



# ICM Solutions

## Building and Sustaining ICM Leaders and Practitioners for Effective Coastal Governance

- Integrated Coastal Management (ICM) is a powerful, practical tool for operationalizing sustainable development and the principles of ecosystem based management (EBM) in coastal and marine areas.
- Developing skilled coastal management leaders and practitioners at the local and central levels of government is essential in establishing and sustaining successful national and regional ICM programs.
- Capacity building and knowledge transfer are not a one-off commitment but a continuing process that is built into successful ICM programs at the national and local levels.



# Context

Coastal and marine ecosystems are extremely complex, highly diverse, and complicated systems. They are home to various species and habitats that provide a wide variety of products and services to coastal communities and society in general. Various economic activities take place in the coastal area including aquaculture and coastal fisheries, tourism and marine transportation of goods, among others. With such competing demands, local leaders oftentimes face difficulty in making decisions that will strike a balance between protecting the functional integrity of natural resource systems while allowing economic development to progress.

The increased demand for building ICM capacities in the region is driven by various developments, including:

- A number of international instruments (e.g., United Nations Framework Convention on Climate Change or UNFCCC; Convention on Biological Diversity or CBD; Rio+20: The Future We Want) are advocating the use of integrated management approaches as a tool for addressing the challenges and constraints to sustainable development;
- Increase in ocean policies and ICM or ICM-related policies and legislation. Fifteen to twenty years ago ocean and ICM legislation were not widely in place;
- The local government experiences with issues such as marine pollution, degradation of habitats, competing uses for available resources and space, climate change, and increasing frequency of disasters have resulted in increasing buy-in to address problems using an integrated approach.
- The importance of coastal and marine areas, and the services that they provide to the GDPs of countries in the East Asian region, are estimated in the range of 10% to 20% of the GDP in some countries.

# Solutions

PEMSEA has developed and implemented a strategic approach to establishing a core group of ICM leaders and practitioners in ICM and related skills development programs over the past 20 years. The following solutions delineate the approaches used by PEMSEA and the results that have been achieved.

**Train systematically (Plan, Do Check, Act).** The ICM model training course developed by PEMSEA was designed to provide practical skills to managers and technical personnel, from planning to implementation, evaluation to assessment and continual improvement.

Each stage of the six-stage ICM process employs specific tools and methodologies, which provided project personnel the opportunity to learn and strengthen technical skills progressively as they implement their respective ICM programs (Box 1).

Limited funding for training is a common concern among local governments implementing ICM programs. Thus, training programs were designed and conducted parallel to project activities and directly supported ICM program development and implementation. Training participants were carefully selected giving priority to the task teams

directly involved in project activities. Training programs have specific outputs that were utilized by the sites after the training.

**Learn by Doing.** ICM programs provided local staff with the opportunity to develop their capacities in the various aspects of ICM development and implementation. ICM sites enabled program personnel to apply the newly acquired skills from the training and to further strengthen their capacities in various ICM tools and methodologies through hands on application. Active participation in various project activities and exposure to practical issues enabled the local staff to expand their knowledge and practical skills through personal experience.

**Involve the scientific community.** Academic and research institutions played an important role in the ICM programs. Scientific tools and methodologies needed in identifying and prioritizing environmental issues and concerns, such as conducting baseline assessments and environmental risk assessment, normally require scientific expertise. Therefore, academic and research institutions were considered as major stakeholders and were included in the conduct of PEMSEA training, both as participants and/or resource persons. The benefit derived from this integrated approach was the exposure of scientists and researchers to practical issues and improved understanding of how science can better relate to coastal management needs and interventions.

## BOX 1. BUILDING LOCAL CAPACITIES THROUGH THE ICM PROCESS.

Stages	Local capacities to strengthen
<b>Stage 1: Preparing</b>	<ul style="list-style-type: none"> <li>• Project development and management for project management staff</li> <li>• ICM training for planning and technical staff and stakeholders</li> <li>• Consultation workshops for the different stakeholders</li> </ul>
<b>Stage 2: Initiating</b>	<ul style="list-style-type: none"> <li>• Prioritizing environmental issues (SOC, IIMS, risk assessment)</li> <li>• Formulating management actions (coastal strategy)</li> <li>• Systematically engaging stakeholder (communication plan)</li> </ul>
<b>Stage 3: Developing</b>	Training consultations for the formulation of: <ul style="list-style-type: none"> <li>• Policy and institutional arrangements</li> <li>• Coastal Strategy implementation plan, issue- and area-specific action plans</li> <li>• Coastal use zoning</li> <li>• Integrated environmental monitoring</li> <li>• Sustainable financing mechanisms</li> </ul>
<b>Stage 4: Adopting</b>	Local government and stakeholders' consultations to facilitate the approval and adoption of: <ul style="list-style-type: none"> <li>• Coastal strategy and action plans</li> <li>• Organizational, legal and financing arrangements</li> </ul>
<b>Stage 5: Implementing</b>	Developing/providing human and financial resources for the implementation of: <ul style="list-style-type: none"> <li>• Coordinating and program management mechanisms</li> <li>• CSIP/action plans</li> </ul>
<b>Stage 6: Refining and Consolidating</b>	<ul style="list-style-type: none"> <li>• Monitoring, evaluation and continual improvement</li> <li>• Improving methodologies and approaches; revision of strategies and action plans</li> <li>• Integrating the ICM program into the planning and development cycle of local governments</li> <li>• Re-training of core or new staff</li> </ul>

**Utilize the ICM demonstration sites for local capacity building.** ICM demonstration sites serve as breeding ground for local capacity building. In particular, ICM demonstration sites (Batangas, Philippines, and Xiamen, PR China) established by PEMSEA in the early phase of the regional programme became perfect examples. Experiences of Batangas and Xiamen have served as working models for the implementation of ICM in Bali (Indonesia), Bataan (Philippines), Chonburi (Thailand), Da Nang (Viet Nam), Nampho (DPR Korea), Port Klang (Malaysia), Shihwa (RO Korea), and Sihanoukville (Cambodia), among others.

The ICM process enabled local governments and stakeholders to generate, package, and utilize essential information from the coastal area and provided an enabling environment and platform for various stakeholders to undertake collaborative planning and develop solutions for many of their problems affecting the marine environment. To date, more than 40 ICM sites have been developed in the EAS region. These sites offer capacity development opportunities to local personnel.

**Learn by Seeing.** One of PEMSEA's popular approaches to changing perceptions of policymakers, local government officials and political leaders from a "sectoral" to an "integrated" approach to coastal management is the study tour program. The program enabled these leaders to gain exposure to practical issues affecting sustainable development of coastal and marine areas and to witness the socioeconomic benefits of ICM. Various aspects of ICM implementation were demonstrated in the study tour of ICM sites. Each ICM site has focus areas where approaches, progress and achievements can be demonstrated.

Some of the popular sites for the ICM study tour in the Philippines are Bataan, Batangas, and Cavite. The focus areas of these sites are private sector involvement in ICM, sustainable financing, the application of coastal use zoning, livelihood programs, and habitat protection and management. Batangas province, in particular, highlights how the ICM scaling up process has developed; from a bay-wide ICM programme, it has expanded geographically to cover the three bays of the province. The scaling up process, including the integration of ICM into the planning process of local governments, is a good practice for replication by other local governments.

**Good Practice – Learning by Seeing**

*Exposure to successful ICM sites is believed to be an effective strategy that enabled the changing of mindset of political leaders and local government officials toward an integrated approach to coastal and marine resource management.*

The ICM program in Xiamen highlights how an innovative scientific and technological support system contributes to effective coastal management. The implementation of marine functional zoning is an example of how the expertise of the scientific group from Xiamen University was mobilized to strengthen planning and investment processes in the city.



**Mobilize Regional and National Task Forces.** To address the lack of expertise at the local level, sharing of experience and skills within a country or between countries helps to develop the required expertise. A good example is the case of the ICM program in Cambodia. Due to the lack of technical personnel with ICM knowledge and experience, the program started with the assistance of a regional task force organized by PEMSEA. This helped Sihanoukville to develop capacity in environmental profiling and public awareness activities. Interagency task teams at the national and local levels were also established to undertake coastal strategy development and action planning and implementation, again assisted by the regional task force. Over time, the province developed and enhanced capacities of local personnel in the various aspects of ICM. Presently, the experiences and skills that have been transferred and applied by local government personnel in Sihanoukville, are now being utilized to replicate ICM in three other coastal provinces. Sihanoukville is now used as a model and training ground for coastal management initiatives in the country, which has also translated into the development and improvement of coastal management policies at the national level.

**Conduct Internship and Fellowship Programs.** Part of PEMSEA's capacity development program includes providing young professionals from the region with an opportunity to strengthen their technical, administrative, and management skills through internship and fellowship programs. The internship training program is designed based on specific needs of the intern. The interns choose their specific subject areas, in most cases focusing on the various ICM tools and methodologies. ICM program needs, such as project proposals, identifying workable program strategies, SOC reports, and case studies, to name a few, have been completed by the interns for their sites during the program. Thus, the program enabled interns to directly provide technical support to ICM sites with guidance of PEMSEA specialists and technical officers. Immediate needs and issues were responded to through the interns' access to PEMSEA technical staff. Examples of interns' outputs are presented in Table 1.

**Good Practice – Hands-on training on ICM Tools and Methodologies**

*“Through PEMSEA’s tailored training program and guidance from PEMSEA staff, I learned more about the State of the Coasts (SOC) reporting system, the integrated information management system (IIMS) and other integrated coastal management (ICM) tools used for the sustainable development of coastal areas in the region.”*

*– Lu Xingwang,  
State Oceanic Administration,  
PR China*

**Table 1. Interns Outputs.**

Cambodia	Draft State of the Coasts Report of Sihanoukville
China	Refined Xiamen State of the Coasts report Refined the Jiulong Integrated River Basin and Coastal Area Management Plan and Operational Strategy Refined Case Study on Risk Mitigation through Effective Implementation of Integrated Management in Xiamen Draft Operating Guidelines for PNLG Secretariat Operations Case study development and review of coastal use zoning training modules
DPR Korea	Refined Taedong River Management Strategy
Indonesia	Draft Action Plan for ICM Scaling up: Jakarta Bay and Ciliwung River, work program on pollution reduction
Lao PDR	Xedone Integrated River Basin Sustainable Development Strategy State of the Coasts Draft Report for Sedone River
Timor-Leste	Inputs to the State of the Coasts Report Action plans for the development of livelihood programs in two districts and at the national level
Viet Nam	Refined workplan and budget of ICM Programs Draft outlines for the State of the Coasts Report Action plans for project proposal development for Small Grants Programme (SGP) projects



*“Before I worked with PEMSEA, I felt that I did not understand what environment and coastal management meant. But in 2001, after being trained in ICM, my knowledge on the environment and coastal management improved. Since then, I worked as project administration staff for the PMO for the ICM implementation in Sihanoukville, Cambodia. Using the learning by doing approach and under the full technical support of PEMSEA Regional Task Force, I became a technical staff and coordinated ICM activities with the concerned agencies.”*

*– Prak Visal, Technical Officer,  
Project Management Office (PMO),  
Sihanoukville ICM Program, Cambodia*

## Results

### **A critical mass of coastal managers and practitioners trained.**

It is believed that implementing ICM at the local level has a good chance of achieving sustainable development. Therefore, significant capacity building efforts of PEMSEA were targeted at the local level. From 2008 to 2013 alone, PEMSEA has conducted over 77 trainings, workshops, and orientation activities participated in

by 2,426 individuals from 12 countries from the region. Of the activities conducted, 50% of these were conducted at the local or site level, 34% was at the national level, and 16% was at the regional level (fig. 1).

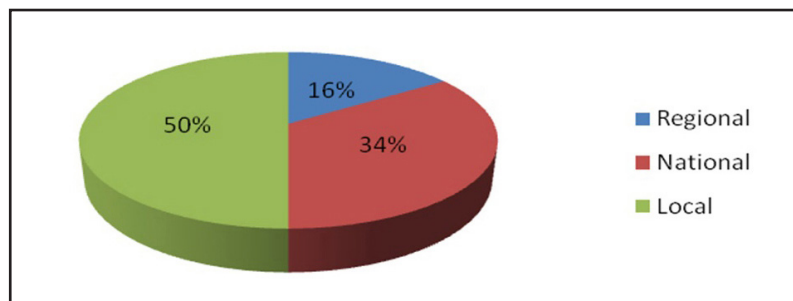


Figure 1. PEMSEA activities by level (2008-2013).

From 2008 to 2013, 48% of interns hosted at the PEMSEA Resource Facility (PRF) were ICM project personnel from local governments tasked to develop and oversee and/or implement ICM programs in their respective localities. The

interns chose their specific subject areas which were directly supporting the technical requirements of the ICM sites. The internship program facilitated the implementation of ICM program at various sites and promoted the transfer of knowledge and skills through hands on training. Many of PEMSEA's past interns are now occupying key positions in the central or local governments and are able to contribute to the development and implementation of the national ICM programs in their respective countries.

**Collaborative planning among stakeholders promoted.** Better understanding on the integrated approach to coastal and resource management enabled key stakeholders to consolidate their initiatives and resources to manage coastal areas and facilitate consensus building on issues affecting the coastal and marine environment. The process of developing a shared vision and strategy for the ICM sites enabled the local people to understand their specific roles in promoting sustainable development of their respective coastal areas.

**Informed decisionmaking.** As a result of ICM awareness and training programs undertaken at the respective ICM sites, local government personnel and stakeholders were able to identify and prioritize efforts in addressing various issues in their coastal areas, and developed and implemented management programs that were responsive to specific issues or problems.

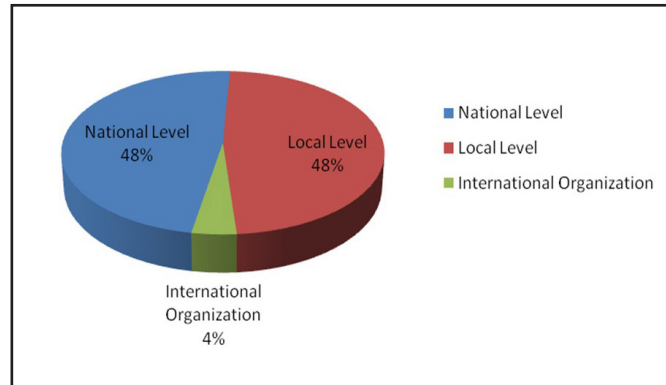


Figure 2. Interns' and Fellows' affiliations (2008-2013).

## Lessons Learned

With the 20 years of ICM experience in the East Asian region, the following good practices and lessons learned in building capacities of ICM practitioners and leaders for effective coastal governance are:

**By conducting training in parallel with program activities and timeframes at ICM sites,** trainees are able to apply newly acquired skills and understanding immediately in their daily work. As a result, trainees gain confidence in the application of new skills and the local governments benefit from expanded capacities of existing staff to not only implement an ICM project, but strengthen local capacity in governance of coastal and marine areas and resources.

**By engaging the different stakeholders** (e.g., national and local government staff; university researchers and scientists; NGOs; community groups) in ICM learning activities, there is a natural movement to develop relationships, share expertise and skills, and learn from each other. This promotes greater understanding and ownership across sectors of the community, as well as across different scientific disciplines.

**Study visits to successful ICM sites provide opportunity for peer-to-peer learning,** which can change the mindset of political leaders and local government officials who are having difficulty understanding the rationale and benefits derived from integrated approaches to coastal and marine resource management. By discussing common challenges and solutions with elected officials and policymakers in other countries or ICM sites, government leaders learn from each other and confer on common socioeconomic, environmental and political issues, and how ICM has been able to address them.

### Keywords

ICM; training program; study tour; scientific support; capacity development; training; regional task force;

### For further reading

PEMSEA. 2006. The Dynamics of Integrated Coastal Management: Practical Applications in the Sustainable Coastal Development in East Asia. GEF/UNDP/UNOPS Regional Programme on Building Partnerships in Environmental Management for the Seas of East Asia (PEMSEA), Quezon City, Philippines.

PEMSEA. 2010. Level 1: Understanding ICM-Model Course on ICM. GEF/UNDP/UNOPS Regional Programme on Building Partnerships in Environmental Management for the Seas of East Asia (PEMSEA), Quezon City, Philippines.

PEMSEA. 2010. PEMSEA Accomplishment Report (2008-2010). Partnerships in Environmental Management for the Seas of East Asia (PEMSEA), Quezon City, Philippines.

PEMSEA. 2013. People. Partners. Progress: PEMSEA Accomplishment Report (2011-2013). Partnerships in Environmental Management for the Seas of East Asia (PEMSEA), Quezon City, Philippines.

Policy Brief: Strategic Interventions for Developing Capacity to Improve Governance of Oceans, Coasts, and Small Island Developing States over the Period 2008 to 2018.

### For further information, please contact:

Chua Thia-Eng, Chair Emeritus, East Asian Seas Partnership Council, PEMSEA ([thiaengchua@gmail.com](mailto:thiaengchua@gmail.com))

Stephen Adrian Ross, Executive Director, PEMSEA ([saross@pemsea.org](mailto:saross@pemsea.org))

Diana Factuar, Training Specialist, PEMSEA ([dfactuar@pemsea.org](mailto:dfactuar@pemsea.org))

ICM Solutions is a digest of some of the contributions to an ICM case studies publication currently being prepared by PEMSEA, Coastal Management Center (CMC) and the World Bank (publication pending).



#### PEMSEA Resource Facility

**Tel.:** (+632) 929 2992

**Fax:** (+632) 926 9712

[info@pemsea.org](mailto:info@pemsea.org)

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