

# Tropical Coasts

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## COAST to COAST

A graphic of stylized waves in shades of blue and green, with white outlines, positioned below the 'COAST to COAST' text.

**From Demonstration  
to Replication**

# ICM Practices: From Demonstration to Replication

**Jihyun Lee**

Issue Editor

**T**his issue of Tropical Coast, as with the previous July issue on PEMSEA Experiences in the Evolution of Coastal Management, deals with the experiences and lessons learned from PEMSEA integrated coastal management (ICM) sites in the East Asian region. In particular, this issue highlights how the ICM experiences at national demonstration sites triggered a wider expansion of ICM programs over the region, through the replication of the ICM framework and processes using available local resources and capacity. It also chronicles continuing ICM efforts in facilitating knowledge sharing and networking among local governments, enabling them to become prime movers in achieving sustainable coastal development.

As indicated by Lee (page 4), PEMSEA national ICM demonstration sites are responsible for transferring knowledge, experiences and lessons gained to the other coastal areas in the region to enhance coastal management practices. Scaling-up the region's ICM efforts from demonstration towards replication, and expanding local practices requires a new level of partnership and alliance among concerned local governments. In addition, scaling-up depends on strong local leadership, continuous capacity building and effective resource mobilization.

The crucial role played by local partnerships among various stakeholder groups, including communities, the academe, the private sector and local and national government agencies, in mobilizing necessary resources and expertise for ICM replication are also emphasized.

The article by Erni, Azucena and Guintu (page 10) presents the valuable experiences in Bataan, Philippines, in building a working, transparent and value-added partnership between the public and private sectors in developing proactive long-term programs for the conservation and sustainable development of coastal and marine resources. The presence of a local leadership with a clear vision on sustainable development; the involvement of the private sector as partners, not only as donors; the sharing of resources, expertise and responsibilities together with local governments and the community; and the benefits of a successful program are identified as critical success factors.

Similarly, Ichwanudin and Mapparessa (page 16) introduce ICM efforts in Sukabumi, Indonesia, where local governments, using their own local resources, are taking an active part, together with local nongovernmental

organizations and community members. The local government adopted ICM as a framework for taking strategic moves on potential economic development, at the same time protecting the pristine coastal areas of Sukabumi.

In contrast to the pristine setting of Sukabumi, the very developed and degraded Shihwa coastal area in the Republic of Korea is highlighted in the article of Kahng and Je (page 20), along with the challenges faced by local and national stakeholders in rationalizing its long-term course for coastal development and environment conservation. The difficulties imposed by a power imbalance among different parties are indicated as a major stumbling block in on-the-ground integrated management operations.

Continuous efforts to build local capacity is crucial to the sustainability of ICM program implementation, particularly with regard to identifying an area's priority risks and developing strategic plans as experienced in Chonburi, Thailand (Narcise and Sujarae, page 30); Nampho, DPR Korea (Ri and Javillonar, page 38); and Sihanoukville, Cambodia (Javillonar, Sihara and Rithirak, page 42).

The initial risk assessment conducted by a multidisciplinary team of local experts in Chonburi strengthened the scientific basis for decisionmaking to address human impacts on the coastal environment and resources of the municipalities. The process of coastal strategy development in Nampho and Sihanoukville became a training ground for local stakeholders to practice participatory approaches for integrated planning and management. The mobilization of young professionals from the region as the regional task force (RTF) to Sihanoukville has proven useful for both RTF members and the local staff in building their knowledge, experiences and expertise regarding on-the-ground implementation of ICM programs.

Finally, river basin and coastal area management experiences in Port Klang, Malaysia, introduced by Haji Rahmat (page 46), give some insight into the challenges that local governments face with regard to national and local government jurisdictional issues.

The region is now making a collective effort to implement the Sustainable Development Strategy for the Seas of East Asia, as adopted with the signing of the Putrajaya Declaration in December 2003. A specific target of PEMSEA for the implementation of the Strategy is that at least 20 percent of the region's coastlines are covered by ICM programs by 2015. The transformation from a handful of ICM demonstration sites, to a comprehensive, region-wide ICM scaling-up programme is a major challenge. The stories coming from the ICM sites, as well as the interest shown by countries to develop and enhance national coastal and ocean policies, give us cause to be optimistic. ■

# Tropical Coasts

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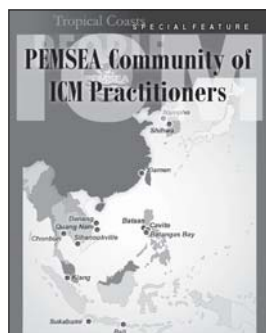
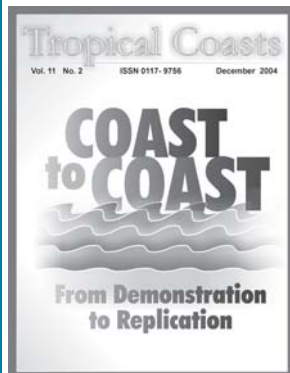
## 25 PEMSEA Community of ICM Practitioners

Meet the men and women behind the ICM programs featured in this issue who, through their steadfast commitment, have enabled the success of ICM in their localities and have encouraged replication of their successes in their nearby localities and countries by mobilizing stakeholders toward the common goal of sustainable ocean and coastal development.

## On the Cover

### ICM Replication in East Asia

In this issue of Tropical Coasts, the second in our special issue on ICM practices, ICM sites in East Asia share their lessons and experiences on replication and networking with stakeholders and policymakers to achieve the common goal of sustainable development in our oceans and coasts.



# Replicating and Networking Local ICM Practices: PEMSEA's Experience

## Introduction

For the past decade, the Global Environment Facility/United Nations Development Programme/International Maritime Organization Regional Programme on Building Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) has been assisting local governments in the East Asian Seas region in planning and managing the coastal environment and resources by building local capacities at national demonstration sites as well as providing a step-wise framework and processes of developing and implementing integrated coastal management (ICM) programs. According to Jashapara (2003), demonstration sites pioneer the ICM approach, provide opportunities for capacity building, make lessons available for other sites, and are used to convince the country to adopt ICM as a management approach.

To effectively expand and replicate ICM efforts, experiences and expertise built in national demonstration sites, PEMSEA encourages local governments in the region to develop ICM parallel sites in their respective coastal areas using their own local resources and capacity, and facilitates linking local ICM efforts through a regional network.

## ICM Parallel Site Development: Replicating ICM Using Local Resources and Capacity

Efforts are being made to extend and replicate ICM practices at sites where local governments are willing to secure their own human and financial resources to implement ICM programs. Such project sites are known as ICM parallel sites. Since the start of the Regional Programme in October 1999, five parallel sites have been developed, namely, in the Philippines (the provinces of Bataan and Cavite), Republic of Korea

(Shihwa), Indonesia (Sukabumi Regency) and Vietnam (Quang Nam Province) (Table 1).

The first initiative for developing a PEMSEA ICM parallel site came from the Province of Bataan, in partnership with the Bataan Coastal Care Foundation, which was formed by 18 multinational and national private corporations. The province has developed its ICM program using its own financial and human resources with the technical assistance provided by PEMSEA. Partnership arrangements for developing ICM parallel sites vary among the different areas. For example, in Shihwa, the Ministry of Maritime Affairs and Fisheries (MOMAF) designated Shihwa Lake and its coastal area as a special management area and developed an action plan for the environmental management of Shihwa, which will be implemented through partnership among national governments, the local government units (LGUs) and civil society through an integrated approach. In Sukabumi, however, the local government took a strong leadership role in collaboration with

the Ministry of Environment and various local stakeholders in planning and developing a coastal management program.

The experiences in PEMSEA ICM parallel sites so far show that the ICM efforts could be replicated using mostly local resources and provides a way to adapt lessons from the demonstration sites to other situations, which would additionally convince the country to adopt the

**The development of an ICM parallel site requires strong commitment and support of local and national governments and stakeholders to replicate PEMSEA ICM working models using their own financial and human resources. A sense of ownership by local government is critical to ensure project implementation and sustainability.**

**Table 1: PEMSEA ICM Demonstration and Parallel Sites.**

ICM Sites	MOA (signing date)	Coastline (km)	Sea Area (km <sup>2</sup> )	Land Area (km <sup>2</sup> )	Population <sup>1</sup> 1999 <sup>3</sup> 2001 <sup>2</sup> 2000 <sup>4</sup> 2002
<b>A. Demonstration Sites</b>					
1. Bali, Indonesia	13 March 2000	219	3,350	2,065	1,769,261
2. Batangas, Philippines	21 August 1996	470	220	871	964,505
3. Chonburi, Thailand	8 August 2001	28	205	129	1,365,668 <sup>4</sup>
4. Danang, Vietnam	7 June 2000	92	169	206	728,823 <sup>3</sup>
5. Nampho, DPR Korea	8 September 2000	127	71	253	323,704
6. Port Klang, Malaysia	19 July 2001	54	612	627	696,900 <sup>2</sup>
7. Sihanoukville, Cambodia	12 June 2001	120	3,207	1,283	155,690 <sup>1</sup>
8. Xiamen, China	8 October 1994	185	334	1,516	1,344,000 <sup>2</sup>
Sub-Total		1,295	8,168	6,950	7,348,551
<b>B. Parallel Sites</b>					
1. Bataan, Philippines	February 2000	177	2,340	1,373	556,489 <sup>2</sup>
2. Cavite, Philippines	March 2004	85	1,275	480	802,964 <sup>2</sup>
3. Quang Nam, Vietnam	November 2004	125	1,200	2,541	1,035,602
4. Shihwa, RO Korea	March 2001	253	57	964	1,050,000 <sup>2</sup>
5. Sukabumi, Indonesia	February 2003	117	749	1,411	421,695
Sub-Total		757	5,621	6,769	3,866,750
<b>Total</b>		<b>2,052</b>	<b>13,789</b>	<b>13,719</b>	<b>11,215,301</b>



### Box 1. PEMSEA ICM Parallel Site Selection Process.

1. A local government makes an official request to the PEMSEA National Focal Agency, to be considered as a PEMSEA ICM parallel site.
2. The interested local government arranges appropriate funding sources for the development and implementation of the ICM program.
3. PEMSEA RPO conducts a site evaluation to assess the eligibility of the site based on the selection criteria (Box 2).
4. Upon selection, a memorandum of agreement (MOA), work plan and budget are prepared between the local government, National Focal Agency and PEMSEA RPO.
6. Specific arrangements for ICM training and technical assistance are developed between the local government, the RPO and other interested sponsors, in accordance with the approved workplan and budget.

### Box 2. Evaluation Criteria for PEMSEA ICM Parallel Sites.

Local governments are selected as PEMSEA Parallel Sites based on the following criteria:

1. ***Commitment of Government and Stakeholders***
  - Support of local government in terms of policy re-orientation/reform, budget and human resources for developing and implementing an ICM program;
  - Support of stakeholders in terms of participation and/or financial contribution for developing and implementing an ICM program; and
  - Support of national government in terms of policy coordination and/or budget for developing and implementing an ICM program.
2. ***Nature of Environmental Management Issues***
  - Environmental problems are relevant to most coastal areas in the country or the region at large;
  - Priority environmental problems can be solved through policy, management and technical interventions; and
  - Major environmental concerns fall within the provision of the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA).
3. ***Manageability of the Proposed Site***
  - Geographical coverage is manageable for ICM practices within the limitation of project resources;
  - Area covers preferably less than five municipalities; and
  - Population of the proposed sites preferably less than one million.
4. ***Replicability***
  - Political, socioeconomic, and cultural characteristics of the proposed sites are similar to other coastal areas;
  - Approaches and methodologies developed can be easily transferred to other areas; and
  - Willingness of the concerned local government to serve as a parallel site for the application of the ICM working model.
5. ***Factors conducive for ICM application***
  - Strong political will at the local government level;
  - Support from the central government;
  - Keen interest of an appropriate agency to serve as lead implementing agency;
  - Availability of financial sources;
  - The public is aware of the environmental problems;
  - Availability of local "champions"; and
  - Availability of scientific/professional institutions within or near the site.
6. ***The following situations will be recognized as barriers to developing an ICM program:***
  - Local government has no jurisdiction over natural resource utilization and environment protection;
  - Strong political resistance exists against environmental/natural resource management; and
  - Local natural resources are controlled by selected groups of politicians/private sector.

ICM approach (Jashapara, 2003). With the achievements in the national demonstration sites, valuable experiences, knowledge, expertise and lessons learned are easily transferred among LGUs and applied to the other coastal areas within a country. Such transfer of experiences from national demonstration sites to parallel sites was most obviously observed in Bali (demonstration site) and Sukabumi (parallel site) in Indonesia; in the Batangas Bay area (demonstration site) and in Balayan

**Through the participation in the network activities, the member local governments would enjoy the benefits of accessing up-to-date and practical ICM knowledge and expertise; international/regional recognition; funding opportunities for developing ICM initiatives; environmental investment opportunities; and advocacy channel to national governments and international organizations.**



**President Roh, Moo Hyun of RO Korea (then Minister of Maritime Affairs and Fisheries) delivers his congratulatory message during the first regional workshop for the establishment of the regional network of local governments implementing ICM in March 2001, Seoul, RO Korea.**

Bay in the Philippines; and Danang (demonstration site) and Quang Nam (parallel site) in Vietnam.

The development of an ICM parallel site requires strong commitment and support of local and national governments and stakeholders to replicate PEMSEA ICM working models using their own financial and human resources. A sense of ownership by local government is critical to ensure project implementation and sustainability. The role of national government is also important in facilitating the transfer of experiences and expertise from demonstration to parallel sites. The parallel sites benefit from PEMSEA's management and technical advice, access to publications, network of experts, and training opportunities. Sustainability of ICM program is achieved via strengthened local governance and capacity building. Better access to environmental investment opportunities is also ensured through enhanced regional and international recognition of their local ICM efforts. Boxes 1 and 2 describe the process and evaluation criteria for the selection of PEMSEA ICM parallel sites.

# By providing due recognition to local governments that are successfully implementing ICM, efforts toward replicating ICM programs will gain momentum.

## Regional Network of Local Governments Implementing ICM

ICM practices by local governments at various PEMSEA national demonstration and parallel sites are now linked in a regional network. Since the establishment of the Regional Network of Local Governments Implementing ICM (RNLG) in Seoul, RO Korea in March 2001, participating local governments are taking turns to host the annual forum of the RNLG. An annual forum facilitates the sharing of knowledge, experiences, expertise and lessons in coastal and ocean governance among local leaders.

## Future Directions

The region is now making collective efforts for sustainable coastal and marine development under the framework of the SDS-SEA, which was officially adopted by 12 PEMSEA participating countries in December 2003 in Putrajaya, Malaysia. A specific target for the implementation of the strategy is that at least 20 percent of the region's coastlines are covered by ICM programs by 2015.

A major challenge in meeting this target is to effectively fill the gap of technical and managerial capacity and knowledge that are required for

this grand undertaking of ICM expansion and scaling-up. ICM scaling-up would not only involve geographic expansion of the ICM program but also expansion with regard to management issues and the coverage of functional integration, such as linking coastal management to watershed and river basin management. It also entails the development of national ICM policy, which would provide a policy framework for effective replication of ICM efforts at the local level.

The RNLG would also serve as a vehicle for advancing scaling-up activities. By promoting stronger commitments of local leaders to coastal governance, leveraging support and assistance from donors, developing cooperative programs with other partners and providing effective working models of ICM, the RNLG would become a driving force for achieving sustainable coastal development among local governments of the region.

Eventually, PEMSEA's efforts toward the replication of ICM practices and regional networking will be coupled with ICM certification, which entails the application of practical criteria and indicators to assess the performance of ICM implementation. By providing due recognition to local governments that are successfully implementing ICM, efforts toward replicating ICM programs will gain momentum. ■



**PEMSEA Regional Programme Director Dr. Chua Thia-Eng signs the MOA for the Cavite ICM Parallel Site on 8 March 2004, together with Cavite Governor Erenio "Ayong" Maliksi (extreme left) and representatives of national and local government agencies, making Cavite the fourth PEMSEA ICM parallel site.**

## Reference

Jashapara, Ashok. 2003. *PEMSEA Mid-Term Evaluation Report*. GEF/UNDP/IMO Regional Programme on Partnerships in Environmental Management for the Seas of East Asia, Quezon City, Philippines.



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- |                        |                             |
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Seas of East Asia (PEMSEA)

Quezon City, Philippines

# Bataan, Philippines — Public-Private Partnerships at Work for Sustainable Development

*“Business is not divorced from the rest of society. The two are interdependent and it must be ensured, through mutual understanding and responsible behavior, that business’s role in building a better future is recognized and encouraged by society.”*

— World Business Council for Sustainable Development

## Introduction

### A Cluttered Past

In Bataan, Philippines, there was a time when the relationship between the Provincial Government and Petron Corporation could be likened to the cluttered beaches and coastlines of the province and the residents. Independent and shores apart. Their efforts, if at all, were sectoral in focus and temporal in nature.

Petron owns and operates the largest refinery in the Philippines, which is located in the Province of Bataan, and therefore pursues its business interests as a private company. The Provincial Government of Bataan has its own mandate, which is to look after the concerns of the province and its people — the public. There were times when their paths would meet, but these usually involved instances when accidents like oil spills occurred. As a consequence, the affected sectors, such as the fisherfolks, had been adversely affected and had thereafter sought assistance from authorities like the Provincial Government, which, in response, had sought measures to redress such concerns, often unsuccessfully.

### The Coastal Cleanup

This changed in 1999, when Petron Corporation, through Petron Foundation, decided to conduct an activity dubbed *Kontra Kalat sa Dagat* or KKD (Movement Against Sea Littering). In observance of Coastal Cleanup Day, usually held every third Saturday of September, Petron organized the activity and sent volunteers from its various offices and from the refinery to Bataan to clear the coastlines of three municipalities.

When sought of its support, the Provincial Government enthusiastically responded by mobilizing its own set of volunteers from its officers and staff.

---

It also invited officers and staff from the concerned municipal governments, teachers and students from public elementary and high schools, nongovernmental organizations (NGOs), and people's organizations (POs), as well as civic and cause-oriented groups, to join the cleanup.

The turnout was overwhelming, with the participants, especially the leaders, realizing that when working together a lot of things could be easily achieved. It was realized that Bataan, especially its environment, faced a lot of problems and would undergo further degradation without the appropriate actions and interventions. An opportunity to work together further was contemplated and efforts towards this were vigorously pursued.

## Something New

Recognizing the opportunity to effect a long-lasting change for the better, efforts were initiated to find out how to make it possible. At long last, common aims were in view for the Provincial Government and Petron Foundation. Their agreement to work together gave birth to a partnership — a public-private partnership (PPP).

The new partners then sought the assistance of institutions and programs involved in environmental management and sustainable development to provide the aspect

**Recognizing the opportunity to effect a long-lasting change for the better, efforts were initiated to find out how to make it possible. At long last, common aims were in view for the Provincial Government and Petron Foundation. Their agreement to work together to achieve common aims gave birth to a partnership — a public-private partnership (PPP).**



**From a relationship that can be likened to Bataan's cluttered coastlines, the birth of a public-private partnership between the Provincial Government and Petron Corporation enabled the province to implement a successful ICM program using local resources.**

that the partnership needed — that of specialized technical assistance on the environment. The partners organized a forum wherein representatives from invited

institutions and environmental programmes presented to the stakeholders the possible solutions and approaches for managing the environment of Bataan.

**At the same time, the leaders of the province's business sector, as community members and stakeholders themselves, realized the need to go beyond individual and piecemeal social initiatives and instead have a more significant and lasting contribution to the social and environmental needs of the province.**

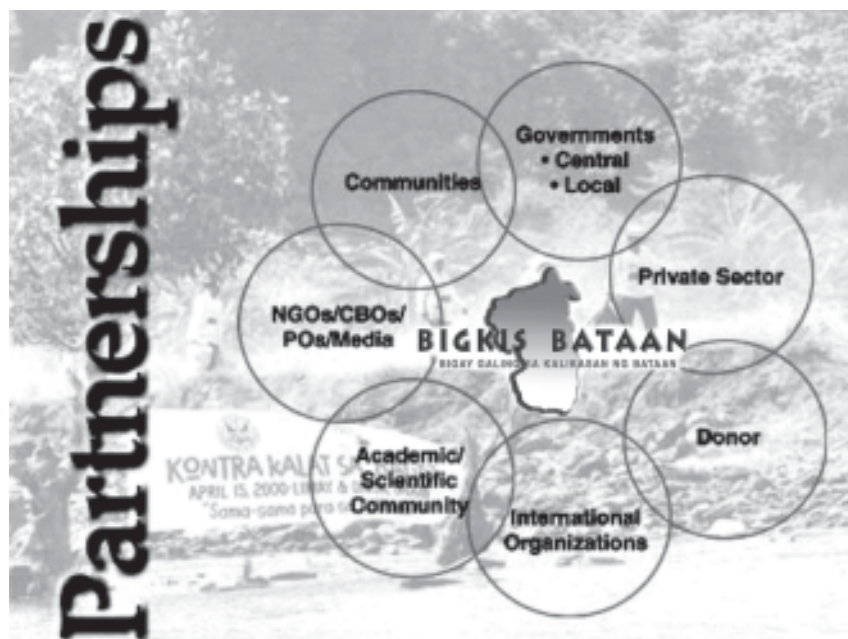
One of the invited programmes was the Global Environment Facility/ United Nations Development Programme/International Maritime Organization Regional Programme on Building Partnerships in Environmental Management for the Seas of East Asia (PEMSEA), which, in the process, generated the interest of the partners and the stakeholders.

The forum opened the door to a tripartite agreement, signed on 10 February 2000, between the PPP of the Provincial Government and Petron Foundation, and PEMSEA for the implementation of a program in Bataan that would involve the sustainable management of the province's natural resources and development.

The timing could not have been more perfect as PEMSEA was then looking for a champion in the Manila Bay area, the bay being one of the programme's demonstration sites for managing pollution hotspots. The perfect match gave birth to PEMSEA's first integrated coastal management (ICM) parallel site. As a parallel site, Bataan would implement an ICM project using its local resources through the partnership that combines the strengths and assets of the local government and the private sector, as well as the participation of civil society. The project came to be known as the *Bigay Galing sa Kalikasan ng Bataan* (BIGKIS-Bataan) ICM Program.

## Rising to the Challenge

Sustainable development requires that there be wise, responsible and efficient use of resources by the present generation to ensure that future generations can still utilize these resources to meet their needs. With this in mind, the Provincial Government has been more resolved in pursuing its official mandate — to take care of the province, including the natural endowments of its land and water, and its citizens — no longer through traditional sectoral and mere regulatory approaches but through a holistic manner in partnership with all concerned sectors — for the *Bataeños* of today and the future.





For the Provincial Government, BIGKIS-Bataan is an opportunity to tread new waters and, at the same time, a challenge to adopt new ways of going about the business of governance. Out of this resolve came the establishment of a Project Management Office (PMO) that would take care of the day-to-day implementation of BIGKIS-Bataan, with the staff, the resources /utilities and the physical office committed to and for the purpose of achieving sustainable development. Since the PMO is under the Office of the Governor, it has the benefit of having direct access to the provincial leaders.

At the same time, the leaders of the province's business sector, as community members and stakeholders themselves, realized the need to go beyond individual and piecemeal social initiatives and instead have a more significant and lasting contribution to the social and environmental needs of the province.

BIGKIS-Bataan provided the ideal vehicle to achieve this goal, but at the same time presented the private sector with a host of challenges, including long-term investment, resources mobilization, program sustenance and public acceptance. It was in this context that Petron Corporation, through Petron Foundation, recognized the need to forge partnerships within their ranks and which has led them to encourage other business organizations based in

or doing business in Bataan to share in environmental stewardship.

The result was 18 corporations and sociocivic organizations forming the Bataan Coastal Care Foundation (BCCF) with the primary aim of supporting the development and implementation of the ICM program as Bataan's key environmental management framework. Since its incorporation in 2000, BCCF has paralleled the efforts of the Bataan Provincial Government in sustaining the ICM program. It has also become the primary partner of the Bataan Provincial Government in developing a culture of transparency and trust in coastal governance in the province. Equally important, BCCF has propped the institutionalization of ICM in the provincial governance system and in the development agenda of key

stakeholder groups in Bataan. The significant contributions by the private sector include mobilization of resources, business management skills, technical expertise, research materials and other relevant data, equipment and facilities and manpower — to complement those provided by the Provincial Government.

Further sealing the partnership, the BIGKIS-Bataan Project Coordinating Committee (PCC) was established to provide guidance to the PMO in the implementation of the ICM program. This multi-stakeholder body serves as the advisory and policy/decision-making arm of BIGKIS-Bataan, and has been instrumental in the leaps and bounds that the program has taken during the last four years.



**Every year the province holds a coastal cleanup called *Kontra Kalat sa Dagat*, which has mobilized 70,948 volunteers since it was first held in 1999.**

**The key, as to any similar capacity-building activity of the programme, is to build a core of local experts capable of training other local staff and who could be tapped for related activities in the future, such as the replication of ICM in other sites in the province.**

## Taking that First Major Step

In 2001, with initial assistance from PEMSEA, the public sector (composed of the Provincial Government and the local government units) of the city and municipalities of the province) and the private sector (represented by BCCF) together helped in the process of formulating the Bataan Coastal Strategy (BCS) through multi-stakeholder consultations. In the process, these consultations generated stakeholder ownership and the corresponding commitment, which is reflected in the Bataan Declaration.

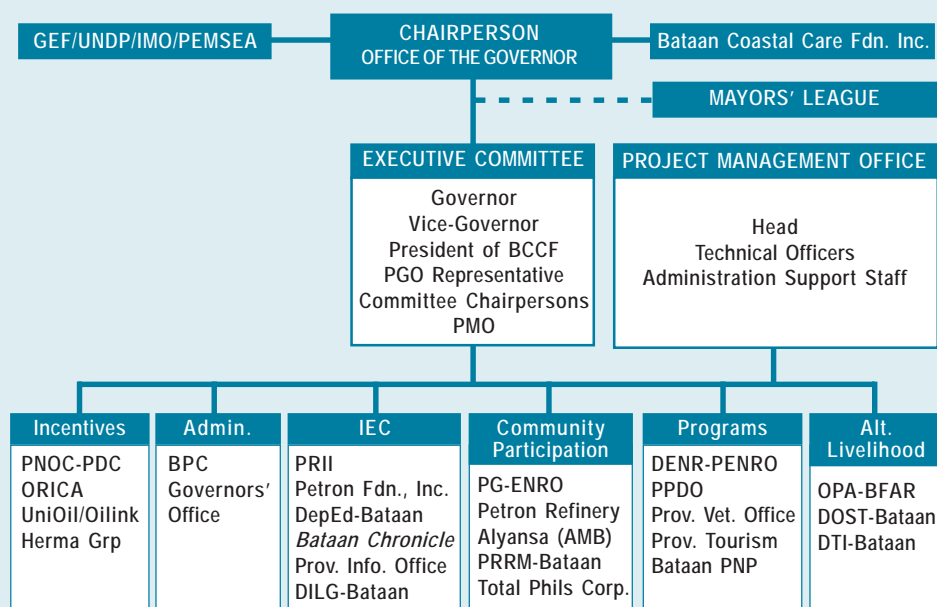
Eventually, the BCS was adopted by the *Sangguniang Panlalawigan* (Provincial Board) as Bataan's primary framework for sustainable coastal development and democratic environmental governance through BIGKIS-Bataan. In 2002, to reiterate their support to the national leadership, a Manifesto of Support to the Bataan Declaration was signed and presented to President Gloria Macapagal-Arroyo.

The BCS is deemed to serve as a comprehensive environmental management framework that would provide directions in achieving targeted outcomes — as identified by the stakeholders themselves — and formulating a series of specific action plans and programs. It is recognized in the BCS that the key to achieving the shared vision is the development of

### The Bataan Coastal Care Foundation, Inc.

The Bataan Coastal Care Foundation, Inc. (BCCF) aims to provide counterpart funding and management of BIGKIS-BATAAN to strengthen the environmental management capabilities of LGUs and NGOs, explore ways for a dynamic and sustainable public-private partnership in environmental management, and increase awareness and promote interactive community participation in coastal resources management. It is currently composed of 16 companies all operating within Bataan. While there are only 5-7 active members of the BCCFI, the following are the listed members of the foundation:

- |                                          |                                                 |
|------------------------------------------|-------------------------------------------------|
| 1. Bataan Polyethylene Corporation (BPC) | 9. Petrochem Corporation of Asia-Pacific        |
| 2. Bataan Thermal Power Plant            | 10. Petron Corporation                          |
| 3. Core Maritime Group                   | 11. Petron Foundation, Inc.                     |
| 4. Grand Asia Shipping Lines             | 12. Philippine Resins Industries, Inc. (PRII)   |
| 5. Herma Group of Companies              | 13. Planters Products, Inc.                     |
| 6. Liquigaz Philippines, Inc.            | 14. PNOC – Petrochemical Development Corp.      |
| 7. Limay Bulk Handling Terminal, Inc.    | 15. Total Philippines Corporation               |
| 8. ORICA Philippines, Inc.               | 16. UniOil / Oilink Petroleum Philippines, Inc. |



partnerships among the stakeholders and the synergy of effort of the many different players with different skills and perspectives so that all efforts — be it individually, by community or by sector, as long as it is within the framework — contribute to the overall pursuit of sustainable development.

## Sustaining the Strategic Partnership

During the process of implementing BIGKIS-Bataan, the partners have manifested their commitment as advocates of sustainable development in the province, through:

- Leadership and the establishment of BIGKIS-Bataan PCC;
- Conduct of and participation in consultation workshops leading to institutional and policy reforms in the municipal, provincial, regional and national levels;
- Sponsorships of community-based rehabilitation projects, supplemental livelihood support to coastal communities, consensus building on environmental issues and information, education and communication (IEC) campaigns; and
- Institutionalization of the Bataan Coastal and Marine Resources Management Office (BCMRMO).



**Through BIGKIS-Bataan, 133,600 mangrove propagules have been planted in a 12.5-hectare area covering five coastal villages, as of 2003.**

## Reaping the Rewards

Overall, the projects initiated through BIGKIS-Bataan as identified in the BCS have given benefits in the form of a healthy working relationship among the local government, private sector, civil society groups and international agencies.

As of 2003, on-the-ground activities as a direct result of the partnership and guided by the BCS, have been able to accomplish the following:

- 133.3 km of the 177-km coastline (75 percent) covering 11 municipalities and a city have been cleaned;
- Approximately 269 metric tons of garbage were

collected during the KKD from 2002 to the first half of 2003;

- 3,035 trees have been planted through the joint efforts of BIGKIS-Bataan and the DENR-Provincial Environment and Natural Resources Office (PENRO) Bataan;
- 133,600 mangrove propagules were planted in a 12.5-hectare area covering five coastal *barangays* (villages);
- 68,780 volunteers were mobilized for the KKD, plus 1,958 volunteers for mangrove enrichment planting and 210 volunteers for tree planting for a total of 70,948 volunteers mobilized from various stakeholder groups; and

continued on page 53...

**Ir. H. Ichwanudin, M. Si**  
Head, Sukabumi ICM Program  
Management Office  
Head, Environmental Agency  
Sukabumi Regency, Indonesia

and

**Mr. Alam Syah Mapparessa**  
Head  
Sub-Division for Natural Environment  
Coastal and Marine Ecosystems Affairs,  
Environmental Sustainability,  
Ministry of Environment  
Indonesia

## Introduction

Sukabumi Regency is located in the West Java province in the south coast of Java Island, around 170 km away from Indonesia's capital, Jakarta. It is part of the rapidly growing economic region of Jakarta and the surrounding planet cities and regencies.

Blessed with natural wonders such as mountains, rivers, beaches and the adjacent beautiful Bay of Palabuhanratu, Sukabumi Regency realizes the huge potential of the area and is committed to pursuing the economic development of the maritime city through the development of coastal tourism, fisheries and other related services and industries.

# Implementing the ICM Program with Local Resources in Sukabumi, Indonesia



**Figure 1. Map of Sukabumi Regency, Indonesia.**

The Government of Sukabumi Regency, at the same time, recognizes the potential threats to the ecological balance of its coastal areas — as a result of pollution, habitat degradation, coastal erosion and sedimentation — as environmental challenges, in addition to management issues such as multiple-use conflicts and the lack of integrated planning.

In line with the long-term sustainable coastal and marine

development paradigm (i.e., “Protecting life support systems and conserving coastal and marine resources for sustainable development and the welfare of the people of Sukabumi Regency”) the Government of Sukabumi Regency realized the importance of applying an integrated approach in the use and management of its coastal and marine resources. As a step forward, on 24 February 2003, the Government of Sukabumi Regency



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signed a Memorandum of Agreement with the International Maritime Organization (IMO), through the Global Environment Facility/United Nations Development Programme/International Maritime Organization Regional Programme on Building Partnerships in Environmental Management for the Seas of East Asia (PEMSEA), for an integrated coastal management (ICM) parallel site in the Regency.

Sukabumi Regency recognizes its ICM parallel site designation as being very strategic and important in supporting and enabling the Government and other stakeholders to achieve their coastal and marine management vision — “The Palabuhanratu is a self-reliant civilized maritime city with flourishing world-class coastal tourism and sustainable fishery industries.”

## Strategic Approaches toward Developing the ICM Program

A number of strategic approaches were taken in the development and implementation of an ICM program for Palabuhanratu Bay, including:

- An integrated planning process across various sectors concerned in coastal and marine resource management;
- Harmonizing the budget portfolio and allocation in individual concerned sectors to optimize the use of available local government budget resources in addressing

**Blessed with natural wonders such as mountains, rivers, beaches and the adjacent beautiful Bay of Palabuhanratu, Sukabumi Regency realizes the huge potential of the area and is committed to pursuing the economic development of the maritime city through the development of coastal tourism, fisheries and other related services and industries.**

strategic environmental issues and achieving the objectives of the ICM program;

- Continuing implementation of public awareness and education programs to empower and enable coastal communities and promote self-reliant co-management initiatives in the management process, led by a local nongovernmental organization called TP3TP (Indonesian acronym) or the Team for the Management and Preservation of Palabuhanratu Bay;
- Promoting effective scientific advice and input to the planning and decisionmaking process; and
- Promoting equal, synergic partnerships among the governments, the private sector and the public in coastal and marine resource management.

Palabuhanratu sub-regency, being the designated new capital of Sukabumi Regency, serves as the center of government administration, business, coastal tourism and fishery development of the Regency.

To support accelerating development and boost economic gains in Palabuhanratu, the Regency Government, in collaboration with concerned central government agencies and the private sector, have planned and have been carrying out infrastructure/facility construction including:

- Developing Palabuhanratu's fishing port/terminal and upgrading it from domestic class to an ocean-going fishing port/terminal. This will allow for greater capacity to receive landing fishes,

# ICM is not a one-for-all principle; it is a continuous and interactive process; it cannot be successfully implemented overnight and in fully integrated circumstances.

provided that the catching technology of the local fishers is upgraded to keep up with the exclusive economic zone; and

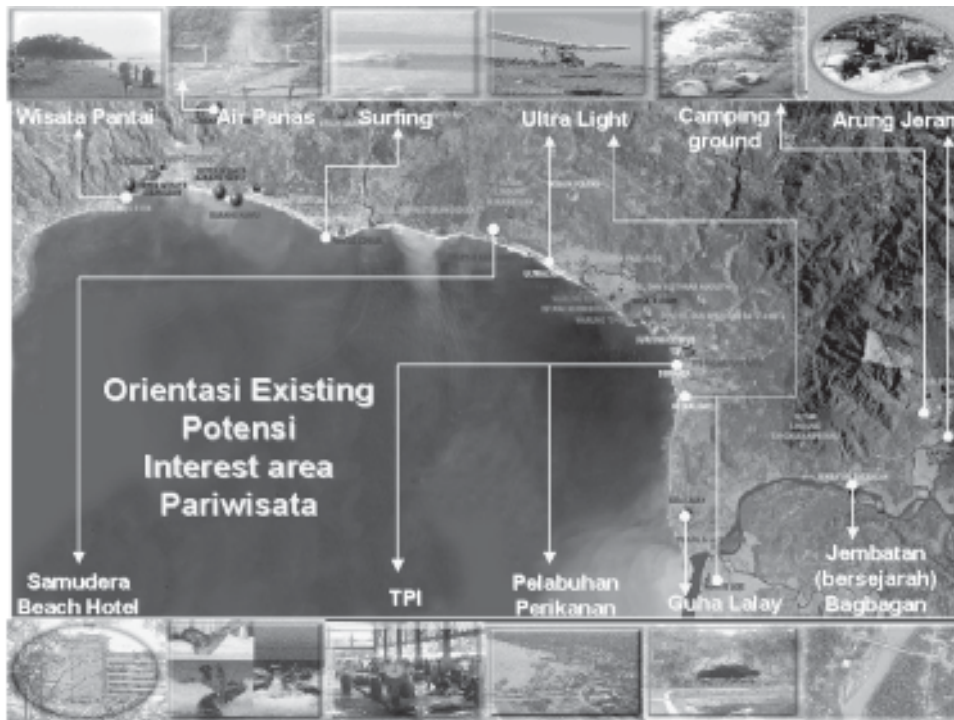
- Developing and enhancing coastal tourism infrastructures and facilities, such as hotels, restaurants, various recreational and safety support facilities, etc.

On the other hand, a number of environmental problems and

management issues remain to be addressed to achieve the sustainable development objectives, specifically:

- The increased production and untreated discharge of domestic solid waste and sewage as well as potential increase of industrial waste discharge from urban areas and the lack of a proper waste management regulation and controlling system;

- The potential conflict between government and local communities with respect to the government's plan of action to regulate and rearrange the use of the beach area based on local regulation on the coastal-use zoning scheme;
- The misleading perception that development is limited to physical infrastructures may lead to the underestimation of the importance of integrated planning and management, which requires participation and commitment of various sectors and local stakeholders;
- Conflict between resource-based short-term economic gain interests and the need for the protection and conservation of coastal and marine resources;
- Challenges in promoting and setting up of effective institutional arrangements and coordination mechanisms due to the resistance of conventional individual sector/agency or project-oriented perspectives; and
- Absence of local regulation, with parliament approval and support, as a legal basis and source of mandates in developing and implementing the activities of an ICM program.



**Figure 2. Existing Coastal Uses and Coastal Waterfront Land-Use Planning in Sukabumi.**

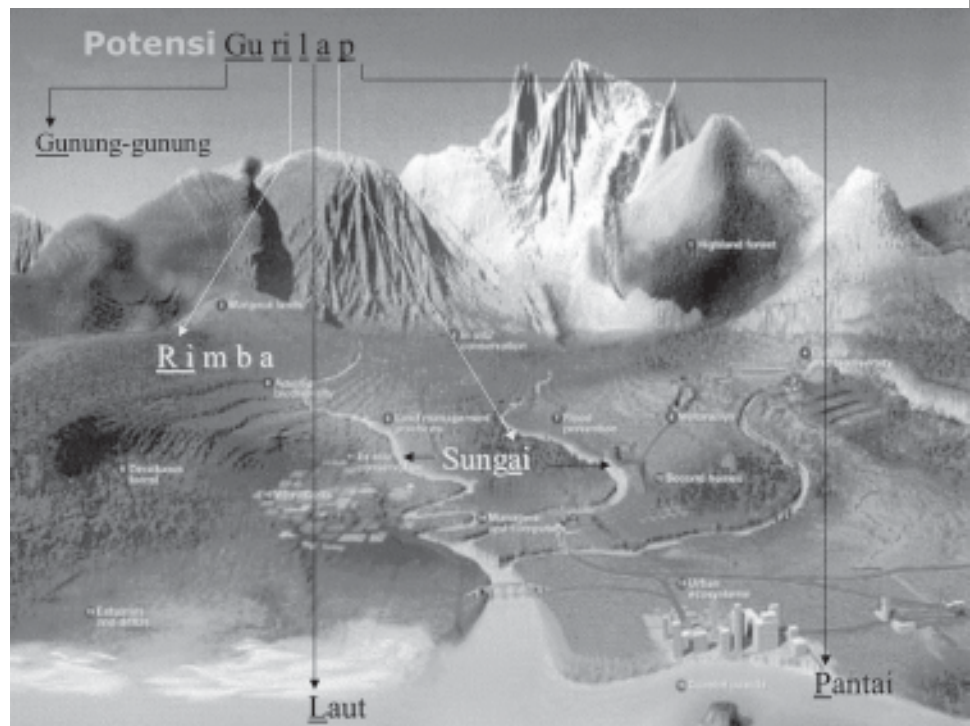
## Lessons Learned

The ICM Program in Sukabumi Regency is still in its developing phase. Some of several lessons gained, with regard to principles and

approaches in the implementation of the program, are:

- The chance for success in achieving ultimate objectives of sustainable use and management of coastal and marine resources at the local level primarily depends on the perception and the commitment of the local government leadership on the needs and importance of ICM;
- Subject to local administrative, political and social setups, there are a number of strategic elements to develop and implement in transforming the principles, concepts and objectives of ICM into reality, including:

- ✓ Strong, stable institutional and legislative arrangements over changing political situations;
- ✓ Operational, effective coordination mechanisms across sectors in planning and implementing ICM program activities;
- ✓ Adequate scientific inputs in the planning and decisionmaking process;
- ✓ Appropriate and scientifically viable coastal-use zoning scheme developed through proper consultations with various stakeholders;
- ✓ Sufficient public education, awareness and involvement in management processes; and
- ✓ Smart, synergic partnerships among governments and the



**Figure 3. Integrating Mountains, Rivers, Forestry and Seas for the Sukabumi ICM Program.**

private sector/investors through co-management and market-based approaches to ensure a sustainable financing scheme for long-term coastal and marine resource use and management.

- While moving towards achieving medium- and long-term goals of ICM implementation cycles, emphasis also needs to be placed on the delivery of strategic actions. This involves short-term outcomes having positive demonstrative effects that will strengthen the confidence of stakeholders in the ICM program and widen active participation of the public and government authorities;
- Authorities/local governments need to be aware of their responsibilities for creating

frameworks, legal basis and arrangements, and basic services and infrastructures that allow the involvement of the private sector and communities in managing coastal and marine area development activities; and

- ICM is not a one-for-all principle; it is a continuous and interactive process; it cannot be successfully implemented overnight and in fully integrated circumstances. The success of ICM program development and implementation relies on the level of consciousness, awareness, commitment, consistence, capacity and confidence of local government authorities and other stakeholders, as well as the presence of a common vision and clear objectives that can be shared by various stakeholders. ■

**Kahng, Sung Hyun**  
Principal Research Scientist  
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and

**Je, Jong Geel\***  
National Congressman  
Seoul, Republic of Korea

## Introduction

Conflict management has been regarded as one of the greatest challenges to integrated coastal management (ICM). The multiplicity of uses and the growing demand for limited resources is likely to generate conflicts among competing sectors. The successful implementation of ICM largely depends on the promotion of the processes for avoiding and resolving conflicts in the coastal zone.

Coastal conflicts are defined as situations or circumstances where strong and persistent divergence of positions (needs, values, etc.) among users and other stakeholders present an obstacle to managing a specific coastal area. While the dimensions, levels, and intensity of conflicts vary greatly, so too can the opportunities for conflict resolution.

# Addressing Multiple-Use Conflicts in RO Korea's Shihwa Lake and Its Adjacent Coastal Area



**The southern part of the reclaimed land serves as a resting place for migratory birds.**

Lake Shihwa area is one of the typical places where conflicts result from planned interventions and development projects in the coastal zone. Government agencies and surrounding local governments plan to develop the reclaimed land surrounding the artificial lake in the near future.

Although environmental degradation in the lake area induced drastic changes in the social perception of how resources should be managed according to ICM concepts, it is still

difficult to reconcile the protection of the natural environment with the socioeconomic needs of the communities in the area.

Coastal conflicts in the Lake Shihwa area typically arise from:

1. Future land use of the reclaimed area;
2. Fishing prohibitions within the lake;
3. Polluted discharges into the sea outside the lake;
4. Future use of the dike (e.g., tidal plant, port, etc.); and
5. Nature conservation needs.

\* Je, Jong Geel was the PMO director for the Shihwa Environmental Management Project until he was elected as a National Congressman in April 2004.



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Emerging and unresolved conflicts in the Lake Shihwa area appear to be mishandled. To produce the favorable outcome of ICM initiatives, there is an urgent need to promote the application of consensus building and dispute resolution processes for achieving sustainable development.

The case study on the Lake Shihwa area will provide valuable lessons on what does and does not work in coastal zone disputes, and the limits and risks of different conflict management techniques. This information can be used in formulating suggestions for developing skills in conflict management techniques and will contribute to disseminate more specific good practices and lessons learned in the Lake Shihwa area.

## Profile of Lake Shihwa

Lake Shihwa is an artificial lake located in the west coast of the Republic of Korea. It was formed in 1994, when a 12.6-km seawall was built to seal off the bay as part of a large-scale reclamation and infilling project. The project aimed at converting the tidal mudflat into 133.7 km<sup>2</sup> of reclaimed land as well as 42.3 km<sup>2</sup> of a freshwater lake to be used for irrigation purposes.

After the closing of the lake, the water quality rapidly degraded due to the insufficient water supply for the lake, the lack of wastewater treatment capacity, and the increasing pollution

**The case study on the Lake Shihwa area will provide valuable lessons on what does and does not work in coastal zone disputes, and the limits and risks of different conflict management techniques. This information can be used in formulating suggestions for developing skills in conflict management techniques and will contribute to disseminate more specific good practices and lessons learned in the Lake Shihwa area.**

loads from watershed. The brackish lake suffered from severe eutrophication, and its water quality became unfit even for irrigation. The water pollution of the lake brought up social and environmental concerns, which led to the project's failure.

To mitigate water pollution, the circulation of seawater was allowed through the sluices since January 1999. The government finally scrapped the plan to change the lake into a freshwater reservoir in December 2000. Following the decision to manage the lake as a seawater body, the Ministry of Maritime Affairs and Fisheries (MOMAF) began to play a leading role in establishing its management plan. Lake Shihwa and its coastal area was designated as a special management area under the Marine Pollution

Prevention Act, and the Comprehensive Management Plan for Lake Shihwa was formulated in August 2001 by MOMAF in collaboration with stakeholders.

## Sources of Multiple-Use Conflicts in Lake Shihwa

The management of the Lake Shihwa area, however, was handled by many different government entities and agencies with little coordination among their programs. Each agency was making its own management plan based on separate laws and criteria, which resulted in conflicting approaches (e.g., utilization-oriented management to develop the reclaimed land versus conservation-oriented management to protect the lake and the surrounding area).

# Experiences in the Lake Shihwa area show that there is a wide gap between “integrated planning and implementation” and a need for innovative approaches that can address power imbalance problems and help empower community and stakeholder groups.

The Ministry of Construction and Transportation (MOCT) is establishing a plan to develop the expanded northern reclaimed land, with an area of 10.5 km<sup>2</sup>, into a new industrial complex. The MOCT prepared an environmental impact assessment (EIA) report and has proposed a development plan for a so-called multi-techno valley. While the Ministry of Environment (MOE), MOMAF, local governments, and nongovernmental organizations

(NGOs) are all against the plan, the Korea Water Resources Corporation (KOWACO) under MOCT is going to proceed with the plan despite the oppositions, to gain revenue from land development.

The Ministry of Agriculture and Forestry (MAF) already acquired the license for reclamation for 44 km<sup>2</sup> of farmland in the southern part of the

reclaimed land in December 1998. The Korea Agricultural and Rural Infrastructure Corporation (KARICO) began the reclamation project in 2002.

Environmentalists are opposing the reclamation project, claiming that rice is surplus in Korea and rice production in the newly reclaimed land would not get competitive prices in the international market. They wonder if the reclaimed farmland might be converted for other uses in the future. Another factor for consideration is the probability that the water quality of Lake Tando will also become unfit for irrigation and its discharge would bring about the deterioration of the water quality of Lake Shihwa.

KOWACO and Hwaseong City are planning to develop the southern part of the reclaimed land to supply lands for residential areas, small industries, universities, research institutes, resorts, theme parks, golf courses, etc. The Ministry of Culture and Tourism (MCT) designated a cultural protection area of 16.1 km<sup>2</sup> around the site where fossil dinosaur eggs were discovered in January 2001. MOMAF and NGOs are also opposing the development of the southern part of the reclaimed land because the mudflats along the shoreline have water purification abilities and serve as a resting place for migratory birds.

To improve the water quality of Lake Shihwa, KOWACO is considering the construction of a tidal power plant with a maximum capacity of 240,000 KW using the tidal embankment. However, this plan is not compatible with the new port

## Box 1: Chronology of Shihwa Action Plan Formulation and Implementation.

Date	Activities
April 2000 – April 2001	Formulation of Draft Plan through research and consultation
June – August 2001	Consultation among national and local governments and agencies
August 31 2001	Approval of Shihwa Action Plan
September 2001 – February 2002	Formulation of Implementation Plan of Shihwa Action Plan
November 2002	Enactment of the National Legislation on Shihwa Management Committee
December 2002	Organized the Shihwa Management Committee
March 2003	Organized the Shihwa Technical Advisory Committee

construction plan of MOMAF.

In addition, local fishers are against the tidal power plant because pollutants will be flushed into the sea. Fishers complain that the fishing prohibition within the lake blocks them from a possible fishing source, in spite of having compensated for the loss of fishing grounds during the dike construction. Illegal fishing at night poses potential human health problems associated with the possible consumption of illegally fished, polluted marine products.

The Ministry of Commerce, Industry and Energy (MOCIE) is constructing high voltage power lines across Lake Shihwa from the thermal power plant since 2001. Local stakeholders are concerned that the power transmission towers would destroy the scenic beauty of Lake Shihwa area.

## Efforts toward Addressing Multiple Use-Conflicts

Dealing with cross-sectoral, multiple-use conflicts of the Lake Shihwa area has been a very difficult task for concerned government and non-government personnel. Particularly, the power imbalance among the parties involved has discouraged them from communicating, building consensus, and negotiating to find a common vision and solutions. Experiences in the Lake Shihwa area show a wide gap



**Figure 1: Map of Shihwa Lake and the Adjacent Coastal Area.**

between “integrated planning and implementation” and a need for innovative approaches that can address power imbalance problems and help empower community and stakeholder groups.

To address this need, the following efforts have been made:

1. The formulation of the Shihwa Comprehensive Management Plan as a strategic framework for policy coordination and integration;
2. The establishment of the Shihwa Management Committee as an interagency coordinating committee; and
3. The establishment of the Shihwa Civil Forum.

## Shihwa Comprehensive Management Plan

The Shihwa Comprehensive Management Plan for Water Quality

and Environment Restoration (Shihwa Action Plan) was formulated through cooperative efforts among various stakeholders including national and local governments, the academe, and civil society groups, and was approved in August 2001.

The following are the strategic focus areas of the Shihwa Action Plan:

- Construct sewage and industrial wastewater treatment plants to reduce land-based pollution;
- Construct a tidal power plant to increase the water circulation within Shihwa Lake as well as to produce electricity;
- Establish a real-time and automatic water quality monitoring system;
- Conduct ecosystem monitoring of the Shihwa coastal area to assess the impacts on the habitat after the opening of Shihwa dike;
- Establish an institutional mechanism for interagency and multi-sectoral coordination such

# The Shihwa Management Committee provides an institutional mechanism for resolving interagency and multi-sectoral conflicts related to the conservation and development of the Shihwa coastal area.

as Shihwa Management Committee; and

- Increase public awareness and participation through the operation of local forums involving civil society groups and various stakeholders.

The Shihwa Action Plan provides an integrated framework for water quality improvement, habitat restoration and sustainable development of the Shihwa coastal area. The effective implementation is constrained, however, by the power imbalance among different ministries as well as the limited perception and involvement of local governments and various civil society groups.

The implementation of the Shihwa Action Plan is supported by the investment plan, with a total budget of US\$575 million, including:

- Construction of sewage and industrial wastewater treatment plants: US\$377 million;
- Tidal Power Plant: US\$186 million; and
- Others: US\$12 million.

Most planned investments rely on public financial sources such as from national and local governments. For example, KOWACO contributes 26 percent of the total planned investment. Identifying and securing diverse funding sources and establishing sustainable financing

mechanisms would also be a major challenge to the future implementation of the Shihwa Action Plan.

## Shihwa Management Committee

In accordance with the Shihwa Action Plan, the Shihwa Management Committee was organized in November 2002. The Committee is tasked to review and make decisions on the major issues related to the implementation of the Shihwa Action Plan, as well as coordinate implementation activities to be undertaken by various government agencies and stakeholders. The Committee is chaired by the Vice Minister of MOMAF and is composed of representatives from relevant national and local governments, agencies, the academe and environmental NGOs. It is noteworthy that through the establishment of the Committee, the participation of local governments and environmental NGOs in the decisionmaking process was, for the first time, officially institutionalized.

The Committee approved the implementation plan of Shihwa Action Plan in December 2002, and organized the Shihwa Technical Advisory Committee, involving 20 experts in the field of water quality, wetland, biodiversity and urban planning, in March 2003. The Committee also organized the Marine Environment Management



**Shihwa Civil Forum contributes to the resolution of multiple-use conflicts, the enhancement of information access, and the increase in public participation.**



Volunteers in April 2002 to monitor, control and enforce legislation on sewage and wastewater discharges as well as solid waste dumping in Shihwa Lake.

The Shihwa Management Committee provides an institutional mechanism for resolving interagency and multi-sectoral conflicts related to the conservation and development of the Shihwa coastal area. It also coordinates various implementation activities of the Shihwa Action Plan, which are undertaken by diversified stakeholders including national and local governments, government corporations, environmental NGOs, the academe, and the private sector.

## Shihwa Civil Forum

To foster a cooperative process among various stakeholders in addressing complex, multiple-use conflicts, the Shihwa Civil Forum was organized during the planning process of the Shihwa Action Plan. Identifying the sources of conflicts in a collaborative manner helped address the underlying causes of problems, rather than merely responding to its symptoms.

Despite some operational difficulties encountered, the Shihwa Civil Forum for the integrated watershed management in Lake Shihwa area contributed to resolving use conflicts and enhancing information access as well as public participation in the decision-making process.

Consequently, public awareness regarding the value of the Shihwa coastal area and the need to improve the water quality of Shihwa Lake has increased.

It is therefore expected that Shihwa Lake, once recognized as an environmental disaster, would demonstrate potential as a model case of addressing multiple-use conflicts through integrated management. ■

## PEMSEA Community of ICM Practitioners



The words "holistic," "interactive," and "dynamic" have been extensively used to describe the virtues of applying an integrated coastal management approach in dealing with complex management issues in coastal areas.

But what does it truly take to integrate all the necessary components of ICM into a systematic mechanism?

From the last issue, we endeavor to answer this question by focusing on the key ingredient in this innovative process — **People**.

Meet the men and women who, with their robust intellect, vision and heart, have toiled to propel the ICM program across the region. From diverse backgrounds and multitudes of experiences, they are the prime movers of PEMSEA's ICM Sites, whose names have remained faceless but whose resounding voices made others hear the call for the management of the Seas of East Asia while being armed only with the power of their actions.

Through their steadfast commitment and notable accomplishments, may we gain inspiration to pursue the painstaking albeit rewarding efforts of weaving our common future. Because after all, ICM is about bringing people together and fighting for a common cause. ICM programs, therefore, highly resonate implementers' technical expertise as well as their personal commitment to create lasting change in coastal management.

[The July 2004 Special Feature on PEMSEA Community of ICM Practitioners can also be accessed at [pemsea.org/icmcomm.htm](http://pemsea.org/icmcomm.htm).]

**Marilou G. Erni**

Executive Director  
Petron Foundation, Inc.

President  
Bataan Coastal Care Foundation, Inc.

"...the residents, the local government units and every other stakeholder, must be active partners in program planning and implementation and that they must have a sense of ownership to the program in order for ICM to succeed."

Perhaps the biggest hurdle in the implementation of the Bataan ICM program was that of information dissemination. It was hard to convince people in Bataan, that there is a better way to preserve the environment hand in hand with economic development; that the business community is sincere in its commitment of being the province's partner in sustainable development; and that the residents, the local government units and every other stakeholder, must be active partners in program planning and implementation. They must have a sense of ownership to the program for ICM to succeed.

Through my experiences in Bataan, I learned that ICM is a long and gradual process. Its success can only be measured after some time, so there must be a long-term commitment among the partners to see through its implementation. I also learned the absolute necessity of partnership and listening to every stakeholder — children, housewives, fisherfolks, religious institutions, local and provincial government officials, and the business community. Lastly, a strong, continuous and comprehensive communication strategy is essential in galvanizing partnerships and in making people fully understand the value of the ICM program for them to eventually embrace it as their vehicle to a better future.

**William W. Azucena**

Officer-in-Charge/  
Environmental Mgt. Specialist  
BIGKIS-Bataan ICM Project

"The ICM process — even with extensive community participation and support of NGOs or the private sector and the academe — will not succeed if done outside current policy conditions as well as political, social and economic structures."

The ICM program in Bataan started at a time when the province's coastal resources were under serious threat from pollution, overfishing, destructive fishing, a booming population and haphazard shoreline development, confounded by divisive sectoral management interventions. The challenges involved linking sectoral efforts and integrating them in a comprehensive coastal resources management program.

The ICM process — even with extensive community participation and support of NGOs or the private sector and the academe — will not succeed if done outside current policy conditions as well as political, social and economic structures. The national and local government units should realize that coastal resources management is part and parcel of governance and that coastal and environmental management is a basic service. Another lesson is that ICM must directly address poverty issues — providing coastal communities with supplemental livelihood assistance that will allow them to survive even with low fish catch and income until such time that ICM interventions are seen and felt. Also, people need to understand the reason for implementing ICM, such as the impacts of human activities on the environment, and appreciate the importance of good resource management practices. ICM must also be an adaptable process recognizing that resource constraints are real and counterpart funding must be encouraged. Capacity building must also adjust to financial, technical and human resource realities at the local level. Finally, ICM should have a broad mass-based and institutional support system involving major stakeholders from all levels of governance to avoid conflicts and duplication of efforts.







**Mayor Chatchai  
Timkrachang**

Sriracha Municipality, Chonburi Province

“Our most important gain from the project is not the funding but the knowledge, and we are committed to sharing this knowledge and working with other coastal municipalities in Chonburi.”

My involvement in ICM came at a time when environmental concerns associated with the accelerated economic development in Chonburi Province were beginning to emerge. Around the same time, the decentralization policy, which delegates the authority and decisionmaking power to local authorities including the conservation, management and control of the natural resources and environment, was beginning to pose a challenge to local governments.

My visits to Xiamen, China and Batangas, Philippines contributed greatly to my understanding of ICM and how it can be employed to build local capacity in environmental management. In any endeavor, knowledge and outlook guide the planning and implementation processes, and I have applied my understanding of ICM in crafting a vision for the sustainable development of Sriracha, and leveraging funds to implement associated projects, such as the coastal renovation and wastewater management projects. I am pleased to claim that ICM implementation has played an important part in my recent reelection.

It takes years to build capacity in environmental management, and I appreciate PEMSEA's contribution to local capacity building through the Chonburi ICM Project. The ICM approach is firmly established in Sriracha and I can assure that we will continue to apply the ICM concept and approach. Our most important gain from the project is not the funding but the knowledge, and we are committed to sharing this knowledge and working with other coastal municipalities in Chonburi.



**Dr. Pak Ki Sok**

Director  
West Sea Oceanographic Research  
Institute

Project Manager  
Nampho ICM Project

“Without firm political commitment and support by policymakers as well as good coordination among stakeholders and massive involvement and support of stakeholders, the ICM program will not achieve its goal and objectives.”

The most difficult challenges that we had to overcome to develop and implement the Nampho ICM project were the lack of experts with specialized knowledge and experiences in concept, approaches and applications of ICM; the lack of an appropriate typology and the lack of adequate guidelines, which have been developed and applied in different physical, political, socioeconomic and cultural environments, for the adoption of ICM; and the different interests of stakeholders who participated in the implementation of the ICM project in Nampho.

During the past four years, we experienced that the application of ICM in a developing country is not an easy task. ICM practitioners have to implement the ICM project in a sustainable manner because the project could not be completed within a short time. To adopt and apply ICM in a creative manner in accordance with different political, socioeconomic and cultural conditions of the country, national and local capacity should be the foremost concern when starting an ICM project. Without firm political commitment and support by policymakers as well as good coordination among stakeholders and massive involvement and support of stakeholders, the ICM program will not achieve its goal and objectives. Sustainable financial support mechanism is also one of key factors to assure smooth implementation of the ICM program.





**Ir. Haji. Rahmat Bin Hj. Mohd. Sharif**

Director  
Selangor Waters Management  
Authority (LUAS)

“Each project had primary thrusts, approaches and accomplishments, but the challenge was to integrate three separate undertakings under one coordinating mechanism or arrangement to maximize available resources and social, economic and environmental impacts within the affected areas.”

I became the PMO Director of the Port Klang ICM Demonstration Project in July 2001. The PMO is hosted by the Selangor Waters Management Authority, where I serve as its Director since September 1999. These dual positions provided me with the opportunity to harmonize ongoing river basin management projects in the State with the ICM project in Port Klang. Each project had primary thrusts, approaches and accomplishments, but the challenge was to integrate three separate undertakings under one coordinating mechanism or arrangement to maximize available resources and social, economic and environmental impacts within the affected areas.

Although this work is still ongoing, there have been numerous accomplishments. In particular, a number of interventions were made to effectively address threats to the sustainable development of Port Klang coastal area, such as water pollution from domestic, industrial and agricultural wastes, municipal solid waste disposal, erosion and sedimentation due to uncontrolled coastal development; and habitat destruction and overexploitation due to illegal fishing, illegal logging and mangrove area encroachment.

The Port Klang Coastal Strategy was developed through various stakeholder consultation workshops, and officially adopted and launched in August 2003. It was gratifying that our efforts for developing Pulau Ketam (Crab Island) as an ecotourism destination were well appreciated during the field trip of the 3<sup>rd</sup> RNLG Forum during the EAS Congress 2003.



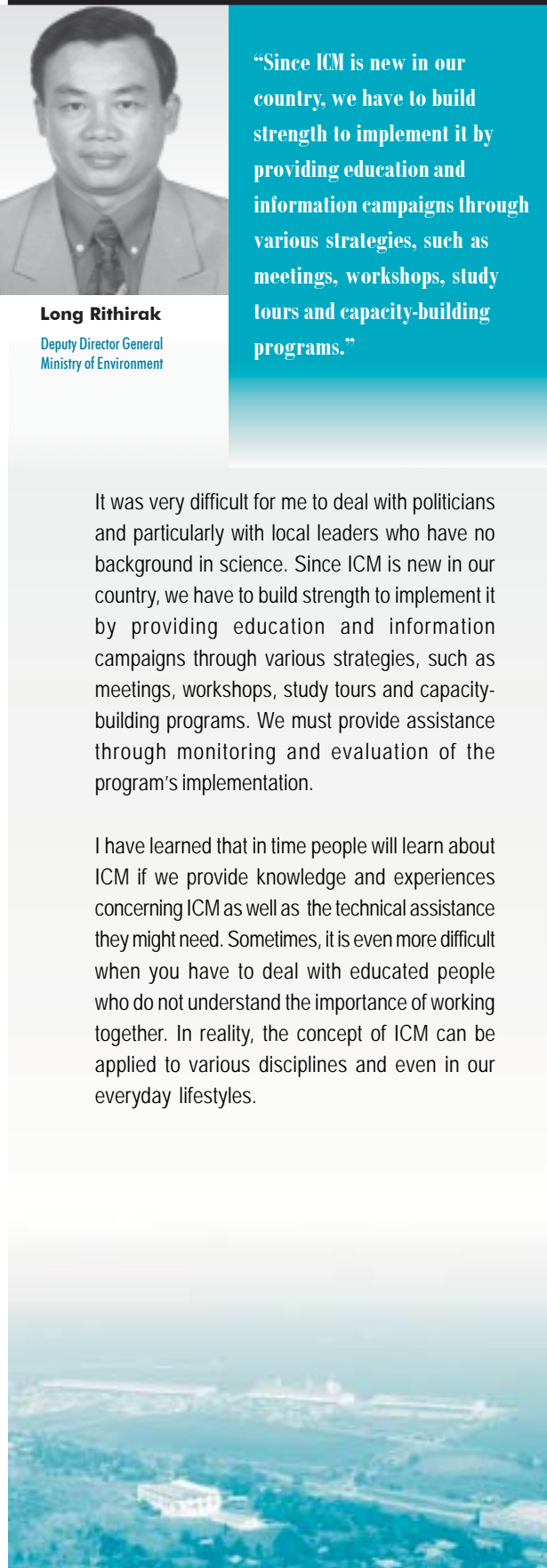
**Long Rithirak**

Deputy Director General  
Ministry of Environment

“Since ICM is new in our country, we have to build strength to implement it by providing education and information campaigns through various strategies, such as meetings, workshops, study tours and capacity-building programs.”

It was very difficult for me to deal with politicians and particularly with local leaders who have no background in science. Since ICM is new in our country, we have to build strength to implement it by providing education and information campaigns through various strategies, such as meetings, workshops, study tours and capacity-building programs. We must provide assistance through monitoring and evaluation of the program's implementation.

I have learned that in time people will learn about ICM if we provide knowledge and experiences concerning ICM as well as the technical assistance they might need. Sometimes, it is even more difficult when you have to deal with educated people who do not understand the importance of working together. In reality, the concept of ICM can be applied to various disciplines and even in our everyday lifestyles.





**H.E. Prak Sihara**

Second Deputy Governor of  
Sihanoukville

PMO Director

**“It is important that government recognize the importance of ICM as a tool for managing challenges that are of national scale and has local impacts, such as land and marine-based sources of pollution; conflicting use of coastal resources; and capacity building and access to information, among others.”**

The National ICM Demonstration Project in Sihanoukville started in June 2000. As a government official, people always expect us to support ongoing economic, environmental and social well-being in the coastal zone. But the greatest challenge is to implement the ICM project despite limited financial resources and technical skills among the implementers, including government officials. While gradually solving the problems of the coastal areas, we have to continually update our knowledge and skills in ICM to be able to effectively address these problems.

I also learned that there is a need to balance development and conservation needs in implementing the ICM project. For instance, we have to make sure that while we are promoting tourism activities, these activities will have no adverse effect on the marine and coastal environment. It is important that government recognize the importance of ICM as a tool for managing challenges that are of national scale and has local impacts, such as land and marine-based sources of pollution; conflicting use of coastal resources; and capacity building and access to information, among others. We are trying to manage these problems through an integrated rather than fragmented/sectoral approach to maximize whatever resources we have.

**Dr. Je, Jong Geel**

Former PMO Director  
Shihwa Environmental Management Project

National Congressman  
Republic of Korea

**“The project has helped change the perception of policymakers towards the integrated approaches for the management of the Shihwa environment and resources.”**

Dr. Je's involvement in the Shihwa Environmental Management Project started when he was a scientist at the Korea Ocean Research and Development Institute located in the Shihwa area. The environmental management project has enabled him to work actively with local politicians, government personnel, environmental NGOs, and community members. The project has helped change the perception of policymakers towards the integrated approaches for the management of the Shihwa environment and resources.

Along with the coastal management in Shihwa, his involvement with environmental projects include leading a national wetland conservation project, conducting a national wetland survey and providing technical advice to the designation and management of wetland conservation areas. Dr. Je's experiences as a scientist and opinion leader in coastal environmental management have helped him serve a much wider mandate since his election as a National Congressman in Shihwa area in April 2004. Dr. Je has also established the "Ocean Forum" in the National Congress in July 2004 to increase the awareness of policymakers on the ocean environment.



**Cristine Ingrid Narcise**  
Senior Technical Assistant  
PEMSEA  
Quezon City, Philippines

and

**Apiradee Sujarae**  
Former Project Coordinator  
Chonburi ICM Project  
Chonburi, Thailand

## Introduction

Chonburi Province is one of the popular tourist destinations in Thailand due to its wealth of natural, cultural and historical resources and its proximity to Bangkok. It is likewise an important economic center and gateway in the eastern region of Thailand, being one of the sites of the Eastern Seaboard Development Project, an expansive policy of the Thai government to extend economic growth to regional and local areas. For Chonburi Province, the target area includes the municipalities of Saensuk, Sriracha, Ao Udom, Laem Chabang and Koh Si Chang, all of which are within the demonstration site of the Chonburi Integrated Coastal Management (ICM) Project (Figure 1).

Under the Eastern Seaboard Development Project, the priority with regard to investment in Chonburi province is industry. Secondary priorities are trades and service provision, and tourism and agriculture. As a result, the economic structure of the province was transformed from being agriculture-based to becoming industry-based with the establishment of new industrial factories, industrial settlements, commercial harbors, and the arrangement of public utility systems such as electricity, water supply, transportation and communications.

# Managing Environmental Risks and Developing Common Framework of Actions in the Chonburi Coastal Area, Thailand



**The adoption of the Chonburi ICM Coastal Strategy on 21 September 2004 demonstrates the commitment of the five participating municipalities in Chonburi Province to implement a common framework to sustainably manage their coastal areas in cooperation with the provincial and national governments and other sectors.**

The fast pace of development and the associated increase in population have drawn considerable concern about environmental impacts due to pollutants, alteration of the physical environment, sustainability of development activities, and consequent effects on the quality of life of the population.

This concern was expressed in various stakeholder consultations and was confirmed scientifically through an environmental risk assessment. Various coastal management activities have been undertaken by the five municipalities to address the identified concerns, and efforts are

underway for an integrated coastal plan guided by the coastal strategy for the five municipalities.

## Identifying Priority Environmental Concerns

The initial risk assessment (IRA) of Chonburi, carried out by a multidisciplinary local technical working group, was the first attempt to integrate existing scientific data in the ICM project area to enhance understanding of the environmental status, determine ecological and human health risks, and identify priorities for the sustainable management of natural resources and environment in Chonburi.

Using risk assessment methods specified by the GEF/UNDP/IMO Regional Programme on Building Partnerships in Environmental Management for the Seas of East Asia (PEMSEA), the IRA for Chonburi showed:

- Human health risks associated with total and fecal coliform in the water column and arsenic (As) in crab tissue;
- Ecological risks from oil and grease, nutrients (phosphate, nitrite and nitrate), organic matter (indicated by biochemical oxygen demand or BOD), heavy metals — mercury (Hg) and cadmium (Cd), and pesticides (endrin, heptachlor, dieldrin and p, p'-DDT) in the water column (Table 1); and heavy metals (As and Cd) in the sediment;
- Sharp decline in fisheries production from 18,993 tons/yr in 1987 to 9,094 tons/yr in 1998 in Muang District and 4,263 tons/yr (1987) to 3,415 tons/yr (1998) in Sriracha District, mainly as a result of over-exploitation;
- More than 97 percent decline in mangrove area in a span of 20 years primarily due to conversion for reclamation, development activities and aquaculture, and collection of mangrove for fuel wood and other uses;
- No decline in aquaculture production, in general, except during occasional episodes of algal blooms, although potential adverse environmental impacts of poor aquaculture practices were noted; and

**Under the Eastern Seaboard Development Project, the priority with regard to investment in Chonburi province is industry, and secondary priorities are trades and service provision, and tourism and agriculture.**

**Figure 1. The Chonburi National ICM Demonstration Project Area.**



- Increasing frequency of occurrence of harmful algal blooms in the last 10 years, with some events causing mortality of fish, mollusks and other organisms.

The existing and potential environmental problems in Chonburi are related to increasing resource use and consumption and waste discharges associated with economic development and urbanization (Figure 2).

**Table 1. Comparative Risk Assessment for Water-borne Contaminants.**

Agent	Risk Quotient (RQ)*					Major Source of Uncertainty/Action Required
	< 1	1-10	10-100	100-1000	> 1000	
NH <sub>3</sub> -N (Nitrogen in the form of ammonia)						No local criteria; used ASEAN criteria
NO <sub>2</sub> -N (Nitrogen in the form of nitrite)						
NO <sub>3</sub> -N (Nitrogen in the form of nitrate)						
PO <sub>4</sub> -P (Phosphorus in the form of phosphate)						
Biochemical Oxygen Demand (BOD)						Used Philippine criteria
Dissolved Oxygen (DO)						
Total Suspended Solids (TSS)						No data from Laem Chabang
Oil and Grease						
<b>Heavy Metals</b>						
Mercury (Hg)						Further investigation needed at Sriracha
Cadmium (Cd)						Further investigation needed at Si Chang
<b>Pesticides</b>						
Heptachlor						Further investigation needed at Sriracha
Dieldrin						
Endrin						
p, p'-DDT (dichloro-diphenyl-chloroethane)						Further investigation needed at Bang Saen
Total Coliform						No data from Si Chang and Ao Udom
Most Probable Number (MPN)/100 ml						
Fecal Coliform						Used Philippine Criteria; Data from two areas only
MPN/100 ml						

\* Range of RQs shown is from average to maximum (worst-case).

RQ < 1 indicates low cause for concern, RQ = 1 signals cause for concern and RQ > 1 signals high cause for concern

RQ < 1 for other heavy metals such as chromium (Cr), lead (Pb), copper (Cu), manganese (Mn), zinc (Zn), iron (Fe) and arsenic (As).



The assessment may not have covered the entire range of ecosystem stressors of importance in Chonburi but it provides a good starting point for identifying and prioritizing risks and enhancing the cost-effectiveness of management efforts. On the whole, the IRA identifies the need for a management framework for the sustainable development and management of Chonburi's coastal resources and environment, which includes:

- Measures to prevent and control the degradation of coastal resources arising from development projects and to promote rehabilitation efforts of affected areas;
- Management plans to protect natural resources and human health from discharges of untreated wastewater;
- Systematic and cost-effective collection of information through scientific researches and an integrated environmental monitoring program focused on the priority concerns and data gaps identified through the risk assessment;
- Multi-agency and multi-sectoral coordination and appropriate institutional arrangements for environmental management;
- Sustainable financing mechanisms to support management actions; and
- Education and awareness programs to communicate risks and promote public participation in environmental protection and management.

## Developing a Common Framework for Action

While the risk assessment provides scientific basis for the environmental concerns identified by stakeholders, the coastal strategy provides stakeholders with a common vision and framework for action to address the environmental concerns and manage their shared coastal and marine areas.

**The initial risk assessment (IRA) of Chonburi, carried out by a multidisciplinary local technical working group, was the first attempt to integrate existing scientific data in the area to enhance understanding of the environmental status, determine ecological and human health risks, and identify priorities for the sustainable management of natural resources and environment in Chonburi.**



Increase in coastal population & discharge of untreated wastes



Industrial development

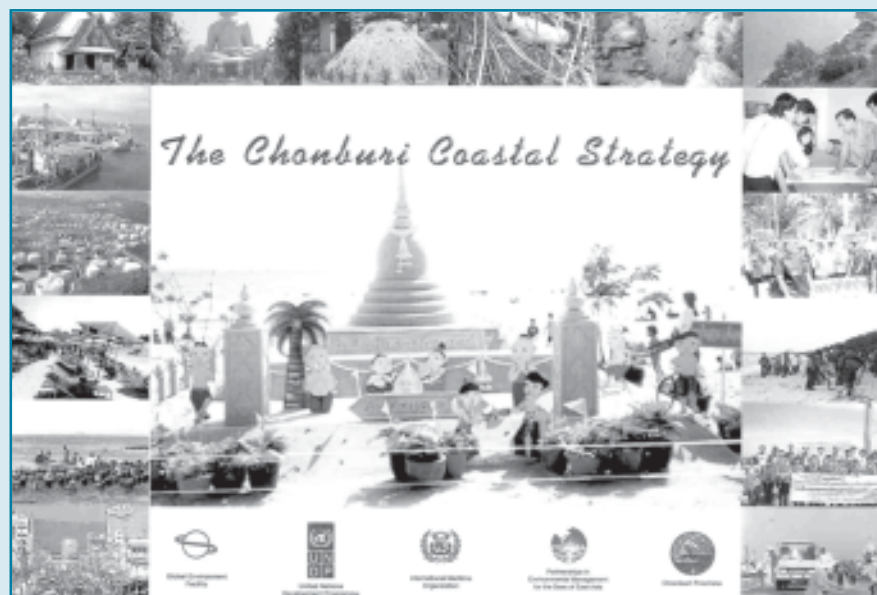


Maritime activities



Agriculture and upland run-off

**Figure 2. Some of the Sources of Identified Risk Agents in the Chonburi ICM Area.**



The coastal strategy presents the people's aspirations for the Chonburi ICM site to become:

**"An area with scenic and clean beaches and coastline, a popular tourist destination and center of socioeconomic development, where local people enjoy and care for the many bounties provided by the environment, protect Thai culture and traditions, and enjoy wholesome, secure and good quality of life."**

The coastal strategy is a product of various consultative meetings and workshops involving major stakeholders representing national agencies, local government units, the private sector, the academe, and civil society groups, who collectively shared information and insights on the values of the coastal environment, threats to these values, necessary strategies and actions to address the threats, and the vital participation of various sectors.

The Chonburi Declaration, officially adopted and signed on 21

September 2004, demonstrates the commitment of the five participating municipalities in Chonburi Province to manage their coastal areas and to adopt and implement the coastal strategy with the support of other key stakeholders including the provincial government, national agencies, the academe, private sector, business and industry, and civil society groups. The adoption of the coastal strategy also generated strong interest for its implementation in other coastal municipalities in Chonburi Province.

## Advancing from Planning to Implementation

It is critical that ICM efforts not only end at the planning stage but move on to the stage of adoption and implementation. This has been demonstrated in Chonburi through the integration of the coastal strategy into the Environmental and Municipal Plans of the five participating municipalities. The challenge now is to translate the identified activities into actual projects and to strengthen capacities for implementation in view of current limitations and available opportunities.

A practical and systematic approach that can enhance the development of an implementation plan for the coastal strategy will also be demonstrated in Sriracha Municipality. This approach will involve prioritization of coastal strategy action programs based on available scientific information such as the risk assessment as well as local capacity and resources for implementation. It will also identify requirements for capacity building and support needed from central government and other institutions. The development of the coastal strategy implementation plan will involve a multi-agency and multi-sectoral task team and consultations with government agencies, community-based groups and other major stakeholders. The approach is aimed at promoting consensus and

ownership among stakeholders to facilitate support for the implementation of the identified priority action programs. The Site Coordinating Committee and the Sriracha Municipality will adopt the coastal strategy implementation plan, and will select a number of priority activities for implementation.

Lessons learned in the coastal strategy implementation plan development at Sriracha Municipality will be gathered to benefit similar efforts in other municipalities in the future. This is expected to strengthen and complement existing coastal management efforts in the five municipalities as shown in Box 1.

It is noteworthy that besides current initiatives in the Chonburi ICM area concerning pollution control, biodiversity conservation is also being given equal attention. One remarkable example is the sea turtle conservation program at Sriracha Municipality, which is being implemented in partnership with various sectors including the local communities and fishers (Box 2). This program was initiated by Sriracha Municipality in 1992 following a serious decline in the number of sea turtles, arising primarily from injuries and deaths from fishing gears and also from occasional consumption. The program has succeeded in nursing and protecting more than 300 sea turtles and releasing at least 150; providing a venue for multi-sectoral cooperation and public

**While the risk assessment provides scientific basis for the environmental concerns identified by stakeholders, the coastal strategy provides stakeholders with a common vision and framework for action to address the environmental concerns and manage their shared coastal and marine areas.**

#### **Box 1. Existing Environmental Management Programs at the Chonburi ICM Area.**

- Water quality protection and rehabilitation initiatives such as the construction/operation of wastewater treatment plants in Sriracha, Saensuk and Laem Chabang and replacement of the bridge to Loi Island (Sriracha) which hindered water circulation;
- Establishment of central facilities for pollution control in industrial estates and promotion of ISO 14001 certification in Laem Chabang;
- Conduct of training for industries and establishments that generate hazardous wastes in Laem Chabang;
- Improvement of solid waste collection systems;
- Promotion of environment-friendly aquaculture especially in Sriracha and Ao Udom;
- Biodiversity conservation such as the sea turtle conservation program in Sriracha (Box 2);
- Waterfront development such as the Sriracha Public Park and Bang Saen Beach;
- Ecotourism such as in Loi Island, Sarm Muk Mountain and Si Chang Island
- Providing safe water to communities (e.g., water desalination system in Si Chang Island);
- Supporting local livelihood by promoting local products/specialties;
- Promoting healthful community living;
- Public awareness and community mobilization in natural resource conservation and environmental protection; and
- Establishing partnerships with the private sector, the academe, communities, and nongovernmental organizations in various initiatives.

# The integration of the coastal strategy into the municipal plans of the five municipalities is currently the high point of the ICM implementation in Chonburi. It indicates the commitment of participating municipalities not only to adopt but also to jointly implement the coastal strategy and meet the challenges ahead.

## Box 2. Creating Environmental Champions through Conservation Initiatives: Sea Turtle Conservation in Sriracha.

### Strategies

- Local leadership and community efforts
- Recovery of and care for captured sea turtles
- Sea turtle conservation pond and hatchery in Loi Island
- Sea turtle release program at Kram Island
- Monitoring through tags, microchips and satellite tracking
- Public awareness and education aimed at coastal communities, fisherfolks, the youth, developers and tour operators

### Achievements

- 150 sea turtles released
- 65 Green turtles and 86 Hawksbill turtles at the conservation pond
- Recreation and environmental education at the conservation pond
- Source of livelihood from tourism
- Community support and cooperation
- Cross-sectoral partnerships in natural resource conservation

### Partners

- Sriracha Municipality
- Royal Thai Navy
- Sea Turtle Conservation Station, Mun Nai Island, Rayong Province
- Burapha University
- Southeast Asian Fisheries Development Center (SEAFDEC)
- Local communities, fisherfolks, youth

education on the value of marine resources; and providing a source of recreation and livelihood from ecotourism. Efforts are underway to further strengthen this program.

## Meeting Challenges and Sharing the Vision

Chonburi Province has undergone accelerated economic development in the past 20 years. However, environmental problems associated with development have become apparent, and the complexity and difficulty of addressing these problems are expected to increase along with further industrialization and urbanization. This highlights the need for innovative management approaches to ensure the sustainable use of coastal resources and environment in the Chonburi ICM site.

In the face of numerous perceived environmental concerns, the risk assessment provides technical basis in identifying priority concerns and guides the determination of interventions to minimize or manage these concerns. The various options for managing the identified concerns are provided in the coastal strategy, with emphasis on coordinated and cross-sectoral approaches.

The integration of the coastal strategy into the municipal plans of





the five municipalities is currently the high point of the ICM implementation in Chonburi. It indicates the commitment of participating municipalities not only to adopt but also to jointly implement the coastal strategy and meet the challenges ahead. It is a considerable step towards managing environmental risks in the coastal areas and achieving the stakeholders' common vision, which, although developed for the Chonburi ICM area, is certain to be shared by stakeholders in other municipalities within and outside the province. Angsila Municipality, also in Chonburi Province, has already taken steps to adopt the Chonburi ICM coastal strategy into its municipal plan.

Replication of ICM efforts at the municipal level using the experiences and lessons learned under the Chonburi ICM project can slowly but surely work its way toward wider implementation in coastal areas throughout the country. ■

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## Introduction

Nampho City, situated in the coast of the West Sea, serves as the marine gateway to Pyongyang, the capital of the Democratic People's Republic of Korea. Its strategic location makes it an economically important area for the development of an international port and various industries, such as metallurgy, heavy machinery, textile, fisheries, and food processing. Lying at the coast of the West Sea and the estuary of the Taedong River, Nampho is endowed with rich natural resources and high biological diversity. As such, its coastal resources are being utilized for the socioeconomic development of the local area and the country in general. However, these development activities increasingly exert pressure on the environment. Thus, to ensure that the economic development of Nampho is pursued with minimum impact on the environment, a management system has to be put in place to ensure its sustainable development.

# Nampho Coastal Strategy: A Blueprint for the Sustainable Coastal Development of Nampho City, DPR Korea



**The process of coastal strategy development in Nampho City provided an opportunity for stakeholders to increase their awareness on the importance of their coastal resources and identify their roles and responsibilities in protecting them.**

In July 1999, the government of the DPR Korea officially signed the GEF/UNDP/IMO Regional Programme on Building Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) project document, which formalized its participation in the Regional Programme. A Memorandum of Agreement for the development and

implementation of an integrated coastal management (ICM) program was signed on 8 September 2000 between DPR Korea's General Bureau of Cooperation with the International Maritime Organization, the executing agency of PEMSEA. These events launched the implementation of the national ICM project in Nampho, which

aims to conserve critical ecosystems and habitats, and prevent marine pollution through a management framework that puts forward an integrated approach in developing and managing coastal resources.

Among five districts and one county in Nampho, Hanggu and Waudo districts were selected as the Nampho ICM project site. The site covers a total area of 467.8 km<sup>2</sup>, with the watershed area of 215 km<sup>2</sup> covering part of the Taedong River and the seaside of West Sea Barrage. The total length of the coastline is 127 km including the length of the riverside of Taedong River, which is 55 km (Figure 1).

Responding to the development situation in Nampho, the local stakeholders recognized the need to formulate a strategic plan for developing and managing

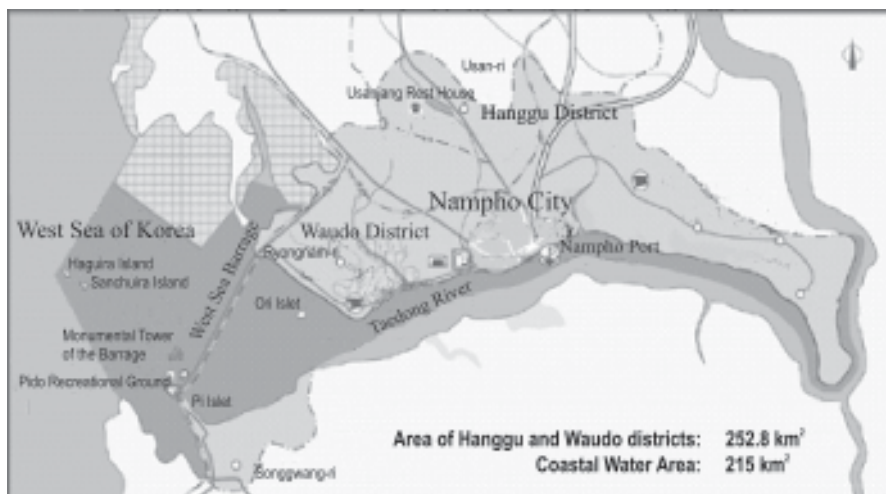
**As a strategic plan, the Nampho Coastal Strategy defines and describes the project boundary, the values of Nampho coast, and the threats to these values, the shared vision and mission of the stakeholders, the strategies, principles, objectives and action programs that will be implemented to fulfill this vision, and the stakeholders responsible for implementing these action programs.**

the Nampho coastal area. With assistance from the Regional Programme Office, the stakeholders collectively developed the Nampho Coastal Strategy, which serves as the blueprint for the sustainable coastal development of Nampho.

### **Process of Developing the Coastal Strategy**

As part of the project's capacity-building component, a training workshop on Coastal Strategy development was conducted among the local project team members in September 2001. The training focused on the process of developing the Nampho Coastal Strategy, emphasizing the importance of multi-sectoral and interagency consultations to bring stakeholders together, to promote consensus building, encourage openness to find solutions to their concerns and uphold their commitment.

As a strategic plan, the Nampho Coastal Strategy defines and describes the project boundary, the values of Nampho coast, and the threats to these values, the shared vision and mission of the



**Figure 1. National ICM Demonstration Site in Nampho, DPRK.**

# The process of Coastal Strategy development started with the identification of historical, cultural, natural and economic values in the Nampho coastal area, followed by the identification of environmental issues which threaten these values.

identification of historical, cultural, natural and economic values in the Nampho coastal area, followed by the identification of environmental issues which threaten these values. From these, the stakeholders came up with a common vision and mission for Nampho, which addressed the people's desire to protect their values in order to achieve sustainable coastal development. Unlike other approaches in strategic planning wherein the starting point is the identification of issues and problems, this approach of identifying values enhanced the stakeholders' appreciation of what they have and how they can protect them from existing and potential threats.

To fulfill the stakeholders' common vision for Nampho coastal area, they identified strategies which

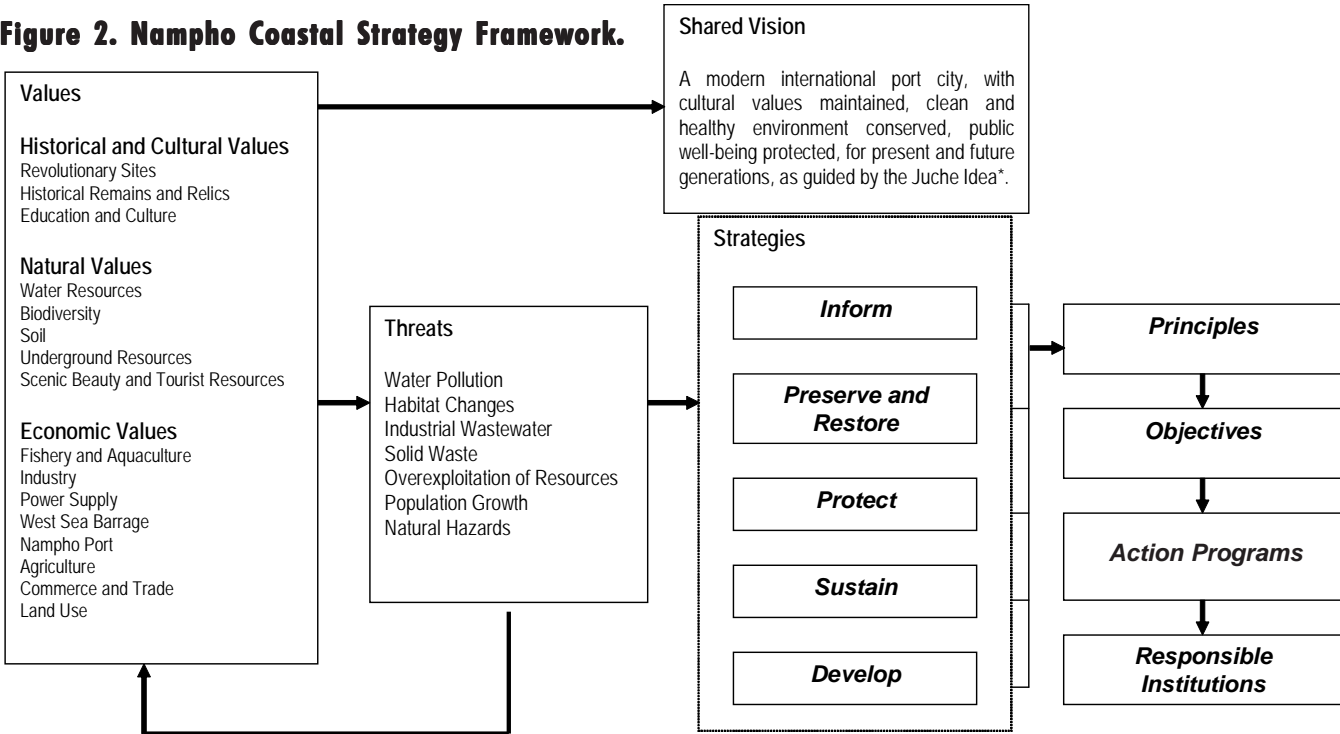
stakeholders, the strategies, principles, objectives and action programs that will be implemented to fulfill this vision, and the stakeholders responsible for implementing these action programs (Figure 2).

A series of stakeholder consultations were undertaken from December 2001 to June 2002 to develop the Nampho Coastal Strategy. Initially, consultations were

undertaken separately in Hanggu and Waudu Districts. A total of 30 stakeholders participated in the district-level workshops. The results of the workshops were validated in an area-wide workshop participated in by experts, scientists and relevant officials from national and local agencies, institutes and universities.

The process of coastal strategy development started with the

**Figure 2. Nampho Coastal Strategy Framework.**



\*Juche Idea represents the guiding principle of the revolution in DPR Korea, which is centered on man and his position and role in the world.



serve as a framework for specific action programs (Table 1). The strategies provide measures for addressing the environmental issues in the site. It also serves to strengthen the ability of various agencies in overcoming difficulties in developing and managing Nampho coastal resources, and provide a mechanism for interagency, intersectoral partnerships for achieving their common vision.

### Conclusion

Given its rich natural resources and high economic potential, development activities in the Nampho coastal area are continually expanding. However, along with these development activities come a

Unlike other approaches in strategic planning wherein the starting point is the identification of issues and problems, this approach of identifying values enhanced the stakeholders' appreciation of what they have and how they can protect them from existing and potential threats.

number of problems that pose a threat to the environmental integrity of Nampho. Threats such as water pollution, habitat changes and over-exploitation of resources cause serious consequences to the sustainability of Nampho's resources, as well as the protection of human life.

In response to this situation, the Nampho Coastal Strategy was developed. The process of coastal strategy development provided an opportunity for stakeholders to increase their awareness on the importance of their coastal resources and identify their roles and responsibilities in protecting them. Understanding its significance, stakeholders came up with a shared vision for the Nampho coastal area. Specific strategies were developed for achieving this shared vision.

To sustain these efforts, there is a need to formally adopt the Nampho Coastal Strategy, being a framework for the sustainable development of its coastal area. This will reinforce the stakeholders' commitment to the fulfillment of their shared vision for Nampho. Ensuing activities will focus on the development and implementation of priority action programs to ensure the proper development and management of Nampho's coastal resources for present and future generations. ■

Table 1: Strategies for the Development and Management of the Nampho Coastal Area.	
STRATEGIES	
INFORM	Inform the stakeholders and relevant agencies of their rights and responsibilities, and the scientific and technical issues concerning the coastal and marine environment, thereby ensuring their active participation in the development of the coast and implementation of the environmental management programs.
PRESERVE and RESTORE	Preserve ecological habitats as well as geographical, cultural and historical features, and restore to their original state, those that have been damaged by human activities.
PROTECT	Protect human welfare and the ecological and economic features of the Nampho coast from risks that occur as a consequence of human activities and natural forces.
SUSTAIN	Ensure the sustainable use of marine and coastal resources in order to fulfill the needs of the present and future generations.
DEVELOP	Develop and utilize Nampho coastal area in consonance with the land and environmental protection policies of the state and plans for the development of national economy, thereby ensuring a balance between economic development and environmental protection.

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## Introduction

Sihanoukville is designated as one of the three economic development areas in Cambodia. It is the site of the country's only deep-water port, serving as a commercial gateway to local and international trade. Sihanoukville waters are teeming with life, with its bays and estuaries abounding with fishery resources. The site has great potential for ecotourism with its unspoiled beaches and nature-based tourism activities in Ream National Park and nearby islands. Given these resources, a lot of development activities are being undertaken in the Sihanoukville coastal area, in line with the country's national economic development agenda. These activities inadvertently exert a lot of pressure to the coastal resources of Sihanoukville, and pose a threat to the environmental integrity of the area.

# Building Local Capacity through Coastal Strategy Development in Sihanoukville, Cambodia



**Through a learning-by-doing process, local capacity was developed in Sihanoukville, such as capacities on how to plan, coordinate and facilitate stakeholder consultation workshops which enabled them to develop a draft coastal strategy and facilitate its adoption through appropriate mechanisms.**

In June 2000, a program for integrated coastal management (ICM) was established in Sihanoukville. Its overall goal is the sustainable development of Sihanoukville's coastal area, ensuring that development activities in the area are carried out with as little impact to the coastal and marine environment. To initiate the

implementation of project activities, a Project Management Office (PMO) was set up at the Municipal Government of Sihanoukville. A policy coordinating body to the PMO was also formed, the Project Coordinating Committee (PCC), which is composed of key representatives of various local government agencies.

At the onset of project implementation, the PMO required much assistance in the implementation of the ICM activities. A major setback is the lack of experience in ICM, which thwarts PMO's confidence in leading the implementation of the activities.

Coupled with the lack of awareness of the stakeholders on the value of their coastal resources, and the technical capacity to help conserve these resources, the initiating stage of the project was rife with uncertain steps. At this stage, the Regional Programme Office (RPO) of the GEF/UNDP/IMO Regional Programme on Building Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) assisted the PMO through the mobilization of a Regional Task Force (RTF).

**The consultations provided a venue for stakeholders from relevant agencies, groups and sectors to come together and form a unified stand in managing their coastal area. First and foremost was the identification of coastal values.**

With the purpose of enhancing the skills of the PMO staff in implementing project activities, the RTF worked with the PMO staff at the site from July to September 2001. The RTF members were young, junior professionals from the region, who went to the site specifically to assist the PMO staff in conducting project activities, particularly in the development of the Sihanoukville Coastal Strategy (SCS).

serve as facilitators in the stakeholder workshops. Initially, the consultations were made at each of the districts of Mitapheap, Stung Hav and Prey Nup. A total of 63 stakeholders coming from various government agencies, schools, nongovernmental organizations (NGOs) and the private sector participated in the workshops.

The consultations provided a venue for stakeholders from relevant agencies, groups and sectors to come together and form a unified stand in managing their coastal area. First and foremost was the identification of coastal values. Unlike most planning approaches that start with problem identification, this approach of starting with values prompted a better appreciation of the coastal area and its resources, and a strong desire to protect it from further or potential damage.

After identifying the values of their coastal area, the stakeholders considered the threats to these values. They came to an understanding of the direction they

**Figure 1. Process of Coastal Strategy Development.**



## Process of Coastal Strategy Development

Considering the values of Sihanoukville coastal area and its multiple uses, there is a need to develop a strategic plan for its sustainable development. In response to this need, a series of stakeholder consultations were undertaken to develop the SCS (Figure 1). The RTF trained the PMO staff to

# The CS captures the people's vision for the coastal area of Sihanoukville, and identifies the strategies and actions needed to realize this common vision. In order to develop this, there was a need to build the capacity of the local stakeholders in planning for the sustainable management of their coastal area.

want to take in their coastal development, and agreed on a common vision for the Sihanoukville coastal area. The vision serves as the comprehensive map for what they want to achieve for the Sihanoukville coastal area. Specific strategies were then identified in order to fulfill this common vision.



**The stakeholder consultations, composed of participants from relevant agencies, groups and sectors, enabled the development of the coastal strategy based on their unified vision and identified coastal values.**

With the conclusion of the district-level workshops, the PMO staff, under the supervision of the RTF, consolidated the results and came up with a draft outline of the SCS. This was presented at the area-wide workshop, which was participated in by key representatives of local and national government agencies, local community leaders, media, and international organizations. Participants reviewed the results of the workshops conducted at district level and provided critical inputs based on their own expertise. The workshop provided a venue for sharing of ideas and experiences, which enriched the SCS. A major accomplishment of the workshop is the completion of the vision, which is truly representative of the stakeholders' aspirations for Sihanoukville.



The results of the area-wide workshop was likewise consolidated and packaged into a draft coastal strategy by RTF and PMO staff. Technical review of the draft was undertaken by local and national officials, followed by a series of validation workshops with the district and area-wide stakeholders. The final draft was then submitted to the PCC and the National Coordinating Committee (NCC) for official approval.

After the comprehensive review of the coastal strategy (CS), the PMO worked on the its finalization. With the guidance of technical staff from the RPO, the SCS was finalized and published in both English and Khmer. The PMO made arrangements for the formal adoption of the SCS through a Declaration Workshop, which coincided with World Environment Day on 5 June 2003.

## Coastal Strategy Development as a Means of Building Local Capacity

The CS captures the people's vision for the coastal area of Sihanoukville, and identifies the strategies and actions needed to realize this common vision. In order to develop this, there was a need to build the capacity of the local stakeholders in planning for the sustainable management of their coastal area.



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Capacity building is defined as the process of changing attitudes and behavior, imparting knowledge and developing skills while maximizing the benefits of participation, exchange of knowledge and ownership. In this particular case of developing the SCS among the stakeholders, capacity building was developed at two levels. The first level is administrative capacity building for the PMO staff. The RTF trained the PMO staff on the process of coastal strategy development. Through a learning-by-doing process, they were trained on how to plan and coordinate stakeholder consultation workshops, including the administrative and logistics arrangements, prepare workshop presentation materials, facilitate the stakeholder workshops, report the results of the consultations, review the draft CS, and facilitate its adoption through appropriate mechanisms.

On a secondary level, the development of the CS helped local government and stakeholders build their own mechanism of consultation and coordination, and overcome the difficulties encountered by lack of technical expertise and knowledge. Its development is a significant step towards increasing the participation of various stakeholders in the management of their marine and coastal resources. The coordination and consultation process increased awareness for environmental management, and facilitated a sharing of expertise and local knowledge on the situation of the coastal and

**With strong support from the local and national government, and with the increased capacity of the people of Sihanoukville to plan for their coastal area, they can now look forward to reaping the fruits of their efforts with the actual implementation of the coastal strategy.**

marine environment in Sihanoukville, understanding of existing capacities and requirements for mitigating adverse impacts, and strategic planning for coastal environmental management. The process of participation, the exchange of knowledge and the ensured ownership amongst the stakeholders lies at the core of building their capacity and enabling change in their environment.

## Conclusion

At the occasion of the CS Declaration Workshop, local and national leaders emphasized the importance of the participation of stakeholders from cross sectors, including the local and national governments, local communities, NGOs and private sector. Given that extensive dialogue has been conducted with a wide range of stakeholders during the entire process of its development, the SCS represents of the ideas of all concerned parties who fully agreed

and committed to the strategies, principles, and action plans to ensure the sustainable development of Sihanoukville.

The development of the CS provided a mechanism for stakeholders to share their local knowledge and recommendations on how they can help manage the coastal area. Their participation in the consultation workshops allowed them to take part in the strategic planning for the fulfillment of their common vision for Sihanoukville, enabling them to understand their roles in the plan and how they can perform these roles effectively.

Much can be achieved through the continued participation of stakeholders in coastal planning and management. With strong support from the local and national governments, and with the increased capacity of the people of Sihanoukville to plan for their coastal area, they can now look forward to reaping the fruits of their efforts with the actual implementation of the coastal strategy. ■

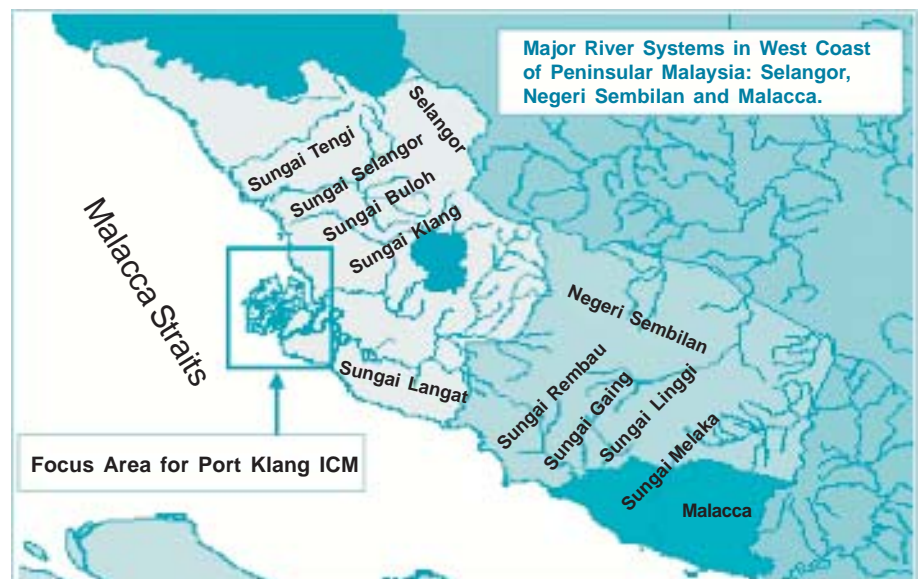
**Ir. Haji Rahmat B. Hj. Mohd. Sharif**  
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Selangor Water Management Authority

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## Introduction

Malaysian river basins and coastal zones are the most productive ecosystems in the country. It houses a majority of the population, as well as the human and natural activities, and represents a unique environment that requires special attention in its planning, development and management. Fragmentation in these areas is a current problem and a number of obstacles were identified to overcome these deficiencies. These included inadequate policy and legislative coordination, weak institutional capacity at the local level, inefficient use and allocation of financial resources, lack of access to scientific advice and lastly, faulty perceptions and virtually total absence of participation by the stakeholders, among others.

# Linking and Harmonizing River Basin Management with ICM in Malaysia — The Port Klang ICM Experience



**Figure 1. Major River Systems In the Coast of Selangor State.**

In overcoming the current weaknesses and realizing the Malaysian Water Vision 2025, there is a consensus that an integrated, holistic and sustainable resources management program has to be embraced to ensure that the economic development would

be pursued without compromising environmental protection.

Previously, integrated river basin management (IRBM) and integrated coastal management (ICM) were treated as separate entities. However, in line

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with the current global trend, these areas are increasingly viewed as a single integrated management entity, especially as viewed from the angle of good governance and delineation of jurisdiction between the state and federal establishments.

The integration would focus on three objectives:

1. Institute IRBM–ICM processes and practices as an integral part of the governance;
2. Promote federal, state and local government initiatives and responsibilities in carrying out IRBM–ICM; and
3. Maintain or enhance the functional integrity, economic viability, aesthetic quality and biological diversity of the river basins and coastal zones.

## **Integrating IRBM with ICM**

The unplanned and uncoordinated development of the river basin and the coastal zone can lead to the degradation of river and marine ecosystems and this can be attributed to the management of the land and coastal zone as a whole. Habitat conversion and degradation as well as its permanent loss are often attributed to the direct/indirect impacts from land-based human activities in the adjoining upland river basins and within the coastal/marine areas.

**IRBM and ICM essentially deal with the integrated management of the river basin and the coastal zone as a single interactive entity. They deal with the coordinated use and management of land and water resources (surface freshwater, wetlands, groundwater and coastal waters); and other natural resources and activities within the river basin and coastal zone, to optimize the use of these resources in a sustainable and productive manner today and in the future.**

IRBM and ICM deal essentially with the integrated management of the river basin and the coastal zone as a single interactive entity. They deal with the coordinated use and management of land and water resources (surface freshwater, wetlands, groundwater and coastal waters); and other natural resources and activities within the river basin and coastal zone, to optimize the use of these resources in a sustainable and productive manner today and in the future.

## **The IRBM-ICM Pilot Demonstration Site**

The proposed national ICM policy identified several pilot sites

representing various specific characteristics in the country to be adopted for detailed on-site studies and for future demonstration and replication. One of the sites selected for this study is an ICM pilot demonstration site in Port Klang in the State of Selangor, under the auspices of a joint program by the Global Environment Facility/United Nations Development Programme/ International Maritime Organization Regional Programme on Building Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) and the State Government of Selangor.

The study, under the umbrella of the national ICM policy, will focus on the 'mixed development character' of

**The tasks of regulating and policing the port, shipping and navigational activities in the area were rather difficult to accomplish since the Port Klang navigational waterway is the busiest coastal waterway in Malaysia, whilst the adjoining Straits of Malacca is the world's busiest international waterway. Improved control in this area is needed for Port Klang to realize its aspiration for full-scale development.**

the site. It would provide a classic showcase for applying the ICM concept in managing multiple resource-use conflicts.

The integration of the IRBM-ICM project boundaries resulted in an expanded boundary that covered the IRBM boundaries of two major adjoining upstream rivers, namely the Klang and Langat Rivers (*sungai* or *Sg.* in Malaysian). Klang River has a watershed area of 1,300 km<sup>2</sup> and Langat River has a watershed area of 2,400 km<sup>2</sup>. Klang River passes through Kuala Lumpur and Klang Valley whilst Langat River drains the Langat Basin, with both river estuaries meeting at the coastal waters of the Port Klang ICM.

The Selangor Waters Management Authority (Lembaga Urus Air Selangor or LUAS) became

the lead agency for the project, with mandate, under LUAS Enactment 1999, to provide the requisite avenue for the integration of IRBM with ICM at the state level, perhaps for future replication at the national level.

### **The Port Klang ICM Demonstration Site**

Port Klang with its North, South and West Ports is the country's premier port. The tasks of regulating and policing the port, shipping and navigational activities in the area were rather difficult to accomplish since the Port Klang navigational waterway is the busiest coastal waterway in Malaysia, whilst the adjoining Straits of Malacca is the world's busiest international waterway. Improved control in this area is needed for Port Klang to

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realize its aspiration for full-scale development.

As the polluted waters from Sungai Klang and Sungai Langat drain into Port Klang coastal waters, coupled with pollution from within the port areas, the waters of Port Klang become heavily polluted and the overall health of its marine ecosystem has degraded over the years.

### **The IRBM of Sungai Klang**

The IRBM project for Sg. Klang is guided by the recently completed study entitled "Klang River Basin Environmental Improvement and Flood Mitigation Project," initiated by the Department of Irrigation and Drainage (DID). The Klang Basin suffers regular flooding and steady deterioration of water quality. The study proposed both the implementation of structural and non-structural measures. The non-structural measures include institutional rearrangement and legislative development, floodplain and emergency management plan, development of flood forecasting and warning system, and community participation and training programs. The existing Selangor State-Federal Government institutional arrangement would be revamped and reconstituted into the Klang Basin Management Council and the Klang Basin Management Executive Committee will serve as a permanent secretariat.

The structural measures include:

1. Flood mitigation plan and tributaries improvement works;



2. Soil erosion and sediment control programs;
3. Urban land-use and run-off minimization plan;
4. Water quality management plan;
5. River solid waste management plan; and
6. Wetland management plan.

The study proposed the implementation of a sustainable action plan to provide protection against floods of 100-year average recurrence interval or ARI\* and achieving Class IIB water quality before 2020.

## The IRBM of Sungai Langat

The IRBM project for Sg. Langat centered around three major studies, namely:

1. Study on sustainable groundwater resources and environmental management for the Langat Basin by Jabatan Mineral & Geosains — Japan International Cooperation Agency (JMG-JICA);
2. Study on pollution prevention and water quality improvement program of Sg. Langat conducted by the Department of Environment (DOE)–Unit Perundangan University Malaya (UPUM); and
3. Sg. Langat IRBM study conducted by DID-KTA.

The proposal for rehabilitation and upgrading of Sg. Langat comprises of both structural and non-structural measures. The structural

# Harmonized legislative and institutional developments, funding sources and mechanisms are recognized as requisite tools for successful IRBM-ICM in the Malaysian context.

measures include provision of treatment facilities for both point and non-point sources. The action plan envisages the attainment of overall water quality of Sg. Langat at Class IIB before the year 2020.

The second study covers the:

1. Catchments management and monitoring plan;
2. River corridor development and management plan;
3. Water resources development and management plan;
4. Flood mitigation plan;
5. Socioeconomic profiling;
6. Institutional development; and
7. Stakeholder participation.

## Integration and Harmonization

The principle of integration and harmonization involves establishing smart partnerships, creating a win-win situation and building commonly shared objectives and resolving conflicts by negotiation, mediation and arbitration. The process requires synergy amongst different sectors (government, private, nongovernmental organizations, civil society, etc.), different government agencies (local authorities, land administrators, fisheries, tourism,

shipping, agriculture, etc.), and different levels of government (federal, state and local).

Linkages also have to be established between land and sea, between policy and science, between different disciplines of science, and between present and future generations. The urgent transitional step is to harmonize economic development with sustainable environmental management that includes harmonizing the diverse multi-sectoral and multi-disciplinary set-ups; protection of the environment, public safety and biodiversity; sustainable use of resources and minimization of resource-use conflicts. The integration between IRBM and ICM embodies all the above principles. In this connection, harmonized legislative and institutional developments, funding sources and mechanisms are recognized as requisite tools for successful IRBM-ICM in the Malaysian context. Malaysia as a federated state has legislative power-sharing arrangements distributed between state and federal establishments and hence should form the pivotal reference in future integration and harmonization exercises. ■

\*The long-term average number of years between the occurrence of a flood as big as a selected event. ARI is another way of expressing the likelihood of occurrence of a flood.

# NEWS

## GEF Contributes \$1M for PPP Project in East Asia

**MANILA, PHILIPPINES** — In a signing ceremony held 25 August, the Global Environment Facility (GEF) contributed US\$1 million to jumpstart a two-year project aimed at building confidence and capacity in public-private partnerships (PPPs) for pollution prevention and the sustainable use of marine and coastal resources in East Asia. The project, called the Development and Implementation of Public-Private Partnerships in Environmental Investments, will be executed by the International Maritime Organization with PEMSEA undertaking overall management and coordination.

The objectives of the PPP Project are to enhance the capacity of government, communities and the private sector to develop, finance, manage and sustain environmental infrastructure improvement projects for pollution prevention and the sustainable use of marine and coastal resources through PPP, and to increase investment opportunities for environmental improvement and coastal and marine resource development and management for countries in East Asia.

About 50 representatives from PEMSEA participating countries, international organizations, and the private sector witnessed the ceremony. In her opening remarks, UNDP Manila Resident Representative Deborah Landey emphasized the importance of partnerships in attaining the Millennium Development Goals.

Philippine Department of Environment and Natural Resources (DENR) Secretary Elisea G. Gozun stressed the importance of the role of the private sector in addressing environmental issues and attaining sustainable development.

PEMSEA Regional Programme Director Dr. Chua Thia-Eng gave credit to the DENR, the local government unit of the City of San Fernando, Pampanga, headed by Mayor Oscar Rodriguez, and the province of Bataan, headed by Governor Enrique Garcia, and the

continued on page 51...

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## PEMSEA Launches Coastalinks

**XIAMEN, PR CHINA** — PEMSEA has launched Coastalinks, the linking of integrated coastal management (ICM) websites aimed at strengthening regional networking and parallel knowledge sharing between local governments implementing ICM in the East Asian Seas region. The launching ceremony was held on 28 October during PEMSEA's 10th Programme Steering Committee Meeting.

Coastalinks currently includes ICM websites from Bali, Indonesia ([balicoastalink.or.id](http://balicoastalink.or.id)); Port Klang, Malaysia ([portklangcoastalink.net](http://portklangcoastalink.net)); Batangas Bay, Philippines ([batangascoastalink.net](http://batangascoastalink.net)); and Danang, Vietnam ([www.danangcoastalink.org.vn](http://www.danangcoastalink.org.vn)). Having established a presence on the Internet, these ICM sites now have a new means of sharing their lessons and experiences in environmental management to a much wider online audience.

Each Coastalink website provides a wide range of information — from principles and strategies on sustainable development and reports on the state of a specific coast in the East Asian Seas region, to investment opportunities, events and current environmental issues prevailing in each site.

Coastalinks is aimed at establishing a clearing house mechanism for ICM knowledge base in the region and constitute one part of PEMSEA's efforts in distilling lessons learned from various ICM sites and disseminating those lessons to pertinent national government agencies, local governments and stakeholders throughout the region. PEMSEA hopes that as ICM initiatives in the region continue to grow, Coastalinks would play an increasing role in organizing and sharing an accumulated wealth of ICM information and experience for interested stakeholders. ■

# China to Host East Asian Seas Congress 2006

**XIAMEN, PR CHINA** — The People's Republic of China will be hosting the East Asian Seas (EAS) Congress 2006, with the theme "One Ocean, One People, One Vision." The decision was finalized during PEMSEA's 10th Programme Steering Committee Meeting where Chinese delegates confirmed the country's desire to serve as host for the 2006 event.

The first EAS Congress, held in 2003 in Putrajaya, Malaysia, highlighted the signing of the Putrajaya Declaration of Regional Cooperation for the Sustainable Development of the Seas of East Asia by ministers and senior officials from PEMSEA's 12 participating countries. The five-day event brought together various stakeholders from diverse disciplines to discuss the welfare of the East Asian Seas and to explore ways and means to ensure the sustainability of marine and coastal resources of the region.

The 2006 Congress will feature the Ministerial Forum on the Implementation of the Sustainable Development Strategy for the Seas of East Asia, the International Conference on Coastal and Ocean Governance and the Meeting of the EAS Partnership Council. The Conference will hold workshops on several areas of interest.

The EAS Congress 2006 will be organized in partnership with several international organizations, honorary advisors, international and local organizing committees, as well as sponsoring and supporting organizations. Organizations interested in being a partner for the EAS Congress can contact the EAS Congress 2006 Secretariat at [congress@pemsea.org](mailto:congress@pemsea.org). For more information, please visit [eascongress.way.to](http://eascongress.way.to) ■

## GEF Contributes \$1 Million...

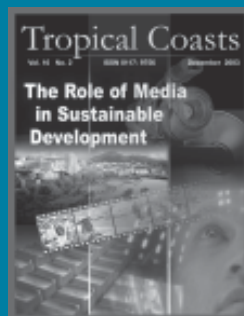
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private sector partner in the project in the City of San Fernando, Mr. Jose Luis Yulo Jr. of Pro-Environment Consortium, for pursuing the partnership towards establishing an integrated solid waste management system in their respective localities.

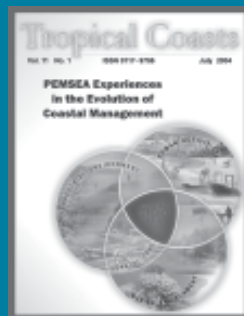
With the continuing decline in the volume of overseas development aid and the inability of countries to allocate sufficient portions of their gross domestic product to environmental protection and restoration, PPP is seen as an innovative way to meet the financial shortfall to counter the on-going degradation of marine and coastal resources in the East Asian region. ■

## Tropical Coasts

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*Melasti – A Festival of Hope* (13 min) looks at the environmental challenges in the marine and coastal areas of Bali, Indonesia, and the partnerships established for its conservation and sustainable use. It offers a unique glimpse of Balinese life, particularly on its three inseparable threads: faith, culture and the environment.

VCD (PAL, NTSC)



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# NEWS

## PEMSEA *de facto* Implementing Mechanism for SDS-SEA

**XIAMEN, PR CHINA —** The 10th Programme Steering Committee (PSC) Meeting of the GEF/UNDP/IMO Regional Programme on Building Partnerships in Environmental Management for the Seas of East Asia confirmed PEMSEA as the *de facto* implementing mechanism for the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA). The decision was made during the intergovernmental meeting, which was held 25-29 October 2004.

Government representatives attending the PSC also adopted a Programme of Activities for the implementation of the SDS-SEA, including the formation of a long-term regional implementing arrangement.

The governments expressed their commitment to establish a regional mechanism, as an essential step towards country-driven SDS-SEA implementation. The regional mechanism will build on the partnership foundation of PEMSEA, which is based on intergovernmental and intersectoral cooperation and collaboration in managing coastal and marine resources.

In this regard, the PSC adopted a road map and timetable for the preparation of a Partnership Agreement 2006 and Partnership Operating Arrangements, for consideration by the 11th PSC Meeting to be held in July 2005, including:

- The transformation of PEMSEA's Programme Steering Committee (PSC) into an East Asian Seas Partnership Council;
- The establishment of a PEMSEA Partnership Fund;
- The operationalization of a self-sustaining, service-providing PEMSEA Resource Facility (PRF); and
- The setting up and launching of a triannual regional congress patterned after the East Asian Seas Congress 2003.

The Meeting also decided to extend formal invitations to the countries of Timor Leste, Lao PDR and Myanmar to join PEMSEA in the implementation of the SDS-SEA. All three countries are within the watershed and sea area of the Seas of East Asia. Timor Leste is situated in the Indonesian Seas, one of the five large marine ecosystems within the Seas of East Asia. Lao PDR and Myanmar are within the Mekong River Watershed, a major tributary to the regional seas.

PSC meetings serve as a venue to review the progress of PEMSEA activities in the region and to make recommendations for their effective implementation. The State Oceanic Administration and the Xiamen Municipal Government hosted the 10th PSC Meeting, which was also attended by representatives from the private sector, nongovernmental organizations, the academe, and international/donor/financial institutions. Delegates from the governments of Lao PDR, Myanmar and Timor Leste joined the Meeting as observers. ■

PUBLICATIONS  
HOT OFF THE PRESS



**Southeastern Coast of Bali**  
Initial Risk Assessment  
100 pp.



**Danang**  
Initial Risk Assessment  
130 pp.



**Putrajaya Declaration of Regional Cooperation for the Sustainable Development of the Seas of East Asia — Sustainable Development Strategy for the Seas of East Asia**  
111 pp.



**Sustaining Benefits**  
38 pp.



- Two projects that directly address poverty alleviation among fisherfolk communities — Mussel Culture Livelihood Project and fish consignment and fuel-buying center as support for Marine Turtle Conservation — were implemented. Nine fisherfolk organizations and an NGO were among the first batch of recipients for these supplemental livelihood programs.

Another benefit is the symbiotic relationship developed among the partners and the gaining of new knowledge through the sharing of experiences and best practices.

Still another, and perhaps the most important, benefit of the partnership is in being able to enjoy the trust of all concerned — the local governments, the private sector, civil society groups, and the stakeholders. This has allowed the partners to have better access to first-hand information on the actual concerns of everyone, resulting in more focused and relevant support.

Among the new initiatives of the partnership is the granting of financial assistance to a number of POs to start alternative/supplemental livelihood programs. Other proposals to promote entrepreneurial skills and community-based livelihood programs are also being looked into. As such, coastal communities in Bataan regard both the local government and the private sector in a positive light, accepting BIGKIS-Bataan as a venue to raise issues on environmental concerns and as a force that could provide solutions to such concerns. Coastal communities are also more aware of their roles and responsibilities on the values of conserving coastal and marine resources for their own benefit.

## The March towards a Sustainable Future

Bataan is rich in history. During World War II, the valiant Filipino and American soldiers were made to march from Mariveles, Bataan to Capas, Tarlac (about 120 km), and survived the ordeal — their deeds echoed in history

through what is known as the Death March. Like these heroes, the partners to the BIGKIS-Bataan ICM Program — drawing on their inherent strengths and complementing and strengthening each other — will continue the march towards the attainment of sustainable development in the province and tackle every difficulty along the way. Together they will tread the right path that will win the war against the destruction of the environment. ■

## Reference

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Coastal Strategy of Nampho City, DPR Korea, 53 pp.



Manila Bay Refined Risk Assessment, 169 pp.



Natural Resource Damage Assessment Manual, 121 pp.



Port Safety Audit Manual, Guidance for Auditors (Vol. 1, 82 pp.)  
Audit Checklists (Vol. 2, 207 pp.)

# EVENTS

## Fourth Forum of the Regional Network of Local Governments Implementing ICM (RNLG)

26–28 April 2005 • Bali, Indonesia

The Fourth Forum of the Regional Network of Local Governments Implementing Integrated Coastal Management (RNLG) will be held in Bali, Indonesia on 26–28 April 2005 with the Government of Indonesia serving as host. The forum will see local governments in PEMSEA integrated coastal management (ICM) national demonstration and parallel sites share experiences and discuss key challenges and issues on sustainable coastal development.

One of the issues to be addressed during the Fourth RNLG will be the sustainable operation of the network's activities. A proposal to expand existing RNLG membership, structure and functions will be tabled for discussion. A resolution by participating local governments expressing their commitments to the sustainable operation of the network will be submitted for adoption. The forum will also promote the participation of representatives from recently developed parallel sites, donor agencies, other local government networks with similar objectives, and local governments implementing ICM outside of the East Asian Seas region.

Current members of the network include the local governments of Bali, Indonesia; Batangas, Bataan and Cavite, Philippines; Chonburi, Thailand; Danang, Vietnam; Klang, Malaysia; Nampo, DPR Korea; Sihanoukville, Cambodia; Shihwa, RO Korea; and Xiamen, PR China. ■

## Working Group Meeting on the Regional Implementing Mechanism for the SDS-SEA

15–18 May 2005 • Manila, Philippines

The Working Group Meeting on the Regional Implementing Mechanism for the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA) will be held in Manila, Philippines on 15–18 May 2005 with the Department of Environment and Natural Resources of the Philippines serving as host.

The Working Group Meeting will prepare working drafts on the "transformation of the existing project-based PEMSEA arrangement into a fully functional, self-sustaining regional implementing mechanism for the SDS-SEA"; the draft Partnership Agreement 2006; and the draft Partnership Operating Arrangements. These drafts will be refined based on the feedback from the national consultation, and submitted for consideration to the 11<sup>th</sup> Programme Steering Committee Meeting.

The SDS-SEA is a package of strategies, principles and action programs for achieving sustainable development for the Seas of East Asia. It represents implementation approaches for the integrated management and the sustainable use of the environment and its resources. ■

## ICM Study Tour

April 2005 • Xiamen, PR China

PEMSEA is organizing an integrated coastal management (ICM) Study Tour in Xiamen, PR China in April 2005 as part of its capacity-building efforts in the East Asian region. The purpose of the study tour is to provide the participants the opportunity to witness the impacts of the ICM program being implemented in Xiamen.

Participants will visit several places that represent the efforts of the Xiamen Municipal Government with regard to marine pollution prevention, sustainable coastal tourism development, coastal landscaping and prevention of coastal erosion.

They will also have opportunities to interact with local stakeholders and experts to discuss the city's experiences in interagency coordination, institutional reform, sea space zonation, integrated enforcement, scientific inputs and ICM capacity building. ■

## 11th Programme Steering Committee (PSC) Meeting

1–4 August 2005 • Siem Reap, Cambodia

The 11th Programme Steering Committee (PSC) Meeting will be held in Siem Reap, Cambodia on 1–4 August 2005. PSC meetings serve as a venue for PEMSEA participating countries to review the progress of PEMSEA activities in the East Asian region and to make recommendations for their effective implementation.

The objectives of the 11th PSC Meeting are to:

- Review and approve the Draft Documents on the Regional Implementing Mechanism for the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA) submitted by the Working Group;
- Secure country support for the transformation of RPO to PRF and PRF Secretariat services;
- Discuss different financial sources and arrangements for the third phase of the programme; and
- Discuss further details on EAS Congress 2006 and Ministerial Forum.

The Ministry of Environment of Cambodia will host the 11th PSC Meeting. ■

# The East Asian Seas Congress 2006

## One Ocean, One People, One Vision

12 to 16 December • PR China

*We only have **one ocean**...  
and it needs our help.*

*As **one people**,  
it is time once again to come together  
in a globally significant event...*

*to make a commitment and work,  
guided by **one vision**,  
for the sustainable development of our seas  
and the welfare of future generations.*

Featuring the

**Ministerial Forum on the Implementation of the  
Sustainable Development Strategy for the Seas of East Asia (SDS-SEA)\***  
(14 to 15 December)

**International Conference on Coastal and Ocean Governance**  
(12 to 14 December)

and

**Meeting of the EAS Partnership Council\***  
(16 December)

### Learn from exciting and informative workshops on

#### COASTAL AND MARITIME SAFETY AND SECURITY

- Natural and Man-made Hazard Management (Tsunamis, Floods, Invasive Species, Ballast Water, etc.)
- Port Safety, Security, Health and Environment Management
- Oil and Chemical Spill Contingency Planning and Response

#### SUSTAINABLE COASTAL AND OCEAN DEVELOPMENT

- The Millennium Development Goals (MDGs) and Agenda 21
- Community in Sustainable Development
- Women and Youth in Coastal and Ocean Management
- Environmentally-friendly Aquaculture
- Right-based Fisheries Management
- Shared Fishery Stock Management
- Eco-tourism

#### ECOSYSTEM MANAGEMENT

- Habitat Management and Restoration
- Ecosystem Management of River Basins, Estuaries and Coastal Seas
- Effective Management of Marine Protected Areas
- Particularly Sensitive Sea Areas (PSSAs)
- Large Marine Ecosystems (LMEs)

#### ECO-LABELLING AND CERTIFICATION

- Codification of ICM Practices
- Marine Stewardship
- Clean and Safe Beaches

#### ECONOMICS AND FINANCE

- Incentive-based Regulatory Instruments
- Innovative Financing (Environment Bond, Revolving Fund)

#### MANAGEMENT-RELATED SCIENCE AND TECHNOLOGY

- Carrying Capacity for Coastal and Marine Uses
- Radio-isotope Technology for Coastal and Ocean Management
- Ecosystem Monitoring and Indicators
- Integrated Information Management Systems

#### COASTAL AND OCEAN GOVERNANCE

- Economic Contribution of the Marine Sector
- Integrating Social Science Concerns into ICM
- Advocacy and Leadership in Coastal and Ocean Management
- Regime-building in Coastal and Ocean Governance
- Approaches to Interagency Collaboration and Partnerships

and many more interesting topics!

### Take part in various side events

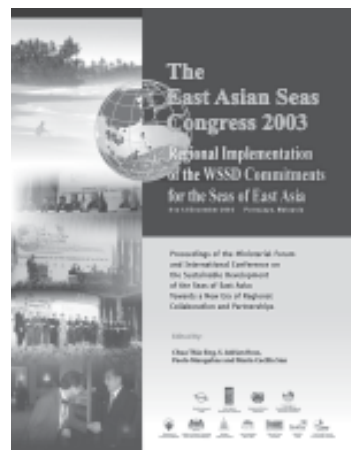
- Financial Advisory Board on Environmental Investments Meeting\*
- Media Forum on Partnerships in Environmental Communication
- Inaugural Meeting of the PEMSEA Network of Local Governments for Sustainable Coastal Development (PNLG)
- Meeting of the Nippon Foundation Research Task Force on the Dynamics of Regional Cooperation on Oceans and Coasts\*
- Meeting of the GEF Small Grants Programme Coordinators\*
- Launching of the Regional C2C Network
- Recognition Night
- Exhibition/ Trade Show
- Poster Session
- Field Trip
- Youth Leaders Forum
- Youth Art Show/Contest
- Ocean Vessel "Open House" for Local Schoolchildren.

*\*By invitation*

**We would be delighted  
to hear from you!**

Please contact the  
EAS Congress 2006 Secretariat thru

Mailing Address: GEF/UNDP/IMO PEMSEA,  
P.O. Box 2502, Quezon City 1165, Philippines  
Tel: (632) 9202211 • Fax: (632) 9269712  
Website: [eascongress.way.to](http://eascongress.way.to)  
E-mail: [congress@pemsea.org](mailto:congress@pemsea.org)



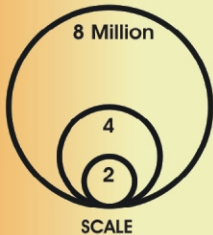
Available at [pemseabookstore.way.to](http://pemseabookstore.way.to).



# GROWING CITIES, THREATENED COASTS

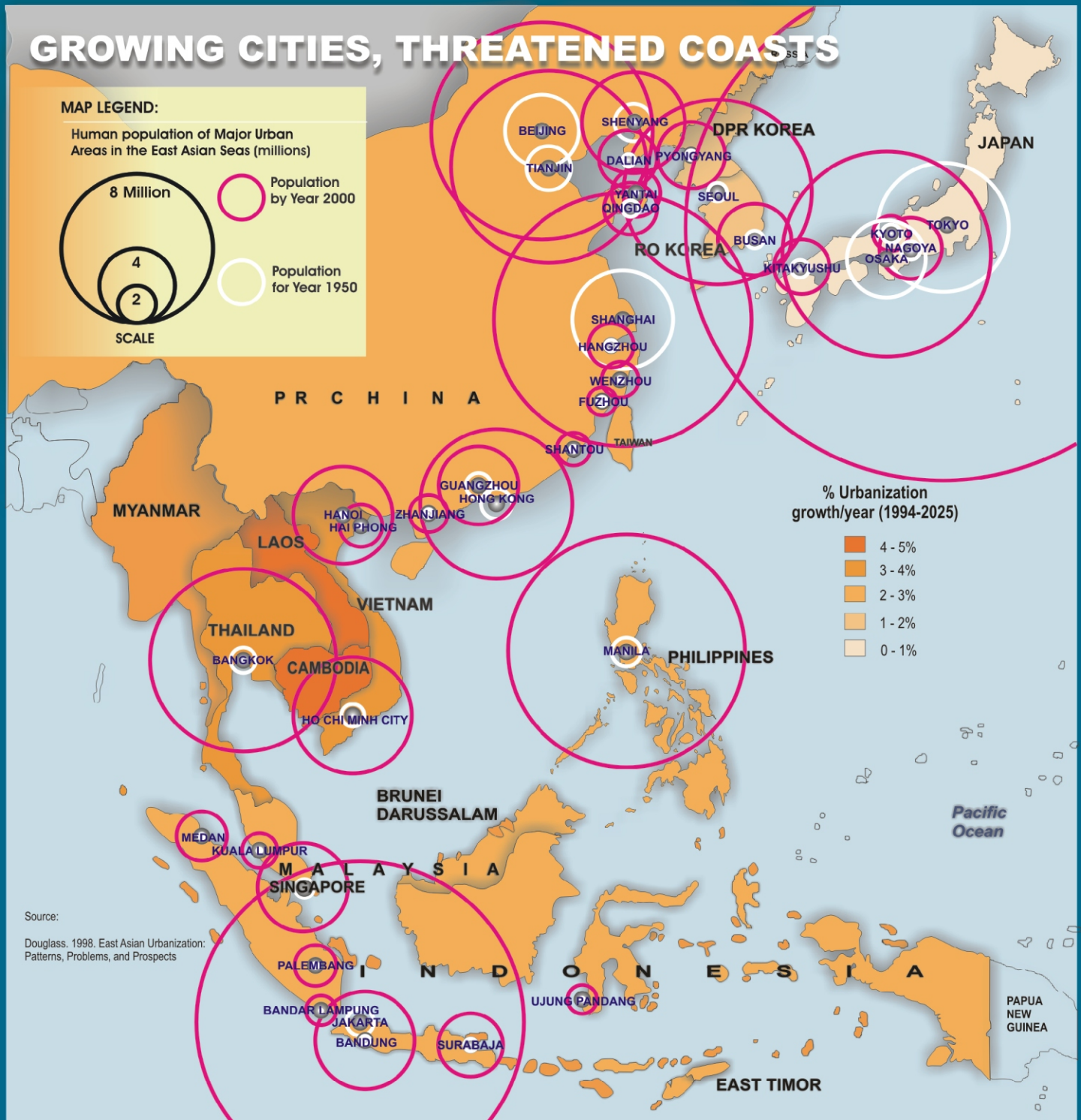
## MAP LEGEND:

Human population of Major Urban Areas in the East Asian Seas (millions)



Population by Year 2000

Population for Year 1950



Source:

Douglass. 1998. East Asian Urbanization: Patterns, Problems, and Prospects

## Exploding Cities

For the past 50 years, the East Asian Seas region has seen a dramatically increasing trend in the population of its urban areas. People are packing up and moving to the cities in search of opportunities for a better life or are simply drawn in by the demands of a growing urban world. The effects of urbanization and globalization has resulted in the formation of very large urban areas that are absorbing hundreds of thousands of people on a yearly basis. As countries in the region compete for global investments, capital cities – mostly located in coastal areas – and key international ports, have taken the lion's share of foreign direct investments in the region.

With the growth of urban areas comes the challenge of environmental degradation due to increasing urban population, the concentration of industries in coastal areas, the expansion of maritime activities, and the unsustainable production and consumption patterns. In many urban areas of the region, rivers are heavily polluted and do not support life, human waste is contaminating drinking water supplies, land for solid waste disposal is diminishing, there is unsustainable depletion of groundwater and some areas are threatened by seawater intrusion. All these issues combine to create a significant challenge to the human and environmental health of urban areas in the region.

Balancing economic development with environmental protection is a significant challenge. For national governments, implementing an integrated management approach to address environmental issues, such as those posed by coastal urban areas, is a viable option that can lead to sustainable development. The challenge is serious, and one that countries cannot afford to lose time on lest it undo all the economic gains realized in past decades.

COUNTRY	PERCENTAGE OF NATIONAL POPULATION LIVING IN URBAN AREAS		CHANGE
	YEAR 1950	YEAR 2000	
BRUNEI	26.8%	73.9%	+ 47.1%
CAMBODIA	10.2%	16.9%	+ 6.7%
PR CHINA	12.5%	35.8%	+ 23.3%
DPR KOREA	31.0%	60.2%	+ 29.2%
INDONESIA	12.4%	42.0%	+ 29.6%
JAPAN	34.9%	65.2%	+ 30.3%
MALAYSIA	20.4%	61.8%	+ 41.4%
PHILIPPINES	27.1%	58.5%	+ 31.4%
RO KOREA	21.4%	79.6%	+ 58.2%
SINGAPORE	100.0%	100.0%	+ 0%
THAILAND	16.5%	31.1%	+ 14.6%
VIETNAM	11.6%	24.3%	+ 12.7%

Source: UN. 2001. World Urbanization Prospects 2001 Revision