal with oil pollution emergencies.

### CONVENTIONS AND PROGRAMMES RELATED PRIMARILY TO WASTE MANAGEMENT

**MARPOL 73/78** protects sea areas from discharge of harmful substances from ships.

**Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matters 1972 (London Convention)** to control pollution from dumping and incineration at sea.

**Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal 1989 (Basel Convention)** to minimize the generation of hazardous wastes in terms of quantity and degree of hazard; to dispose of them as close to the source of generation as possible; and to reduce the movement of hazardous wastes.

**Global Programme of Action for the Protection of the Marine Environment from Land Based Activities, 1995 (GPA on LBS)** to prevent the degradation of the marine environment from land-based activities.

### CONVENTIONS PRIMARILY RELATED TO HABITATS AND SPECIES

**Convention on Wetlands of International Importance, 1971 (Ramsar)** promotes conservation and wise use of wetlands and their resources.

**Convention Concerning the Protection of the World Culture and Natural Heritage (World Heritage) 1972** protect cultural and natural sites of such outstanding universal values that their conservation is of concern to all people.

**Convention on International Trade in Endangered Species of Wild Fauna and Flora, 1973 (CITES)** regulates trade in species threatened with extinction.

**Convention on Conservation of Migratory Species of Wild Animals, 1979 (Bonn Convention)** provides a framework for enhancing the conservation status of rare and threatened migratory species.

**Convention on Biological Diversity, 1992 (CBD)** conserve biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits arising out of genetic resources.

### CONVENTIONS AND PROGRAMMES BROADLY RELATED TO MARINE ENVIRONMENTAL ISSUES

**United Nations Convention on the Law of the Sea, 1982 (UNCLOS)** is a framework convention governing all uses of the ocean. It establishes maritime zones and obligations to conserve and sustainably manage living and non-living resources and to prevent, reduce and control pollution.

**United Nations Framework Convention on Climate Change, 1992 (UNFCCC)** provides the focus for international action to address the threat of climate change.

**Programme of Action for Sustainable Development 1992 (Agenda 21)** is an action plan for sustainable development into 21<sup>st</sup> Century.

## **O u r   S h a r e d   V i s i o n .**



**The resource systems of the Seas of East Asia are a natural heritage, safeguarding sustainable and healthy food supplies, livelihood, properties and investments and social, cultural and ecological values for the people of the region, while contributing to economic prosperity and global markets through safe and harmonious coexistence for present and future generations.**

# RATIFICATION OF MARINE RELATED CONVENTIONS AND PROGRAMMES\*

 No. OF CONVENTIONS RATIFIED RELATED TO OIL SPILLS

 No. OF CONVENTIONS AND PROGRAMMES RATIFIED RELATED TO WASTE MANAGEMENT

 No. OF CONVENTIONS RATIFIED RELATED TO HABITATS AND SPECIES

 No. OF CONVENTIONS AND PROGRAMMES RATIFIED BROADLY RELATED TO MARINE ENVIRONMENTAL ISSUES

( For more details, see page 78 )



\* By PEMSEA participating countries

COUNTRY	CLC Conventions/ Protocols	FUND Conventions/ Protocols	OPRC	MARPOL/ Annexes	London Convention	Basel Convention	GPA on LBS	Ramsar	World Heritage	CITES	Bonn Convention	CBD	UNCLOS	UNFCCC	Agenda 21 Chapter 17
Brunei	92	92		86						90			96		
Cambodia	94			94			Y		91	97		95		95	
China	86,99		98	83,88,94		92	Y	92	85	81		93	96	93	Y
DPR Korea				85	85				98			94		94	
Indonesia	99			86		93	Y	92	89	78		94	86	94	Y
Malaysia	95	95	97	97		93	Y	95	88	77		94	96	94	Y
Philippines	97	97			73	93	Y	94	85	81	94	93	84	94	Y
Rep. Of Korea	92,97	97	99	84,96	93	94	Y		88	93		94	96	93	Y
Singapore	81,97	97	99	90,94,99,00		96				86		95	94	97	Y
Thailand			00			97	Y	98	87	83				94	Y
Vietnam				91		95		89	87	94		94	94	94	Y