



Sustaining Benefits

SUSTAINING BENEFITS

January 2005

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Foreword

All roads lead to the sea.

Though sparse in words, this phrase says a mouthful. It illustrates the intrinsic link between humankind and the sea — how the lives of billions of people around the globe are inevitably drawn to this bountiful ecosystem, either directly or indirectly.

Ours is a progressive world shaped by the dynamic and complex relationships between people and the natural environment. Such relationships are evident in the East Asian Seas whose interconnected waters sew and hem the very fabric of people's culture, politics and economy into a unified regional consciousness.

The East Asian Seas are a confluence of shared hopes and dreams of a people slowly recognizing the power that the sea has over them — and more importantly, their own power to turn the tides towards the direction they choose. This awakening has been incited by the escalating environmental problems that have plagued this globally significant water system and their imminent threats to a sustainable future. From as high as mountaintops to as low as groundwater, the sea is where everything ends — and begins. It is a copious basin of natural resources, and ironically, a living receptacle of all sorts of pollution.

Alongside this realization comes the challenge to rise above decades of unrequited national and regional efforts and to embrace groundbreaking methods and approaches in addressing environmental problems. It is a challenge that asks us to look at things from a different perspective — one that allows us to see the glass as half full rather than half empty — or in this case, to realize that we are not separated by land, but rather, are connected by the sea. It is a challenge that goads us to ultimately realize that all roads do eventually lead us back home, towards the sea where everything ends and begins.

This special publication enthuses a more proactive and holistic scheme for environmental management, particularly for the coastal and marine environments of East Asia, which involves an extensive and dynamic network of key players and stakeholders working together towards one vision.

Conscientiously put together by Mr. S. Adrian Ross (Senior Programme Officer, PEMSEA) and myself, with the valuable inputs of Dr. Cielito F. Habito (Professor of Economics and Director, Ateneo Center for Economic Research and Development), this material offers concrete steps to effectively mobilize people from all sectors, in all levels, with the noble intention of creating nothing short of a global movement for the sustainable development of our seas.

Chua Thia-Eng

Regional Programme Director
Partnerships in Environmental Management
for the Seas of East Asia
(PEMSEA)

The East Asian Seas: Our Threatened Lifeline

The Seas of East Asia and their associated waterways are vital to the lives of close to a third of entire humankind. To the estimated 1.5 billion people who live within a hundred kilometers of the region's coasts, this is easy enough to see. But most people do not fully appreciate the extent to which this is so, as much of the wide array of goods and services the seas provide for human benefit tend to be taken for granted (see box). As an integral component of the global ocean ecosystem, life literally flows from the East Asian Seas.

Ironically, the great wealth offered by these seas — be it in terms of fishing, tourism, international trade, or natural resources — is what attracts people and economic activities, ultimately making them the seeds of their own destruction. The closer people are to the seas, the greater the damage done. Poorly planned (and often unplanned) coastal development is one of the main sources of environmental problems in our seas. Overfishing is just one of them. The greatest harm actually comes not from what we do at sea, but from what we do on land, particularly at the coasts. Pollution, over-exploitation of resources, loss of biodiversity, over-population, regionalization and globalization of economies, unsustainable production and consumption patterns — all these exert pressures on the fragile balance of the region's five large marine ecosystems (LMEs).¹ The scale of these challenges in the Seas of East Asia is now beyond all experience.

Science has established that the crisis is deepest where the water is shallowest. This is where pollution is at its worst, habitats are most readily destroyed, and much of the depletion of fisheries takes place. More and more of the narrow strip of land along our coasts and its habitats have been ruined by a host of poorly planned and badly regulated activities, from the explosive growth of coastal cities and towns to the uncontrolled increase in tourism, from industrialization to the expansion of shrimp farming, and from the development of ports to foreshore reclamation.

¹ The East China Sea, the Yellow Sea, the South China Sea, the Sulu-Celebes Sea, and the Indonesian Seas comprise the five LMEs of East Asia. They are semi-enclosed by coastal countries of the region and interconnected by large-scale atmospheric, oceanic and biological processes and phenomena.



The top satellite image of Indonesia's Banda Aceh shore was made on June 23, 2004. The bottom image shows the same area on December 28, two days after the tsunami flattened the town and altered the shoreline. Images courtesy of DigitalGlobe.

A Global Hotspot

It is probably no coincidence that the two archipelagic countries in Southeast Asia, namely the Philippines (7,100 islands) and Indonesia (13,600 islands), have consistently been the worst performing economies among the original ASEAN members. Being archipelagic is not in itself the problem. Rather, it is the traditional tendency for development planning to focus inordinately on land-based resources and economic activities, and neglect water-based resources and economic activities built around them or allied to them. Given that water bodies far exceed the land areas in these two countries (four-fifths of total territorial area for the Philippines; two-thirds for Indonesia), this is a serious omission indeed.

The experience of the Philippines and Indonesia only serve to highlight the importance of recognizing and managing the ocean and coastal resources in the regional economy. For the rest of the economies in the region, the current and potential benefits from the oceans and coasts are tremendous, but have yet to be fully appreciated and realized. The result has been mismanagement, misuse, and degradation that ultimately redound to a constantly growing threat to the welfare of peoples in the region.

Growing populations, dynamic economic growth, and rising global demand for fishery and aquaculture products, largely met by exports from the East Asian Seas, all have combined to exert tremendous pressure on the region's marine environment and natural resources through depletion of fisheries and destruction of mangroves, coral reefs, seagrass beds and other habitats.

The recent 2004 tsunami which affected South and Southeast Asia sharpened the focus on the effects brought by the loss of natural defense walls afforded by well-protected mangroves and coral reefs. Accounts from communities in Indonesia, Malaysia and Maldives report that extensive coastal habitats have lessened the damage wrought by the tsunami. The event, which claimed at least 150,000 lives, is being referred to by the United Nations as the worst humanitarian crisis in

What The Oceans Do For Us

- Maintain chemical balance in the atmosphere
- Regulate climate (global temperature, precipitation, greenhouse gases, and cloud formation)
- Regulate natural disturbances (storm protection, flood control, drought recovery)
- Regulate water flows (regulation of global, regional and local scale hydrology through currents and tides)
- Provide water supplies (storage of water returned to land as precipitation)
- Transport and deposit sediments (moving sediments from source areas and replenishing depositional areas)
- Cycle nutrients (storage, internal cycling, processing and acquisition of nutrients, nitrogen fixation, phosphorus cycles)
- Treat wastes (breakdown of excess foreign and toxic compounds);
- Promote biological balance (trophic-dynamic regulation of populations);
- Harbor life (feeding and nursery habitats for resident and transient populations of harvested plant and animal life)
- Produce food (marine plant and animal life extracted as food for humans)
- Provide fuel, building and other raw materials
- Provide biological materials and genetic resources for medicines, etc.
- Provide recreational services (tourism, sport and other outdoor pastimes)
- Promote cultural experiences (aesthetic, artistic, educational, and spiritual activities).





Estimates of area (Ha) and rates of loss of mangrove habitat in seven countries bordering the South China Sea, compared with the world totals.

(Data from FAO, 2003)

	Estimates of mangrove area (Ha)			Rate of loss (%)	
	1980	1990	2000	1980-1990	1990-2000
Cambodia	83,000	74,600	63,700	-10.1	-14.6
China	65,000	44,800	23,700	-31.1	-47.1
Indonesia	4,254,000	3,530,700	2,930,000	-17	-17
Malaysia	669,000	620,500	572,100	-7.2	-7.8
Philippines	206,500	123,400	109,700	-40.2	-11.1
Thailand	285,500	262,000	244,000	-8.7	-6.9
Vietnam	227,000	165,000	104,000	-27	-37
Total	5,790,900	4,821,000	4,047,200	over all -16.7	over all -16.1
World	19,809,000	16,361,000	14,653,000	-17.4	-10.4
% world total	29.2	29.5	27.6		

modern times. The magnitude of the devastation is horrific, with the needed relief and reconstruction work reaching tremendous scales.

Scientific studies warn that at current rates of degradation, the region’s coral reefs face total collapse within 20 years, while mangroves could be gone within 30 years. The 1997-1999 financial crisis showed the unsustainability of such growth. The economic contraction affected the lives of millions through falling incomes, rising absolute poverty and malnutrition, declining public services, threats to educational and health status, increased pressure on women, and increased crime. Nevertheless, links between improved environmental management and economic development are still not well appreciated by policymakers and decisionmakers in both the public and private sectors. This reflects the political

climate of the region, where competitiveness and conflicts among countries and their economic sectors tend to overshadow the uncertainties regarding environmental impact and sustainability.

If current trends in coastal resource degradation are not reversed, the social fabric of many countries could disintegrate over the next 50 years. Food security would be compromised as supplies of fish and other

marine products dwindle due to unsustainable take, destructive practices and habitat degradation. Economic dislocation would result for those whose jobs are related to the coastal and marine environment when it is no longer able to generate sustainable livelihoods. Public health would be compromised by toxins increasingly found in edible marine products and by the increased contamination of fresh and marine waters. The overall vulnerability of the people, especially the poor who rely on natural resources for food and sustenance, would be worsened.

The implications of all these go well beyond the region itself. The Seas of East Asia are a political, environmental, biodiversity and socioeconomic hotspot — perhaps the foremost hotspot worldwide with regard to sustainable development and management of marine and coastal resources. The East Asian Seas are a world center of marine biodiversity, with more than seven million km² of sea area supporting 30 percent of the world’s coral reefs and mangroves, and producing 40 percent of the world’s marine fish and 80 percent of the world’s aquaculture. Thus, the worsening of the region’s environmental integrity will impact not only on the lives of the inhabitants of East Asia, but also those in countries in the rest of the world who are benefiting from the region’s marine and coastal resources and waterways.

Wanted: A New Paradigm

Decades of advocacy, political commitments and conservation efforts at national and regional levels have not prevented the Seas of East Asia from degrading at an ever-increasing pace. The seas are degrading faster than appropriate policies and management interventions are being put in place. The implication is that the Seas of East Asia, given current trends, cannot sustain current rates of economic development and productivity in the region.

Past management interventions can mostly be described as too little, too late. They were largely reactive, driven by crises arising from disease outbreaks, oil spills and other major catastrophes. They tended to be single-sector or single-issue oriented, whereas resource and environmental challenges transcend sectoral, legal and administrative lines. Many of the initiatives have remained as plans yet waiting to be translated into action.

Arresting and reversing the decline of the East Asian Seas thus requires a new approach, a new paradigm.

From Reactive And Sectoral To Proactive And Holistic

First, it requires an approach that is proactive. The approach needed is one that anticipates problems, rather than merely responds to them. Experience has proven time and again that it is more costly to repair damage than to prevent it.

Second, it requires an approach that is holistic, i.e., one that is comprehensive and integrative.

The approach needed is one that recognizes the interconnectedness of the challenges facing the entire marine ecosystem. It should consider, for example, that scarce water supplies flowing in our streams, rivers, wetlands and deltas — essential to life, opportunity and economic development — also transport pollutants and disease-carrying organisms over long distances, from hilltops to oceans and across national boundaries. These pollutants accumulate on the coastal zones and impinge on public health, biodiversity and important economic activities such as fisheries and tourism. Clearly, an effective response would have to bring together various entities with varying geographic and sectoral perspectives and concerns.

The approach needed is therefore one that brings together and elicits the cooperation and support of various governments, and within particular countries, of various government agencies, stakeholder groups, sectors and disciplines. In past experience, competition for resources, authority and recognition often resulted in severe conflicts and turf wars among sectoral line agencies and among various levels of government, resulting in a response system that was rendered ineffective by such an isolationist, 'sector-vision' approach. Lack of trust between and among governments, the private business sector and civil society groups had also led to divergent, overlapping or duplicative efforts, rather than harness complementarities and potential synergies among them.

Integrated coastal management (ICM) is precisely designed to address conflicting and competing uses of the limited natural resources the sea has to offer. ICM has proven to be a valuable tool in reducing interagency and cross-sector conflicts at the local government level, facilitating new



Xiamen, PR China

partnerships between governments, resource managers, local and indigenous communities, industry, the private sector, and the scientific community to develop and implement coastal management strategies and policies. Such partnerships are at work and showing tangible positive results in the Provinces of Bataan and Batangas in the Philippines, and in the Municipality of Xiamen in PR China. Xiamen's success in implementing ICM has in fact promoted a national effort to extend ICM throughout the entire coastline of China — a clear demonstration of how a local initiative can catalyze and strengthen national policy development.

While there is a growing array of positive local-level experiences and initiatives, much remains to be desired at the national level, where there is seldom an agency or a ministry with a clear mandate for interagency coordination with respect to coastal and ocean governance. Lack of this poses a strong challenge to ICM practitioners, who, left to their own devices at the local level, have nonetheless managed to achieve clear and positive impacts. What more, then, with a corresponding coordinative mechanism in place at the national level, to provide a concerted direction and supplementary resource support for ICM programs nationwide.

From Environmental Protection To Ecosystem-Based Management

The three dimensions of sustainable development — economic development, social development and environmental protection — are interdependent and mutually reinforcing. Sustainable development thus requires shifting of emphasis beyond environmental protection, which focuses on environmental quality and pollution control, to the broader concept of ecosystem-based management. Here the focus is on the integrity of ecosystems that provide essential resources and services for human well-being and economic activities, and a balance between conservation, sustainable use, and the fair and equitable sharing of benefits arising out of resource utilization.

A fundamental requirement of ecosystem-based management is the linkage of watersheds, estuaries and coastal seas — in other words, the social, economic and ecological relationships from the mountaintops to the seas. Their interdependence and impact on each other need to be factored into planning and management considerations. Management interventions should be guided by sound scientific knowledge on the carrying capacity of the ecosystems in the face of development pressures. However, estimation of ecological carrying capacity remains an imprecise science. Lessons from Chesapeake Bay, the Great Lakes, Seto Inland Sea and elsewhere indicate that managing the LMEs of East Asia will have to be a dynamic process marked by self-correction and mutual learning, rather

than one based on a static understanding of ecosystems and instant consensus on problematic issues.

From a practical standpoint, no matter how much scientific information is collected, there will always be gaps, uncertainties and errors in our information and understanding. Decisions must be made regardless of deficiencies in information, and managers must be aware of these gaps when developing and administering management interventions.

In ICM, the management boundary is conceptually defined from the inner limits of the watershed area to the outer boundary of the large marine ecosystem. In this sense, ICM is ecosystem-based management in action. In practice, ICM employs a more practical management boundary, such as the administrative boundaries of a municipality, city, province or state. The advantage of the ICM approach is that it facilitates a gradual scaling up of integrated management practices, within the



resource limitations and timeframe of the concerned governments and stakeholders. In the management of the Seas of East Asia, ecosystem-based management is exemplified through ICM.

The Time To Act Is Now

While the environmental problems of the Seas of East Asia pose a serious threat, there is still time to reverse current trends of degradation and destruction. It will be a formidable challenge for all concerned. The future hinges critically on decisions that are made and the actions that are taken now.



Participants experience bringing in the fish catch during a Youth Camp in Sibuyan Island, Philippines.

In particular:

- National policies are needed to mainstream coastal and ocean governance into economic development policies, programmes and actions that improve and sustain the products and services provided by oceans and coasts, while reducing environmental, health and social impacts.
- Integrated coastal management efforts need to be replicated and expanded throughout entire national coastlines.
- National interagency and multisectoral mechanisms must be set up to coordinate the management of cross-sector uses of marine and coastal resources.
- Dedicated, time-bound actions must be defined aimed at pollution reduction and control, restoration of degraded habitats, resource enhancement and preservation of species and areas of special significance. These must use the ecosystem-based management approach as well as other tools to manage watersheds, estuaries and the associated seas.
- Relevant scientific and technical support must be provided, and management capacity strengthened at local and national levels, to plan and manage coastal and marine resources in a responsive and sustainable manner.
- Innovative financing mechanisms are needed to support implementation programmes and environmental improvement projects at the national and local levels, and to leverage

investments and partnerships among local governments, the private sector and civil society.

- Effective regional collaborative and partnership arrangements must be harnessed for intergovernmental, inter-organizational and multi-sectoral partnerships to coordinate, guide and monitor progress toward the shared goal of sustainable development of the region's seas and coasts.
- Resourceful advocacy and awareness programmes need to be undertaken to broaden stakeholder awareness, knowledge, motivation and participation in coastal and ocean governance of the Seas of East Asia at all levels.

These initiatives are mere first steps in a long march towards sustainability. They also represent an opening of new opportunities that benefit all sectors of society through increased awareness, access to information, capacity to participate, and fair and equitable distribution of benefits.

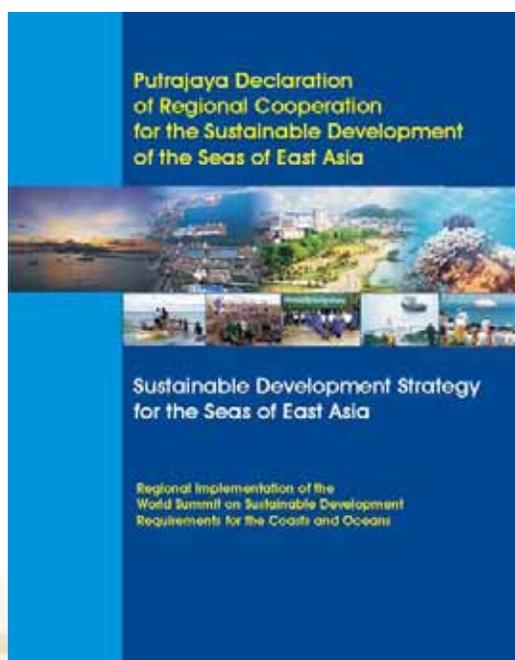


The Putrajaya Declaration: A New Milestone

On 12 December 2003, a milestone event for coastal and ocean governance took place in the East Asian Seas region. Twelve coastal nations adopted the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA).

Ministers and senior officials from the 12 governments² signed the Putrajaya

Declaration, signifying their agreement and determination to implement the SDS-SEA in accordance with their respective national priorities and capacities. The Putrajaya Declaration is the first regional declaration for the sustainable development of the coasts and oceans of East Asia, which directly responds to the global targets that have been agreed to in the World Summit on Sustainable Development (WSSD) Plan of Implementation, the UN Millennium Declaration, and Agenda 21.



The SDS-SEA adopts a holistic and integrative approach for addressing both sectoral and cross-sectoral issues, thereby contributing to national efforts in meeting international obligations. It also offers a programmatic approach to addressing the linkages among poverty alleviation, sustainable livelihood, reduction of vulnerability to natural hazards, long-term security, economic growth and the health of human beings, ecosystems and the natural resource base. By establishing concrete goals and objectives in terms of desired institutional and operational changes, as well as a framework for preferred social, economic, environment and resource outcomes, it also provides a platform for cooperation among governments and other stakeholders, including the 16 international agencies and non-governmental organizations who officially signed up as collaborators in the implementation of the SDS-SEA.

² Brunei Darussalam, Cambodia, China, DPR Korea, Indonesia, Japan, Malaysia, Philippines, RO Korea, Singapore, Thailand and Vietnam



With the signing of the Putrajaya Declaration, the 12 countries have confirmed their desire to work together to achieve a shared vision for sustainable development, and to use the SDS-SEA as the framework for policy and programme development and implementation, as well as a platform for cooperation and partnerships among governments and other concerned players.

Underlying Principles

Successful implementation of the SDS-SEA hinges on its four underlying principles:

- **Self-reliance and sustainability:** building capacities at the local, national and regional levels and removing existing disparities that limit commitments to and capabilities for achieving the sustainable development goals;
- **Partnerships:** developing and adopting policies, regulations, programmes, practices and opportunities that engage different stakeholders — men and women, public and private, national and local, NGOs, governments, international financial institutions, and the international community — working across administrative boundaries, sectors and organizations, in concert with each other;
- **Synergy:** combining existing initiatives and the diversity of interests, perspectives, cultures, skills, services and experiences in the region, to realize multiplier and cumulative effects that accelerate progress toward the shared vision of the SDS-SEA; and
- **International conventions and international and regional programmes of action:** mainstreaming the sectoral objectives, targets,

programmes and schedules of existing international instruments into the regional implementing arrangement, including poverty alleviation and other priority targets of the WSSD Plan of Implementation and the UN Millennium Development Goals, in partnership with the Association of Southeast Asian Nations (ASEAN), the United Nations Environment Programme (UNEP) Regional Seas Programme, International Maritime Organization (IMO), Food and Agriculture Organization (FAO), Economic and Social Commission for Asia and the Pacific (ESCAP), Asia-Pacific Economic Cooperation (APEC), and others.

To be sure, considerable financial and human resources will be required to fully implement the SDS-SEA. But the Putrajaya Declaration has made the important first steps in the long march towards sustainable development. It is to the benefit of the peoples of the region if governments and stakeholder groups were to work together at all levels of the society to implement its six strategies and 218 action programmes, effectively turning the current tide of pessimism to optimism, desperation to hope, and weakness to strength.

Putting The New Paradigm Into Action

To achieve the vision and objectives of the SDS-SEA, countries of the region have agreed to implement action programmes that are relevant to their own national interests, and work in partnership to address transboundary

environmental and natural resource-use issues. Moving from words to actions requires countries to take ownership of the SDS-SEA, by:

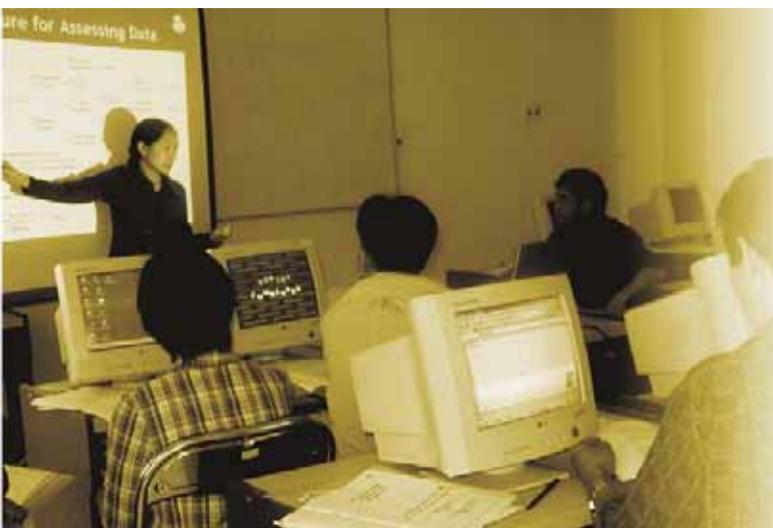
- mustering their national political will and resources to move from planning to implementation on the ground, setting priorities and targets in light of their specific conditions, especially for regional and subregional cooperation; and
- acknowledging the disparities in political, cultural, socioeconomic and environmental conditions throughout the region, and the interconnectivity among them.

The difficulties in regional coastal and ocean governance admittedly lies in the tradeoffs between conservation and development, but from the standpoint of coordination and execution, success lies in the resolution of intergovernmental, interagency and intersectoral conflicts.

Effective implementation of the SDS-SEA will require creativity and innovation. Management by control must give way to management through interagency, multi-sector partnerships. The conventional attitude of “grow now, clean up later” must be replaced by a “protect as you grow” approach in light of the vast evidence on rapid deterioration of ecosystems, much of it irreparable. Long-term management targets need to replace traditional short-term objectives, usually defined within the limited terms of elective local or national officials. The existing decisionmaking processes should be more science-based, rather than depending primarily on the discretion of the political leadership.

Implementing SDS-SEA is a long-term commitment that requires considerable human and financial





resources. Therefore a key component of national programmes will be a sustainable financing mechanism, starting with ample budgetary allocations, to make funds available for implementing environmental improvement projects, as well as for developing the necessary national and regional capacity for implementation.

Obviously, actions cannot be done all at once. Countries should therefore confirm their priorities, individually and collectively. A new regional initiative is needed to focus on the required changes and strengthen national efforts in the implementation of the SDS-SEA. Such an initiative would build upon the previous rationale, coordinate national and regional efforts, catalyze international resources and the private sector, and forge stakeholders' partnerships towards achieving the goals of the SDS-SEA. The initiative would be a short-term undertaking, serving as a catalyst for change and creating a foundation for sustainability, including:

- **at the regional level**, creating an intergovernmental and multi-sectoral

mechanism to coordinate, guide and monitor the progress of the SDS-SEA implementation, including the development and application of partnerships and innovative financing programmes to achieve the targeted goals;

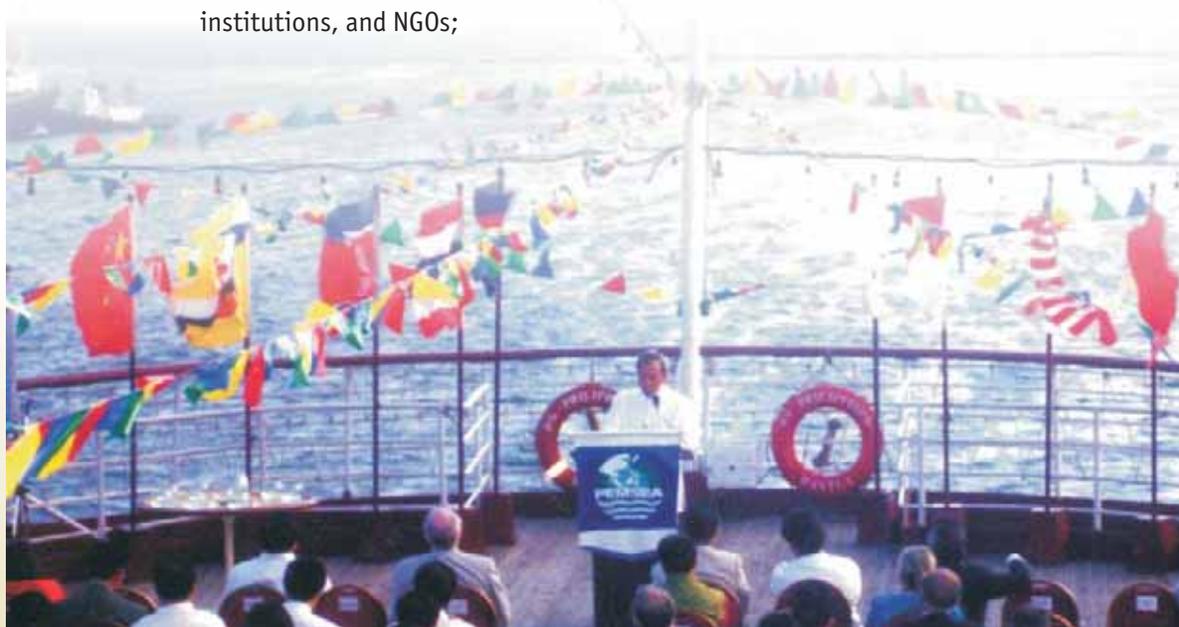
- **at the sub-regional level**, marshalling the essential skills, knowledge and experience in integrated management, and the associated legal, technical and scientific capacities, to support the sustainable implementation of action plans emerging from the GEF-supported projects in the region, including the Bohai Sea, Manila Bay, Gulf of Thailand, South China Sea, and Yellow Sea, as well as newly developed action plans for other sub-regional sea areas and pollution hotspots;
- **at the national level**, facilitating the mainstreaming of ocean and coastal governance into national economic development policies;
- **at the local level**, scaling up ICM programmes and adopting time-bound targets for integrated river-basin management, nutrient reduction, sustainable access to safe drinking water and sanitation; habitat restoration, fisheries management, and the effective management of marine protected areas; and
- **at the global level**, promoting environmental sustainability through the effective implementation of the SDS-SEA in the five LMEs of the East Asian Seas, and transferring the knowledge and experience to other countries and regions of the world.

Premium On Partnerships

Putting partnerships on the political agenda for the sustainable development of coastal and marine resources is both a critical imperative and major challenge. Political stakeholders need to better understand and articulate the opportunities and benefits of partnerships, move away from generalized non-committal statements, and adopt a concrete agenda with focus on implementation.

Partnerships and collaborative arrangements need to be fostered and strengthened in the following:

- transboundary environmental and natural resource-use issues, involving coastal states, user states, resource managers and the concerned sectors, and local communities;
- implementation of international environmental instruments and regional plans of action, involving UN agencies, convention secretariats, regional organizations and institutions, and national and local governments;
- strengthening technical and managerial capacities, involving UN and international agencies and financial institutions, donors, national governments, universities and scientific institutions, and NGOs;



- policy reforms concerning integrated management approaches, empowerment of local governments and civil society, access/transfer of information, financing and economic incentive programmes and public-private partnerships in environmental investments, involving governments, international financial institutions, NGOs, and the private sector;
- environment investments in pollution reduction and restoration of degraded habitats and natural resources, involving local governments, financial institutions, scientists, communities and the private sector; and
- monitoring and reporting the progress of the SDS-SEA implementation, involving local and national governments, regional and international agencies and organizations and NGOs.

The SDS-SEA clearly indicates where the different stakeholders can participate, what value-added inputs they can provide, and how their contribution will result in multiplier and cumulative effects that accelerate achievement of the goals of countries and partners alike.



Stakeholders sign a declaration for the implementation of the Bali Coastal Strategy, providing a management framework to promote sustainable development in Bali, Indonesia.

Broadly, these can be classified as those coming from government, the private sector, the scientific community, civil society groups, and the international community. Their respective roles are described below.

Governments: Leading By Example

Country ownership needs to be demonstrated through national policy...

The coasts and oceans are largely neglected in national planning. Policymakers and economic planners do not fully appreciate the fragility of the natural ecosystems to human interventions, nor are the implications or consequences well understood. While poverty alleviation tends to be prominent in the policy agenda, not many fully understand its critical linkage to natural resources and environmental protection. Lack of policy direction on the sustainable use of the coasts and oceans and policy support for a systematic and programmatic approach to coastal and ocean management will continue to impact negatively on the health of the coastal and marine ecosystems and associated livelihoods, particularly of the poor.

Thus, development and implementation of national coastal and ocean policies is urgently needed. First, the severity of environmental degradation could seriously undermine the continuous supply of goods and services from the coastal and marine ecosystems. Second, the importance of the coastal and ocean economy to the region is increasingly being recognized, especially in light of trade liberalization, globalization and regional economic

realignment. There will be an increase in maritime transport activities due to the increasing demand from the rising economies of the region especially China, Japan, RO Korea and most Southeast Asian nations. Third, it is expected that there will be greater interactions among the countries in the region on issues pertaining to boundaries, natural resource exploitation and management, marine environment protection, maritime trade, and scientific research. These interactions will need policy direction and support. And fourth, there is a need to develop practical measures to ensure sustainable development of coastal and ocean sectors and its continuous contribution to national GDP.

The Putrajaya Declaration on SDS-SEA provides further impetus for countries in the region to develop a national policy on coasts and oceans. National implementation of the SDS-SEA requires countries to mainstream coastal and ocean governance into their national policy and priorities. Management of the coasts and oceans must become an integral part of national economic development, and should form a critical component of the countries' national Agenda 21, a commitment they had also made in the 1992 Rio Earth Summit.

To date, not many coastal countries of the world have a comprehensive national policy on coasts and oceans. In the recent years, Australia, Canada and the USA have taken the lead to establish and strengthen their national ocean policy. Several countries in the region have also started similar initiatives such as the Philippine Archipelagic Agenda, the Thai Ocean Policy and the Coastal Policy of Malaysia. The Republic of Korea enacted integrated coastal management legislation, while Japan undertook shoreline



Chinese government officials and international organization representatives sign a memorandum of agreement to help reduce waste discharges and marine pollution across adjacent provinces and administrative boundaries in the Bohai Sea, PR China.

management legal initiatives to address multiple-use and interagency conflicts in the coastal areas. In addition to the legislation on sea space utilization, the Chinese People's Assembly has recently adopted an economic development policy of the ocean. Other countries of the region are also considering similar initiatives.

These developments indicate a regional trend towards coastal or ocean policy development, for which the broad framework of the SDS-SEA provides a solid foundation and a guiding framework.

... and effective national coordinating mechanisms are critical.

Coastal and marine environmental and resource issues affect many sectors. Getting these sectors to work together to implement coherent policies remains a serious challenge to many governments, especially as most governments are organized along sectoral lines. This highlights the need for strengthening national interagency consultation and coordination for the implementation of cross-sectoral projects and programmes. There is



Philippine President Gloria Macapagal-Arroyo formally receives the Manila Bay Coastal Strategy, a comprehensive management framework that emphasizes the need for partnerships for integrating economic development and environmental management of Manila Bay, from then United Nations Development Programme Resident Representative Terence Jones in October 2001.

seldom an agency or a ministry with a clear mandate in interagency coordination, particularly with respect to coastal and ocean governance.

The establishment of the Ministry of Fisheries and Marine Affairs of Indonesia and the Ministry of Maritime Affairs and Fisheries of RO Korea are examples of countries moving one step closer to providing such a coordinating mechanism. Interagency coordination at the local level may be much more doable in view of the geographical size, and could serve as a starting point. Some ICM sites in the region have already developed interagency coordinating mechanisms, and have successfully reduced duplication of efforts and interagency conflicts. The success of local governments could eventually influence changes at the central government level. This bottom-up approach could be critical to clearing the bottlenecks caused by institutional arrangements, both at the local and national levels.

The development and/or strengthening of similar coordinating mechanisms at the regional level

will also facilitate national efforts and processes for cross-sectoral coordination. Combined with the success of such mechanisms at the local level, this combination of “top-down” and “bottom-up” impetus will increase likelihood of success in developing effective national coordinating mechanisms.

ICM efforts need to be expanded to cover entire national coastlines...

Both Agenda 21 and the WSSD Plan of Implementation encourage the application of the ICM approach to strengthen coastal and ocean governance. ICM is increasingly being practiced in some countries of the region, but remains on a relatively small scale. Many projects are donor-driven and are largely at the demonstration stage. ICM’s effectiveness can be visible through implementation by local authorities and stakeholders. The SDS-SEA provides insights into how ICM can be employed as an effective tool for reducing multi-sectoral conflicts over the sustainable use of marine and coastal resources, and for setting in place the necessary institutional arrangements for managing such resources over the long term, within the carrying capacity of the concerned ecosystems.

National governments would do well to adopt a systematic but gradual approach in expanding ICM efforts to cover their respective coastlines based on national priorities, capacities and timeframes. In 2001, the Paris Conference on Coasts and Oceans recommended the adoption of ICM programme targets of 20 percent of the coastline in the first decade, 60 percent in the second decade, and 100 percent within three decades. Such targets are achievable considering the economic and technical capacity of the region as a whole.

... and scaled-up further to the regional level...

The success and sustainability of the SDS-SEA implementation is the 'scaling-up' of on-the-ground initiatives from local, to national, and on to the regional level. By demonstrating to local governments that the ICM framework and process not only results in environmental benefit but economic gain as well, a number of local communities and governments in the region have begun to institutionalize ICM programmes within their regular operations. Xiamen, China is a good example of the positive impact that an ICM programme has on the social, economic and environmental fabric of a city. By adopting an urban ecosystem management approach, Xiamen placed public health at the center of economic development, set up effective nutrient reduction programmes, rehabilitated habitats, improved shorefront management, and reduced adverse impacts on ecosystem health, thus creating a more conducive and healthy environment for its residents.

But as benefits and confidence build up, the scope of the challenge also widens. It becomes apparent that individual local governments cannot completely solve environmental problems on their own. Transboundary issues, such as pollutant loadings from river discharges, ocean currents, sea-based activities or atmospheric deposition, require interventions at a higher level. This is where national governments play a vital role, to ensure that the necessary policies, programs and capacity-building activities are in place for the expanding ICM coverage to all coastal communities.

At the sub-regional and regional levels, where conflicts across national boundaries are even more pronounced, a similar scenario is being played out. Countries acting independently cannot achieve sustainable development goals on their own. They need the cooperation of their coastal neighbors, some of whom may not have the same understanding or level of resources to commit to such programmes. The SDS-SEA provides the strategic framework and platform for countries and stakeholders to work together.



The Ministerial Forum on the Sustainable Development of the Seas of East Asia held on 12 December 2003 in Putrajaya, Malaysia, brought together 12 neighboring countries in the East Asian region to collectively agree on a common framework of action for attaining sustainable development — The Sustainable Development Strategy for the Seas of East Asia (SDS-SEA).

... even as scaling down to small island communities is also needed.

The region is home to the world's most populous archipelagic states, and includes thousands of small island communities. These small island communities are special, both from an environmental and a developmental perspective. While the ICM framework and process provide such communities with a management model, it may be necessary to scale-down the methodology to align it with capacities within



the island communities. Given the limitations of land area, freshwater, energy, technical skills, finances, and management experience, there is need for special consideration of issues such as traditional governance systems, achievable time-bound targets, adaptation of indigenous technologies, and capacity-building/technical assistance programmes. National policies, priorities, action programmes and targets will therefore need to give special consideration to island communities.

Ecosystem management challenges are many and complex...

With high levels of population and rapid industrial development, existing efforts to combat the rate of pollution in coastal areas are not adequate or efficient. Management measures need to go beyond the impact of pollutants from land and sea-based activities, but also address the root causes, namely consumption and use patterns resulting from changing living standards.

Excessive nutrient load in coastal waters, particularly in enclosed and semi-enclosed areas, has become a priority concern. This has been traced to increasing occurrences of harmful algal blooms and the depletion of dissolved oxygen in the water column. The result is severe damage to ecosystems, human health, livelihoods, and local economies. Steps must also be taken to halt the continuing destruction and degradation of coral reefs, mangroves, seagrass beds, wetlands and estuaries, before the damage becomes irreversible. Moreover, preservation and enhancement of endangered and depleted marine life critical to biodiversity conservation and people's livelihoods is imperative. Adaptive management and the precautionary principle would best guide efforts to address uncertainties arising from ecosystem and human responses.

Other priority management concerns include:

- developing and implementing zoning schemes, based on the primary ecological functions of management areas;

- determining the absorption capacity of rivers, lakes, estuaries and coastal ecosystems and setting time-bound management targets;
- identifying of sources of pollutants, pollutant load reduction targets, and cost-effective measures for achieving prescribed targets;
- establishing waste reduction strategies for secondary townships and municipalities, and community-based waste management programmes; and
- assessing changes in consumption and use patterns and promoting awareness and education programmes aimed at changing attitudes and behaviour.

Efforts are needed to systematically address these issues. To this end, twinning and networking arrangements involving South-South and North-South collaboration to share knowledge and experience in innovative approaches in ecosystem based management (e.g., Chesapeake Bay, Seto Inland Sea, Bohai Sea, Manila Bay, Masan-Chinhae Bay and Jakarta Bay), and the development and management of marine protected areas (e.g., Great Barrier Reef and Sulu-Sulawesi Sea) would shorten the management timeframe and make optimum use of human and financial resources.

... and environmental monitoring is critical.

With the rapid deterioration of the environmental quality of the Seas of East Asia, there is a pressing need for accurate and timely reporting of environmental changes. Decisionmakers and the public at large need to know the extent that environmental quality has improved or degraded, and the associated risks exposed to the general public.

Environmental monitoring is being practiced in most countries. Most national monitoring programmes focus on water quality measurements, varying from each other in terms of purpose, comprehensiveness, coverage, methodologies and use. However, lack of common analytical standards and inconsistency in sampling approaches among countries makes monitoring data not readily comparable. This presents a problem for managing environmental quality of any given water body shared by more than one administration or jurisdiction, whether national or international. As a result, existing environmental monitoring efforts of the region have neither been effective in accurately tracking the changes in the state of the environment, nor in predicting these changes.

International efforts have contributed to the standardization of some analytical techniques and data interpretation. National capacity in environmental monitoring has increased



considerably; and many countries in the region now have the basic technical skills and adequately-equipped laboratories to undertake monitoring programmes. Nevertheless, the disparities among countries' capabilities in environmental monitoring remain. There is an urgent need to develop an operational network of site-specific monitoring efforts, building upon various local level ICM initiatives for tracking environmental trends, and facilitating local level support to global and region-wide monitoring and assessment programmes.

Improvement of national policies to facilitate dissemination and sharing of monitoring information among countries also poses a challenge. But with active use of the Internet and globalization trends, more and more countries are willing and able to share their monitoring information, and international efforts to promote sharing of environmental monitoring results, such as the Global Ocean Observing System (GOOS) programme of the Intergovernmental Oceanographic Commission (IOC), need to be actively pursued.

Country-to-country assistance will narrow disparities within the region.

Disparities within and among the countries of the region, in managerial, legal, technical, financial and other capacities, are a major constraint to the implementation of the SDS-SEA. The region has much of the required technical and managerial expertise in research institutions and institutions of higher learning. Technical expertise on coasts and oceans is available in a number of countries. Some countries also have managerial experience in implementing ICM programmes. PEMSEA has been able to develop a pool of practical knowledge

pertaining to the management of coastal areas and sub-regional seas. The region now possesses a body of working knowledge on coastal and ocean governance that can be packaged, developed and used for sharing and application. Such technical and managerial knowledge on coastal and ocean governance represents valuable "intellectual capital" that has yet to be fully mobilized.

A technical support network, whereby better-endowed countries help the less-endowed, would be a useful start to mobilizing the region's intellectual capital within such fields as marine environmental monitoring, maritime legislation, marine biodiversity, marine policy, waste management/pollution control, and integrated coastal management. The goal is to reduce disparities through training and capacity building, scientific and technical support, personnel exchange programmes, study tours, twinning of sites/communities, and others.

Private Sector/Business Community: Sharing Responsibilities And Rewards

Changing expectations about the role of business in society requires that the concept of good corporate citizenship be pushed into mainstream business thinking. Indeed, there is a growing body of evidence linking corporate citizenship activities to positive business performance. Increasingly, leading organizations, such as the World Business Council for Sustainable Development, empathize the ideal that leadership is a catalyst for change toward sustainable development, and are promoting eco-efficiency, innovation and corporate social responsibility.

Such leadership is required for the private sector and business community of the region, particularly for small and medium-sized enterprises.

There are numerous opportunities for industry organizations, the private sector and the business community to be partners in the implementation of the SDS-SEA, and numerous benefits to be derived at the same time. Some of these opportunities include:

- solving environmental problems at the community level (e.g., pollution control; waste management; restoration of habitats; sustainable access to safe drinking water), enhancing sustainable development efforts and promoting corporate responsibility in a multi-stakeholder context;
- developing self-sustaining environmental enterprises in partnership with local governments and the community (e.g., eco-tourism; sport fishing; and sustainable aquaculture, manufacturing, and trade);
- strengthening and facilitating the participation of small and medium-sized enterprises, and informal business enterprises in supply chains, while transferring sustainable development practices and procedures;
- 'living' the universal principles identified in Agenda 21, making the local (and global) economy more sustainable and accessible;
- leveraging the SDS-SEA's regional reach and coordinating capability among

participating governments, the business sector, civil society and other stakeholders facilitates new opportunities, sharing of knowledge, good practices and lessons learned, thereby accelerating positive actions and impacts; and

- accessing forums involved in policymaking and decisionmaking with regard to development issues, regulations, institutional reforms, strategies and measures to tap the full potential of private sector involvement in infrastructure projects, and financing programmes that effect the business sector.

Two of the principal development issues confronting the region are sustainable access to safe water supply and pollution control. UNEP has estimated that 1.5 billion people (28 percent located in East Asia) will lack access to



clean water and 2 billion (33 percent located in East Asia) will lack adequate sanitation facilities by the year 2015. UN studies report that about \$80 billion is spent annually on both issues; but that an additional \$100 billion a year is needed to meet the Millennium Development Goal (MDG) target of halving the number of people lacking these basic services. Official development assistance (ODA) to these sectors is about \$3 billion. Nations have promised to double this aid. None have done so to date. But even if they do, \$6 billion will clearly not solve the problem. Neither will all of the combined resources of the international financial institutions, such as the World Bank (WB) and the regional development banks. Neither will the beleaguered national budgets of developing countries themselves.

The only other possible source of funds to meet the MDG target is the private sector.

One hundred billion dollars seems like a lot of money to come from any sector. This is not necessarily so; rather, it is a matter of perspective. The world economy today stands at \$35 trillion. In perspective then, the \$100 billion needed for water and sanitation represents less than three-tenths of one percent of global Gross Domestic Product (GDP). The question is: how to get at these funds?

Engaging the business community as a partner within the context of sustainable development implies that the private sector must first be convinced that such partnerships lead to benefit. The private sector does not give grants. Nor do they make concessionary loans. Moreover, efforts to expand and diversify funding sources must be linked up with good governance, an appropriate policy environment,

and the technical capacity to achieve investment objectives and sustain operations. It falls on governments to ensure that the policy and investment climate is conducive to private sector participation and to the development of long-term public-private sector partnerships.

The Scientific Community: Turning Research Efforts Into Management Options

Scientific support is an integral part of coastal and ocean governance. In the East Asian region, the connection between available scientific information and decisionmakers (i.e., governments and communities) requires strengthening. Management objectives are a matter of societal choice in ICM programmes. The choices should be based on knowledge and science, to allow people to make rational judgments and translate their values into practice. PEMSEA has employed a process of linking local universities with local governments implementing ICM programmes, in order to strengthen scientific input and support at the community level. Use of environmental risk assessment has also proven helpful in bridging the communication gap between scientists and managers, as a vehicle for translating scientific data into a form that can be used by managers in setting priorities and identifying management interventions.

Policymakers and resource managers would also benefit from experts' knowledge on ecosystem carrying capacity and the direct and indirect values of natural resources. Similarly, environmental monitoring protocols based on

scientific principles would help with the accurate assessment of ecosystem health. Legal expertise would be helpful in customizing ICM practices, improve codes of conduct for resource use and provide modalities for the implementation of relevant international conventions.

Other priority areas requiring partnerships with the scientific community are listed as follows:

Training and education: The implementation of the SDS-SEA will generate a demand for technical and managerial expertise, especially for coastal managers, planners, economists, ecologists, sociologists, communicators, political scientists, remote-sensing experts, geographical information system (GIS) experts, pollution experts, etc. It will also create opportunities for universities and training institutions to orient their training targets to meet the rising professional demand. For example, if the proper ratio of professional coastal managers to coastal municipalities is 1:1, the Philippines will require some 900 professional coastal managers to implement ICM programmes in its over 830 coastal municipalities. Many other countries in the region are facing the same problem. Despite the availability of ICM training opportunities in some universities in developed nations, and to some extent local universities in developing countries, the number of relevant professionals currently being produced falls far short of expected demand.

Networking among scientific institutions:

Several universities in the region have developed graduate programmes on ICM. These universities could be upgraded and organized into a regional network, with a function to meet the manpower requirements of the region. The network members might be able to share a standard ICM curriculum and develop appropriate textbooks on ICM.



The scientific community can play a major role in public awareness and educational programs aimed at informing stakeholders of the need to conserve the region's endangered marine resources.

The establishment of institutional networks in the region to cater to specific technical assistance and training needs of countries, and collaborative research on topics of common interest, would make a positive contribution to the advancement of SDS-SEA implementation. The network would contribute to the standardization of approaches and methodologies in environmental monitoring, risk assessment, ecological carrying capacity, indicators, and so on. The network would also assist countries in the formulation and implementation of improved environmental monitoring practices. The environmental risk assessment approach and methodology is an area of particular interest to countries of the region, and an area that the scientific network could contribute.

Areas of Excellence: Some institutions in the region are of international quality. They can thus play a key role in meeting the needs of the region. In particular, those institutions with recognized 'areas of excellence' could provide world class, top quality research inputs and expert advice to countries on specific topics that are relevant to coastal and ocean governance,

such as marine environmental monitoring, maritime legislation, marine biodiversity, marine ecosystem management, marine policy, and ICM.

By networking identified 'areas of excellence', the intellectual capital that has been cultivated across the region over the past decades, would be marshaled and mobilized in support of countries and stakeholders implementing the SDS-SEA. Such scientific, technical and managerial knowledge on coastal and ocean governance is an invaluable asset of the region, and needs to be exploited fully in order to narrow disparities among nations in achieving sustainable development goals.

Civil Society: Transforming Public Values Into Effective Practices

An ecosystem-based management approach includes the consideration of people's needs for food, shelter, jobs, and all the varied economic, cultural and spiritual benefits that different communities and sectors of society

derive from nature. Managing ecosystems inevitably involves tradeoffs among different ecosystem uses. Public participation — at the appropriate level — provides the best means to negotiate such trade-offs equitably and to make sure the goals that drive day-to-day actions of natural resource agencies reflect the values and priorities of community stakeholders

A first step is for governments to recognize the need to build the capacity for public participation, such as committing to programmes for training and outreach to communities. It also can mean incorporating environmental education into public school curricula and adult education programmes. Empowering civil society groups as environmental stewards is the key, giving authority, power and capacity to local institutions to actually benefit natural resources. This implies active support to strengthen capacities. For example, experience in ICM implementation indicates that, at the local level, community organizations, religious groups, NGOs, POs, local universities, industry and the private sector all need to be motivated and mobilized in the planning and implementation of integrated management



programs. In addition to national governments, donors, international agencies and the private sector could partner such efforts through capacity enhancing programmes.

At the national level, scientific, technical and legal organizations and associations, national universities, financial institutions, private sector groups, specialized international NGOs (e.g., Conservation International, IUCN - The World Conservation Union, Ship and Ocean Foundation, Wetlands International, WorldFish Center, and World Resources Institute), donors, the media (Asia Pacific Forum of Environmental Journalists or APFEJ) and international agencies and



organizations could help countries define the values and benefits derived from the ocean and coastal sector, and how to sustain those values. The ultimate target would be adoption of national ocean policies and strategies using the framework and approaches of the SDS-SEA as a guide, and the setting in place of the necessary laws, guidelines, procedures, mechanisms and programmes to leverage collaborative working relationships among different government agencies, levels of government, international community, and sectors of society to implement the strategies.

UN Agencies, International Organizations And Regional Programmes: Shaping Synergies

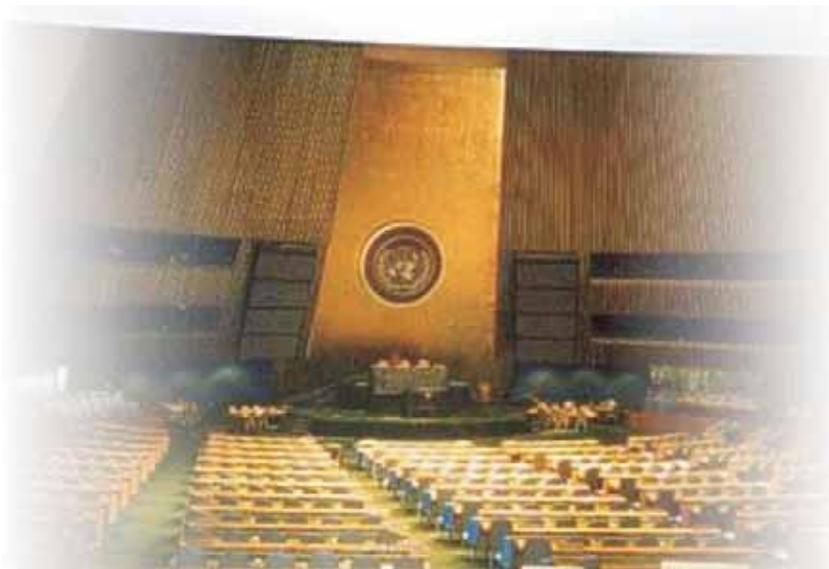
Nearly 200 international environmental agreements exist today, and most exist independently. Nations' uneven efforts to implement these treaties, as well as the various regional plans of action that have been adopted in different forums, means that the objectives and impact of the agreements are severely diminished. Improved integration of environmental efforts is possible, even within the array of existing treaties and institutions, by stressing the link between economic development, social well-being and environmental management — i.e., sustainable development.

The SDS-SEA serves as a functional framework for regional cooperation in the implementation of international conventions and agreements, providing international agencies with the opportunity to work in partnership with governments and other stakeholders, to address the adopted priorities of countries, such as:

- IMO regarding navigational safety (e.g., Marine Electronic Highway implementation), marine pollution prevention, oil spill response; liability and compensation, ocean dumping and the disposal of dredge material, ballast water management, port safety and security (e.g., Port Security, Safety, Health and Environmental - Management System or PSSHE-MS implementation), and the development and approval of Particularly Sensitive Sea Area (PSSA) applications;
- FAO regarding improved fisheries management, including national and subregional support to implement measures to prevent, deter and

eliminate illegal, unreported and unregulated fishing, and the implementation of the Code of Conduct for Responsible Fisheries;

- UNEP regarding biodiversity, and the implementation of the Global Program of Action (GPA) and the EAS Regional Seas Action Plan;
- IOC/UNESCO regarding environmental monitoring and reporting initiatives at the national and regional levels;



International and regional assemblies like the United Nations Assembly enhances international cooperation and agreement.

- United Nations Industrial Development Organization (UNIDO) regarding industrial development and the application of clean production processes and practices;
- United Nations Development Programme (UNDP) regarding capacity building in sustainable development and the implementation of Capacity 2015; and
- World Health Organization (WHO) regarding human health and sanitation issues and achieving the related MDG targets.

At the regional level, there are a number of important regional programmes, plans of action and projects that would strengthen the implementation of the SDS-SEA, as well as benefit from the synergies created by the SDS-SEA partnership platform, including:

- ASEAN regarding the mobilization of national commitments for the SDS-SEA implementation;
- APEC regarding integration of coastal and marine management, fisheries, maritime transport and business opportunities in environmental investments into the region's economic programmes;
- ESCAP regarding policy development to integrate planning into national economic development plans;
- Coordinating Body for the Seas of East Asia (COBSEA) regarding implementation of a regional programme of action on protection of the marine environment, including the adoption of National Programmes of Action on the reduction of land-based pollution;
- Northwest Pacific Action Plan (NOWPAP) regarding its implementation;
- GEF regional projects in LMEs (i.e., South China Sea and Yellow Sea), as well as in major river basins (Hei, Pearl, and Mekong) regarding implementation of their respective strategic action plans, capacity building and investments.
- The Small Grants Projects of GEF would provide mutual benefit by linking with, and adding value to, the activities being undertaken in the region.

Donors And Financial Institutions: Realigning ODA And Financing Programmes

Public and private sector expenditures for environmental infrastructure improvement projects, such as sewage treatment, hazardous and non-hazardous waste management, port reception facilities, and resource conservation and restoration projects are relatively low compared to development initiatives in other sectors, such as transportation, telecommunications, energy production and distribution and manufacturing. There are many reasons for this situation, not the least of which are the lack of political will, inadequate policies and regulations, limited enforcement capacity, barriers to and/or lack of incentive for private sector investment, and competition for limited public sector capital. Environmental infrastructure improvement projects normally do not have the high rates of return and short payback periods that are characteristic of investments in other areas. In addition, the general public's dependence on the government for environmental services adds to the difficulty of establishing a sound revenue generating scheme based on user fees in many developing nations.

Changing public perception on the need and benefits of environmental facilities and services is required, and that is one of the value-added benefits of ICM programmes. But equally important is the need to convince concerned governments to give higher priority to environmental improvement projects and to explore ways and means to mobilize new and additional financial resources. With the continuing decline in the volume of overseas

development aid and the inability of countries to allocate sufficient portions of their gross domestic product to environmental protection and restoration, finding innovative ways to meet the financial shortfall is critical.

East Asian countries plan to invest several billion dollars in water pollution reduction measures over the next five years, some of which will be funded by the World Bank (WB), the Asian Development Bank (ADB) and other lenders. However: (a) these planned investments will be insufficient to reverse worsening local and transboundary water pollution; and (b) most of the investment will be concentrated in a few large cities and in publicly-owned and managed waste-water treatment facilities. This leaves three major gaps in the region's land-based water pollution control efforts: (i) pollution from secondary cities and their industrial complexes; (ii) agricultural pollution; and (iii) limited private investment and public-private partnerships for pollution reduction.

The actual mobilization of new and additional financial resources, including private sector resources, requires further innovative tactics to help address these three major gaps in regional land-based pollution control efforts.

At the national level, potential barriers to environmental investments, such as existing and required policies, legal and financial practices and supporting arrangements, such as tariff structures, transparent fiscal practices, internationally accepted accounting standards, disclosure norms,

trusteeship, bankruptcy, debtor-creditor relationships and commercial dispute resolution mechanisms, need to be identified and, as appropriate, reforms put in place. In addition, consideration of national or sub-national environmental funds, linked to existing or planned action plans and environmental management programmes, national fiscal and tax policies, loan and grant programs of international financial institutions, donors and national financial institutions, and government planning, investment and development programs will be key to leveraging financing for priority projects within countries.

At the regional level, a revolving fund would add value to national efforts by focusing on transboundary, area-specific concerns, and offering reimbursable financial incentives to smaller cities and secondary townships and the private sector to catalyze pollution reduction investments. For example, one of the region's biggest environmental concerns is how to effectively reduce nutrient loadings to coastal waters. Single country efforts alone will not be adequate to effectively reduce the level of nutrients in subregional sea areas and pollution hotspots. The need for regional collective efforts is obvious. Correspondingly, a financial mechanism to support such transboundary issues and engage private sector investors is urgently needed.

The promise of innovative national and regional approaches, acting as "complementary mechanisms" for building investment partnerships, needs to be further developed and evaluated. Clearly, the overall objective is to leverage financial resources to co-finance new and additional investments aimed at reducing land-based pollution of their rivers, estuaries and seas. Strategically, the approaches would seek to catalyze: (a) greater involvement of the private sector in investment and facilities management to reduce land-based pollution; (b) pollution control investments in secondary cities; and (c) pollution control investments by industrial and agricultural enterprises in regional pollution hotspots.

The World Bank and the ADB are major stakeholders in this effort. Their experience and financial expertise is required to assist national and local governments, commercial banking institutions and private sector investors in the region with the development and implementation of financing and investment programmes, complete with fair and transparent accounting systems, dedicated to achieving time-bound pollution reduction targets.

Official development assistance (ODA) plays an essential role as a complement to other sources of financing, especially in countries with limited capacities. Effective partnerships between donors and recipients imply that the frameworks and plans are being driven and owned by the countries. The SDS-SEA provides such a vehicle, and the message is clear. The shift must be from a 'planning and capacity building' mode, to a 'full-scale implementation of the SDS-SEA' mode, adding value and cumulative impacts. Realigning ODA priorities to meet country needs for the implementation of the SDS-SEA would complement the efforts of governments and other stakeholders, including the transfer of new and innovative technologies and practices that are appropriate, affordable and accessible by all sectors of the community including the poor, South-South and North-South twinning, and promoting and supporting ventures with the private sector in environmental investments and partnerships with local communities.

GEF: Leveraging Partnerships That Change Behaviour

Over the past 10 years, GEF has enhanced the capacity and understanding of marine and coastal management issues among governments and stakeholders throughout the East Asian Seas region. Policymakers are developing an understanding of the important linkage between environmental sustainability,

economic development, and the quality of life of the people. Demonstration sites have been established, and serve as learning centers for senior government officers and practitioners of integrated management programmes. At the same time, the level of scientific and technical know-how and experience has been raised, and the value of strengthening scientific input into management programmes has been confirmed.

What is required is to bring these various and diverse resources and capacities together, into a functional regional partnership arrangement — a partnership where: developed countries of the region help the less developed countries achieve the shared vision of the SDS-SEA; user states, donors and international agencies and organizations work hand-in-hand with governments, NGOs, the scientific community and the private sector to solve priority environmental problems while transferring skills and capacities to local stakeholders; national governments implement strategic policies that assimilate environmental management with economic development; and national government agencies, International Financial Institutions (IFIs), commercial banks and investors institutionalize innovative financing programmes dedicated to the elimination of pollution.

The GEF is well-positioned to facilitate that necessary next step, namely to serve as the channel for bringing together its different projects, and the initiatives and experience of others, into a long-term collective effort with the direction and synergy to finally turn the tide of resource degradation and destruction in the Seas of East Asia.

GEF's Waterbody Operational Program (OP8) focuses on seriously threatened waterbodies and the most imminent transboundary threats to ecosystems. The expected outcomes of OP8 projects are that "collaborative processes are fostered through a

logical progression of GEF-funded activities — from project development, to analyses of transboundary priority environmental concerns, to formulation of strategic action programs, to eventual regional capacity building or country-specific investment projects. The operationalization of the SDS-SEA on a regional scale remains a major challenge, specifically to mobilize the necessary partnerships, capacities and financing arrangements. GEF support would serve as a leverage for national and multi-country efforts, with the assistance of IFIs, donors, communities and the private sector, to set in place the required technical, economic, financial and regulatory measures to implement the SDS-SEA on a long-term and self-reliant basis.

ICM is a dynamic process of developing the necessary expertise, institutional capacity and stakeholder support for the creation of pragmatic solutions to problems and issues that threaten the sustainability of human use of coastal ecosystems and their natural resources. The scaling-up of national ICM programs, as outlined in the SDS-SEA, would achieve 100 percent coverage of country coastlines in about 30 years. This is directly in line with the objective of the GEF Integrated Land and Water Multiple Focal Area Operational Program (OP9), to integrate the use of sound land and water resource management strategies as a result of changes in sectoral policies and activities that promote sustainable development. GEF support would be the catalyst for achieving the necessary long-term commitments among different sectoral agencies and stakeholders and to leverage the intended sectoral changes at the local, national and sub-regional levels. Above all, the global contribution of GEF would be to help transform the East Asian Seas region from an environmental hotspot to an ecological sanctuary, and a sustainable development model for the world.

Towards A Better Balance

Balance within the context of sustainable development means making environmental decisions that foster ecosystem health, treat people fairly and make economic sense. Environmental trends in the East Asian region show that this balance has yet to be found. How can the region move toward a better balance?



The Sustainable Development Strategy for the Seas of East Asia provides the platform. A cross-section of the six strategies of the SDS-SEA reveals that there are at least three fundamental elements behind the shared vision that the countries have adopted with the signing of the Putrajaya Declaration—knowledge, capacity, and governance. In fact, the SDS-SEA is a strategy founded on the experience and lessons of PEMSEA, the countries of the region and other stakeholders, and promoting sound decisionmaking through effective links between knowledge, practices and policies. The premise of the SDS-SEA is that when knowledge is available, and governments and people have the capacities to use it, multi-sectoral participation and decisions regarding policies, instruments, institutions and programmes can be more effective.

Knowledge – Seeds Of Confidence

Knowledge of environmental management and sustainable development, as held by government agencies, scientists, resource and environmental managers, ICM practitioners, NGOs, the private sector, and traditional and local communities in the region, can only fulfill its true value when it is shared and

applied on a regular basis to address conflicts between conservation and development. Otherwise, it is a resource that will eventually be lost.

The SDS-SEA keys in on a number of opportunities where knowledge transfer and sharing of skills and experiences across governments, sectors and international agencies cultivate the seeds of confidence that are needed in order to establish a solid foundation for local, national and regional environmental governance, including, *inter alia*:

- promoting dialogue and collaboration between different knowledge systems through the implementation of ecosystem-based management programmes in key watersheds, estuaries and adjacent coastal seas of the region (PROTECT);
- facilitating the integration of traditional, local, and scientific knowledge in the sustainable development of marine and coastal resources through partnership arrangements involving research institutions, universities, the private sector, governments, communities, NGOs and Areas of Excellence (SUSTAIN and PRESERVE);
- developing and transferring innovative economic instruments and financing arrangements, including public-private sector partnerships, in support of environmental investments and changing the behaviour of different resource users (DEVELOP); and
- exchanging knowledge from site-to-site, from country-to-country, and across the

Strategic Action Statement Of The SDS-SEA

The East Asian Countries shall:

- Ensure **SUSTAINable** use of coastal and marine resources.
- **PRESERVE** species and areas of coastal and marine environment that are pristine or are of ecological, social or cultural significance.
- **PROTECT** ecosystems, human health and society from risks occurring as a consequence of human activities.
- **DEVELOP** economic activities in the coastal and marine environment that contribute to economic prosperity and social well-being while safeguarding ecological values.
- **IMPLEMENT** international instruments relevant to the management of the coastal and marine environment.
- **COMMUNICATE** with stakeholders to raise public awareness, strengthen multisectoral participation and obtain scientific support for the sustainable development of the coastal and marine environment.



world by implementing a systematic approach to environmental monitoring, evaluation, and information exchange using standardized sustainable development indicators, and contributing to the regular process of the Global Marine Environmental Monitoring and Assessment (COMMUNICATE).

The SDS-SEA approach to knowledge sharing is in line with WSSD and Agenda 21 calls for greater involvement of the scientific community and civil society in monitoring and evaluating the impacts of past actions, as well as a multi-sectoral, participatory approach to defining solutions to existing and potential environmental problems that cross political, social and economic borders.

Capacity – Sustaining The Momentum

Knowledge transfer leads to building capacities, as well as to instilling a sense of responsibility and motivation that enables people and institutions to plan, manage, conserve and use resources in a sustainable and equitable manner while achieving their desired outcomes. Several ICM sites have already been established in the region, providing working examples of how local governments are able to build and sustain local capacities to manage coastal and marine resources in an integrated manner, in partnership with local stakeholders. The SDS-SEA takes these lessons and builds upon the momentum that has been created among participating countries and stakeholders over the past 10 years. The Strategy approaches the issue of empowerment of individuals, institutions, organizations and

governments through capacity building and promoting an enabling environment for the practical application of new and innovative skills, technologies and practices at local and country levels. Some of the proposed action programmes include:

- enhancing training and skills development among local stakeholders with the establishment and expansion of regional and national training centers, and standardized training curricula for ICM managers and local practitioners (DEVELOP);
- raising awareness and building capacity by facilitating public access to pertinent information and education materials through community initiatives lead by NGOs and through electronic media, with programmes directed specifically for women, the youth, indigenous peoples, marginalized groups and the media (COMMUNICATE);
- facilitating exchanges of experiences in application of ICM and ecosystem-based management approaches through case studies, study tours, expert and local government networks, internships, staff exchange programmes, and national and regional conferences, including the launching of a regular regional congress patterned after the East Asian Seas Congress 2003 (SUSTAIN, PRESERVE, PROTECT, DEVELOP, IMPLEMENT and COMMUNICATE); and
- providing opportunities for concerned stakeholders to participate in integrated management of marine and coastal resources by scaling-up ICM programmes to cover at least 20 percent of national coastlines by 2015 (DEVELOP).

Governance — The Ultimate Challenge

To be most effective at all levels — local, national, regional and international — governance needs to be mutually reinforcing. If the capacity of governance is weak at any level, the desired outcomes of the SDS-SEA will be undermined. This is the ultimate challenge. The strength of the SDS-SEA is that it is inclusive, involves stakeholders at all levels, including the public sector, the private sector, members of civil society, and the international community. Some of the available opportunities include:

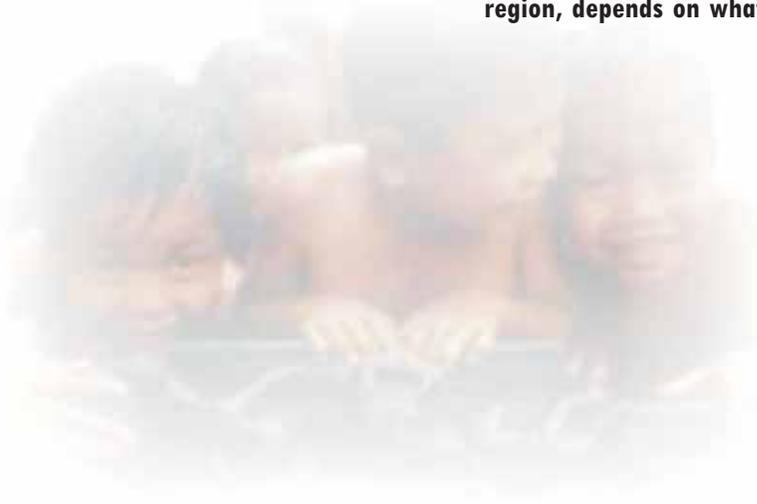
- enhancing the capacities of national policymakers to understand and promote the relevance and effectiveness of international environmental instruments by translating the principles and objectives of international conventions into desired management outcomes (IMPLEMENT);
- promoting the adoption of national policies and action plans for sustainable coastal and ocean development in at least 70 percent of the participating countries by 2015 (DEVELOP);
- enhancing the participation of all relevant players in the development, implementation and review of programmes aimed at implementing the SDS-SEA through a regional partnership arrangement for sustainable implementation of the SDS-SEA (IMPLEMENT);

- formulating and implementing national and regional pollution reduction investment programmes and facilities for promoting investment opportunities in improved environmental infrastructure for small- and medium-sized enterprises, private investors and public-private partnerships (PROTECT); and
- establishing a regional private sector advisory group to provide input and direction on the structuring of investment projects and risk reduction techniques and requirements of the private sector (IMPLEMENT).

The region needs to review its past approaches and attitudes towards regional concerns. Certainly it needs collective wisdom to move ahead, focusing on transboundary environmental problems and resource overexploitation for the common benefit.

Conclusion

We end with the statement with which we began: the Seas of East Asia and their associated waterways are vital to the lives of close to a third of the entire humankind. It has been said that sustainable development is not something that governments or international institutions do for people; it is something that people, through principled and active partnerships, must achieve for themselves.³ Sustaining the Seas of East Asia is sustaining the two billion lives that depend on it. In the end, the work lies in their very hands, and those of us who have the capability to lead the way must do our part to make it all happen. Indeed, everybody's future, including those outside of the region, depends on what we do or fail to do today.



³ Dr. Cielito F. Habito, Chair of the Sixth Session of the UN Commission on Sustainable Development (UNCSD VI), in his Opening Statement for the Session, April 20, 1998.

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