



PEMSEA Accomplishment Report

2014-2015



PEMSEA Accomplishment Report

2014-2015

PEMSEA Accomplishment Report 2014–2015

November 2015

This publication may be reproduced in whole or in part and in any form for educational or non-profit purposes or to provide wider dissemination for public response, provided prior written permission is obtained from the PEMSEA Executive Director, acknowledgment of the source is made and no commercial usage or sale of the material occurs. PEMSEA would appreciate receiving a copy of any publication that uses this publication as a source.

No use of this publication may be made for resale, any commercial purpose or any purpose other than those given above without a written agreement between PEMSEA and the requesting party.

Published by Partnerships in Environmental Management for the Seas of East Asia (PEMSEA).

Printed in Quezon City, Philippines

PEMSEA.2015. PEMSEA Accomplishment Report 2014–2015. Partnerships in Environmental Management for the Seas of East Asia (PEMSEA), Quezon City, Philippines. 45 p.

ISBN 978-971-812-036-1

This report was prepared by Partnerships in Environmental Management for the Seas of East Asia.

The contents of this publication do not necessarily reflect the views or policies of PEMSEA Country Partners and its other participating organizations. The designation employed and the presentation do not imply expression of opinion, whatsoever on the part of PEMSEA concerning the legal status of any country or territory, or its authority or concerning the delimitation of its boundaries.

PEMSEA Resource Facility
P.O. Box 2502, Quezon City 1165, Philippines
Tel: (+632) 929-2992 Fax: (+632) 926-9712
Email: info@pemsea.org
www.pemsea.org

MESSAGE

From the East Asian Seas Partnership Council Chair



Amb. Mary Seet-Cheng

The East Asian Sea (EAS) region has reached new heights in the past year. PEMSEA has taken another step towards its transformation with its headquarters formally recognized by the Government of the Republic of the Philippines. Ensuring its sustainability and cementing its place in the region, PEMSEA will continue to work as an organization of committed partners towards the sustainable development of the region's coastal and marine resources in the years to come.

The PEMSEA Accomplishment Report 2014-2015 provides an overview of the progress made at the regional, national and local levels in support of the regional marine strategy, the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA). PEMSEA's accomplishments from 2014 to 2015 chronicle innovative policies, legislation and capacity enhancement initiatives at the national level. At the local level, on-the-ground implementation of ICM programs has been extended to more than 14 percent of the region's coastline, engaging local governments, coastal communities and their partners in a variety of critical issues ranging from food security and alternative livelihoods, to land and sea use zoning, to natural and man-made hazard reduction and management, and so on. Of course not all initiatives and accomplishments of the PEMSEA partners and collaborating organizations can be included in one report. But the breadth and content of the snapshots contained in this report offer some insight into the range of work being done in support of the SDS-SEA and the many stakeholders that are contributing to and being affected by such efforts.

I would like to congratulate the PEMSEA Secretariat for their dedication to the transformation of PEMSEA to a full-fledged international organization and to its continuing efforts in support of promoting and facilitating SDS-SEA implementation among PEMSEA Country and Non-Country Partners. These efforts build upon the legacy of experience since the organization's founding in 2003, and ensures PEMSEA's steady progress towards its goal of sustainable development of the seas of the region.

PEMSEA is about to enter a new post-2015 era with an updated regional marine strategy and a new set of targets to map our progress. The East Asian Seas (EAS) Congress 2015 and the Fifth Ministerial Forum in Da Nang City, Viet Nam, in November 2015 will highlight the theme, Global Targets, Local Benefits: Setting the Sustainable Development Agenda for the Seas of East Asia beyond 2015. This Congress will set the stage for new and renewed partnerships and commitments to the SDS-SEA 2015. I look forward to the outcomes of the Congress and the Ministerial Forum, which will surely add to PEMSEA's continuing pursuit of integrated management solutions across the Seas of East Asia – one economy, one community, one partner at a time.

MESSAGE

From the PEMSEA Executive Director



Mr. Stephen Adrian Ross

PEMSEA's mission is to foster and sustain healthy and resilient coasts and oceans, communities and economies across the Seas of East Asia through integrated management solutions and partnerships. For the past two decades, we have been witness to important advances at the global, regional, national and local levels, along with an increasing awareness of the significance of healthy oceans and the provisioning, regulating, supporting and cultural services that the ecosystems of the seas of East Asia provide, not only for the region but globally.

Taking stock, the PEMSEA Accomplishment Report for 2014-2015 report confirms that we are on track to attain the four strategic targets established in 2006 during the Second Ministerial Forum in Haikou, PR China, although not necessarily in the manner or timeframe that we had expected. This confirms that it's not so easy to see 9 to 10 years down the road with great accuracy.

Despite the various challenges, we are pleased with the collective accomplishments of PEMSEA Partners for 2014 and 2015. Not the least of these accomplishments has been an updating of the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA) to incorporate new priorities and commitments made in various international instruments at the global level, but put into the context of priorities, objectives, changing conditions, knowledge and capacities at the regional and national levels. At the same time, PEMSEA intensified its work with countries, ICM sites and various collaborating organizations, preparing, agreeing on and initiating work to expand ICM implementation over the next five years. Another key activity involved designing and building a regional platform for sharing knowledge and experience in coastal and ocean governance and management, as well as applying knowledge products and services to scale up partnerships and investments in ICM across the region.

The vital progress of SDS-SEA implementation over the past two years has not come about through the work of PEMSEA alone but through the work of national and local governments, international organizations, donors, universities, business groups, coastal communities, community-based organizations, and so on, through combined and individual efforts. This will be even more evident in the future as PEMSEA's partnerships evolve still further.

I wish to thank the Executive Committee Chairs, Ambassador Mary Seet-Cheng, Undersecretary Analiza Rebuelta-Teh and Dr. Chul-hwan Koh, and Co-Chairs Dr. Antonio La Viña, Dr. Zhang Haiwen, and Mr. Makoto Harunari, for their guidance and support over the past two years.

On behalf of the officers and staff of PEMSEA, I wish to also gratefully acknowledge our Country and Non-Country Partners, our sponsoring organizations – the Global Environment Facility (GEF), United Nations Development Programme (UNDP) and the World Bank, and our collaborators and supporters for extending valuable assistance in various forms.

Finally, PEMSEA would not have been able to deliver its share in the partnership without the dedication and commitment of its officers and staff, with whom I have had the privilege to work. Thank you all.

Table of Contents

Message from the East Asian Seas Partnership Council Chair	v
Message from the PEMSEA Executive Director	vi
Looking back... Looking forward	1
Target 1: A self-sustained regional partnership mechanism for the implementation of the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA)	1
Target 2: National coastal and ocean policies and supporting institutional arrangements in place in at least 70 percent of Partner Countries	2
Target 3: ICM programs for sustainable development of coastal and marine areas and climate change adaptation covering at least 20 percent of the region's coastlines	3
Target 4: A report on the progress of ICM programs every three years, including measures taken for climate change adaptation	4
SDS-SEA 2015: Integrating global targets and objectives into the regional marine strategy	4
Reaching for Improved Ocean Governance and Blue Economy Development	6
Providing Solutions through ICM	9
Finding Ways that Work	32
PEMSEA Financial Overview 2014	40



Looking Back... Looking Forward

Making changes in the manner that coastal and marine areas in the East Asian region are being managed requires perseverance and long-term commitment. The important advances achieved by PEMSEA in 2014 -2015 are not a one-time effort, but a result of the sustained efforts of Partners and collaborators over many years. As it moves forward with its post-2015 program, PEMSEA will remain vigilant to uphold and build upon these gains.

Without doubt, 2015 is a milestone year. Not only is it the culminating year for the UN Millennium Development Goals (MDGs) and the Hyogo Framework for Action, but also for SDS-SEA implementation and the four strategic targets adopted by the Second Ministerial Forum in 2006.

Progress with respect to those four strategic targets may be summarized as follows:

Target 1: A self-sustained regional partnership mechanism for the implementation of the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA)

On May 12, 2015, the ratification of the Headquarters Agreement between the Government of the Republic of the Philippines and Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) was endorsed by the Philippine Senate. The Agreement grants privileges, immunities and facilities by the Government of the Philippines to PEMSEA to facilitate its functions and operations as an international organization. This marked the completion of a nine-year transformation process for PEMSEA, which began in 2006 when Partner Countries

committed to change PEMSEA from a project-based arrangement into a self-sustained and effective regional collaborative mechanism with a mandate to pursue the implementation of the regional marine strategy, the SDS-SEA.

With the transformation complete, a new PEMSEA brand and logo was developed in collaboration with Partners in 2014 and 2015. The new brand and logo will be launched during the EAS Congress 2015 in Da Nang, Viet Nam, featuring “solutions for sustainable seas” and the advancement of PEMSEA Services as a set of service offerings designed to support the needs of PEMSEA Partners, coastal communities and other organizations and sectors committed to achieving the SDS-SEA objectives, targets and action programs.

A Project Cooperation Agreement was also signed between UNDP and PEMSEA in August 2014, recognizing PEMSEA as an Implementing Partner of UNDP and authorizing PEMSEA to provide project implementation services for the five-year, US\$10.6 million UNDP/GEF Project on Scaling up the Implementation of the SDS-SEA.

Target 2: National coastal and ocean policies and supporting institutional arrangements in place in at least 70 percent of Partner Countries

As of June 2015, ten of the twelve countries implementing the SDS-SEA, or 84% of the countries, have developed and implemented national policies, strategies, action plans and programs in coastal and ocean management and river basin management.

In addition, nine out of twelve countries, or 75% of the countries, have established national interagency and inter-sectoral coordination mechanisms for coastal and ocean management and river basin management. The most recent was the establishment of China’s National Oceanic Commission in 2013, which is considered to be the country’s high-level interagency mechanism that will coordinate the development and implementation of the national marine strategy and other marine-related initiatives. In the Philippines, the establishment of a national coordinating mechanism is pending the passage of its ICM Law. The House of Representatives of the Philippines has approved the ICM Bill in August 2015. The ICM Bill is currently being reviewed by the Philippine Senate.

Cambodia, DPR Korea, Indonesia, Lao PDR, Philippines, Thailand, Timor-Leste and Viet Nam have all prepared country-specific SDS-SEA implementation plans, while China has adopted a national framework plan for SDS-SEA implementation in 2012.

Viet Nam’s ICM Strategy to 2020 and Vision to 2030 was approved by the Prime Minister (No. 2295/QD-TTg) in December 2014. The National Action Plan (2016-2020) to implement the strategy, which is in line with the SDS-SEA framework, is undergoing preparation.

Table 1. Status of participating countries in policy, legislation and national coordination mechanisms related with coastal and ocean governance or water governance.

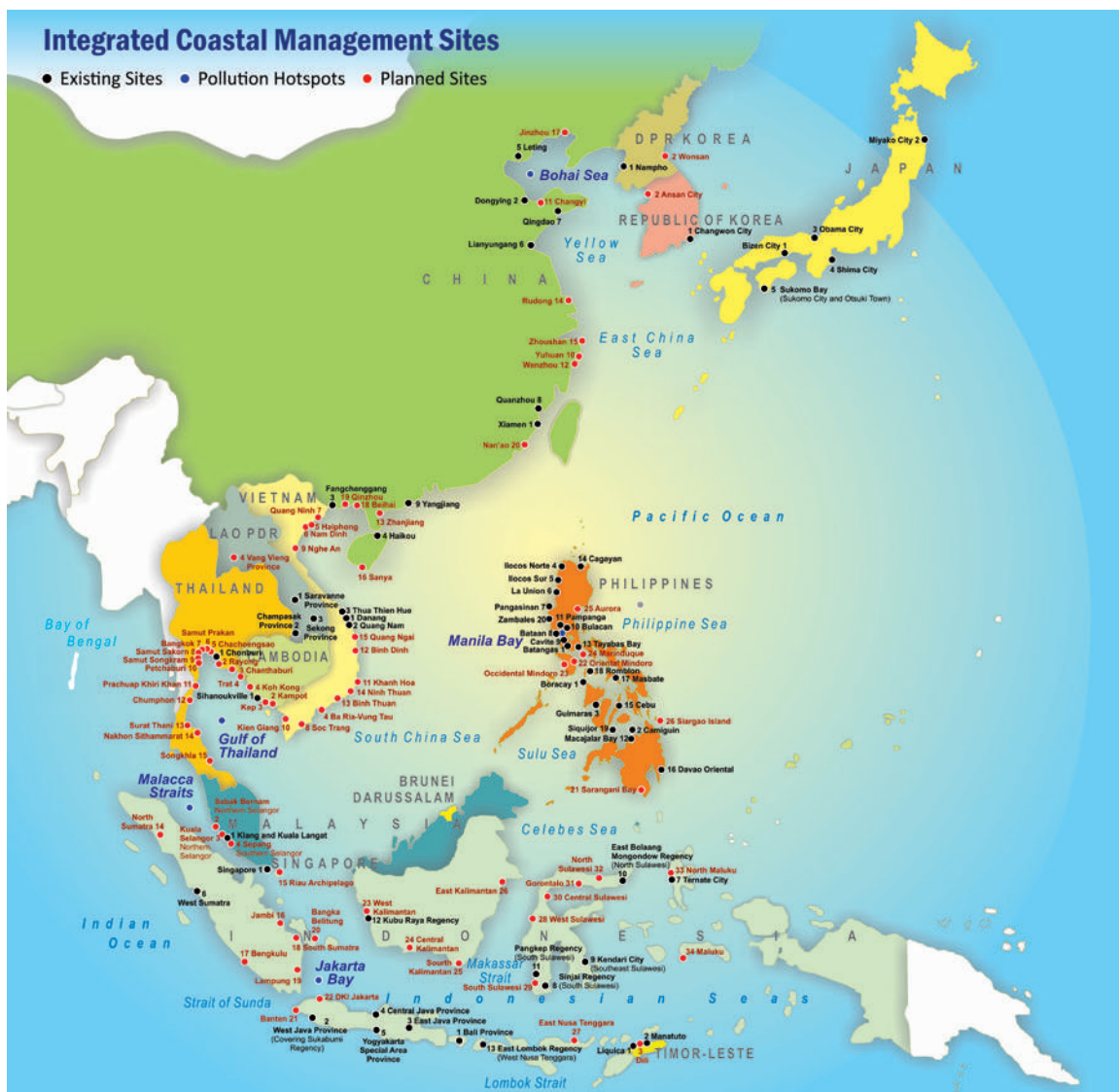
COUNTRY	Coastal and Ocean Policies or Water Governance Strategy	Coastal and Ocean, or Water Governance Legislation	National Institutional Arrangements for Coastal and Ocean Governance or Water Governance
Cambodia	✓		✓
China	✓	✓	
DPR Korea			✓
Indonesia	✓	✓	✓
Japan	✓	✓	✓
Lao PDR	✓		✓
Philippines	✓		
RO Korea	✓	✓	✓
Singapore	✓	✓	✓
Thailand	✓	✓	✓
Timor-Leste			✓
Viet Nam	✓	✓	
Number of countries with instruments	10	7	9

Most countries have also established national interagency coordination mechanisms under different aspects of sustainable development. For example, Cambodia, China, Indonesia, Philippines, Thailand and Singapore have established and operationalized their national climate change coordination mechanisms.

Target 3: ICM programs for sustainable development of coastal and marine areas and climate change adaptation covering at least 20 percent of the region's coastline

Integrated coastal management (ICM) programs cover approximately 14 percent of the region's coastline, as of June 2015. This represents significant progress since 2006, when ICM coverage amounted to about three percent of the entire coastline. Looking to the future, the prospect of achieving the identified target looks feasible. Buoyed with confidence in ICM development and implementation, countries have confirmed the development of a number of new ICM sites over the next five years, collectively representing ICM coverage of more than 25 percent of the region's coastline by 2021.

Figure 1. Map of local governments with committed ICM programs in the East Asian region.*



* All of the 74 coastal governments of RO Korea have established and implemented local coastal management plans in accordance with the Coastal Management Act and National Integrated Coastal Management Plans. On this map, only Changwon City and Ansan City are illustrated, as both are members of the PEMSEA Network of Local Governments.

Target 4: A report on the progress of ICM programs every three years, including measures taken for climate change adaptation

The first country and regional review of SDS-SEA implementation was submitted to the 4th Ministerial Forum in 2012. A second country and regional review will be submitted to the 5th Ministerial Forum in November 2015. The reviews have tracked the work being undertaken in each country and regionally to implement the SDS-SEA.

In addition, State of the Coast (SOC) reports have been initiated or completed by 29 local governments in 2015, in line with the PEMSEA guidebook for preparation of SOC reports. The SOC reporting system serves as an effective means of assessing the social, economic and environment performance of ICM programs, and provides constructive input to the broader planning, implementing and evaluating cycle of national and local governments.



SDS-SEA 2015: Integrating global targets and objectives into the regional marine strategy

More than ten years after the SDS-SEA was first adopted, the decision was made by the EAS Partnership Council to update the regional marine strategy. The objective of the update was to take into account the numerous ocean-related international instruments and obligations that had been adopted by Partner countries since 2003, as well as to keep the strategy in tune with country priorities and objectives. Some of the priority instruments targeted for inclusion in the updating process were the United Nations Framework Convention on Climate Change (UNFCCC), the Sendai Framework for Disaster Risk Reduction, Rio+20's The Future We Want, the Aichi Biodiversity Targets, and the UN Sustainable Development Goals.

The EAS Partnership Council established a Working Group in June 2014 to implement the updating process in cooperation with a team of legal consultants and the PEMSEA secretariat. The Working Group met face-to-face twice (September 2014 and March 2015) and interacted electronically throughout the review and updating process.

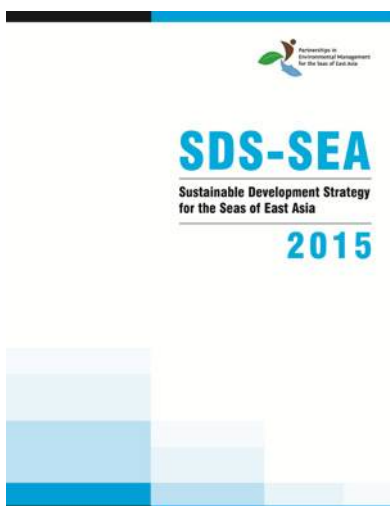
The draft output from the Working Group was reviewed by an expanded Executive Committee meeting (i.e., a meeting of Executive Committee members and representatives from PEMSEA Country and Non-Country Partners) in April 2015. The June meeting of the EAS Partnership Council adopted the updated SDS-SEA 2015 in principle, subject to consultation, review and approval within the respective countries. The country review and approval process was completed in October, and the SDS-SEA 2015 will be endorsed to the Fifth Ministerial Forum of the EAS Congress in November 2015 for consideration and adoption.

Box 1 Working Group for the SDS-SEA update

The Co-Chairs of the Working Group were Atty. Analiza Rebueta-Teh and Atty. Antonio G.M. La Viña, respectively the Intergovernmental Session Chair and EAS Partnership Council Co-Chair. Members of the Working Group included:

- Mr. Long Rithirak, Ministry of Environment, Cambodia;
- Dr. Zhang Zhaohui, State Oceanic Administration, PR China;
- Mr. Dasminto, Ministry of Environment and Forestry, and Dr. Ario Damar, Bogor Agricultural University, Indonesia;
- Mr. Daisuke Miura, Ministry of Land, Infrastructure, Transport and Tourism, Japan
- Mr. Singthong Phanthamala, Department of Water Resources, Ministry of Natural Resources and Environment, Lao PDR;
- Ms. Araceli Castillo Oredina, Department of Environment and Natural Resources, Philippines;
- Mr. Cho Kyoungju, Ministry of Oceans and Fisheries, RO Korea
- Mr. Mario Marques Cabral, Ministry of Agriculture and Fisheries, and Eng. Mario Viegas Tilman, National University of Timor-Leste, Timor-Leste;
- Dr. Dang Huy Ram and Dr. Ngo Tuan Dung, Viet Nam Administration of Seas and Islands (VASI), Ministry of Natural Resources and Environment (MONRE), Viet Nam;
- Dr. Sheila G. Vergara, ASEAN Center for Biodiversity, Philippines;
- Ms. Maeve Nightingale, Mangroves for the Future, IUCN
- Dr. Suk-Jae Kwon, Korea Institute of Ocean Science and Technology, RO Korea
- Dr. Fang Qinhu, PEMSEA Network of Local Governments, PR China; and
- Dr. Keita Furukawa, Ocean Policy Research Institute-Sasakawa Peace Foundation, Japan.

The legal consultants were Ms. Pauline Caspellan, Ms. Alaya De Leon and Ms. Jemima Mendoza of the Ateneo School of Government, while the PEMSEA secretariat included Mr. Stephen Adrian Ross, Mr. Yinfeng Guo, Ms. Kathrine Rose Gallardo and Dr. Won-Tae Shin.



The SDS-SEA 2015 includes seven strategies, and encompasses objectives and action programs for sustainable development of the coasts and oceans of the region. Specifically:

The **DEVELOP** strategy covers new and emerging economic development policies and investment strategies for countries of the region and opportunities for the building a “blue economy” across the Seas of East Asia.

The **SUSTAIN** and **PRESERVE** strategies address issues related to biodiversity protection, conservation and rehabilitation, enhancement of freshwater and marine water quality and equitable and sustainable fisheries management – essential aspects for sustainable development of coastal and ocean economies.

The **PROTECT** strategy addresses the brown agenda – pollution reduction and waste management from land- and sea-based activities, while the **IMPLEMENT** strategy focuses on compliance with relevant international conventions and agreements, including IMO conventions, guides and codes, and the execution of related obligations at the regional, national and local levels.

The **ADAPT** strategy focuses on climate change adaptation and disaster risk reduction and management and strengthening capacities and measures to prepare for, adapt to, and respond to natural and man-made hazards.

The **COMMUNICATE** strategy is an overarching approach to information and knowledge-sharing and the mobilization of governments, civil society, the business community, scientists and universities, and the region's youth for sustainable development of the coastal and marine environment.



Reaching for Improved Ocean Governance and Blue Economy Development

Lasting solutions for sustainable development of the region's coasts and oceans result when everyone pitches in, within their individual priorities, objectives and capacities. Countries of the region have made remarkable progress over the years in building coastal management and governance frameworks at the national and local levels. Over the past two years, coastal and ocean policies and legislation in Indonesia, Viet Nam and Thailand have been innovative and exemplary with regard to blue economy development.

In September 2014, **Indonesia adopted its National Ocean Policy (National Act No. 32/2014 on Marine Affairs)**. The policy provides a legal framework for the management of coastal and marine resources guided by the principles of blue economy. It promotes national and local governments working together to manage and develop coastal and marine resources and small islands. The policy also encourages community participation, particularly in coastal and marine governance, development and management, as well as input to program evaluation and monitoring activities. In addition, importance is placed on preserving traditional and cultural values related to the coasts and seas.

Viet Nam's Law of Marine Resource and Environment of Sea and Islands (Law No. 82/2015/QH13), which was ratified in June 2015 during the 13th National Assembly, stresses the importance of an integrated approach towards the management of its coastal and ocean resources. The law aims to synchronize national coastal management by establishing an interagency coordinating mechanism, led by the Ministry of Natural Resources and Environment (MONRE) and tasked with addressing the development of economic sectors associated with seas and islands using an integrated management approach.¹

Thailand's Promotion of Marine and Coastal Resource Management Act took effect in June 2015. The new law provides an integrated framework towards fisheries management, conservation, land zoning and community participation towards protecting Thailand's coastal and marine resources. In particular, it encourages the participation of communities and local governments through multistakeholder platforms that propose development management plans for marine and coastal resources. Trat Province in the Eastern Gulf of Thailand has been identified to serve as one of the demonstration sites for the implementation of the new law.²

Keeping up with International Commitments

In addition to national policies, countries have also ratified international conventions and agreements related to sustainable development of coasts and oceans. China (2013) ratified, and Viet Nam (2014) and the Philippines (2015) accepted the **Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity**. The international agreement provides a legal framework for the fair and equitable sharing of benefits arising out of the utilization of genetic resources. It also creates incentives to conserve and sustainably use genetic resources, and ensures that the benefits of biodiversity towards human development are shared.³

The region has also actively welcomed another international treaty. Agreed on in 2013, the **Minamata Convention on Mercury** is a global treaty to protect human health and the environment from the adverse effects of mercury. In the same year that it was introduced, seven countries in the region signed the treaty, namely Cambodia, China, Indonesia, Japan, Philippines, Singapore and Viet Nam. The convention targets banning new and phasing out existing mercury mines. Aside from restrictions on the supply and trade of mercury, the convention also proposes to control products and processes in which mercury or mercury compounds are used. This can contribute to minimizing waste and byproducts containing mercury, which are being improperly disposed in drainage systems and bodies of water, from reaching coastal and marine environments.⁴

¹ Vietnamnet Bridge. 2015. "Law on Sea and Island Natural Resources and Environment Considered." 28 May 2015. Available at: <http://english.vietnamnet.vn/fms/government/131867/law-on-sea-and-island-natural-resources-and-environment-considered.html>.

² IUCN. 2015. "Thailand's New Marine and Coastal Resources Management Act: Engaging Coastal Communities in Conservation." Available at: http://www.iucn.org/news_homepage/news_by_date/?21548/Thailands-New-Marine-and-Coastal-Resources-Management-Act-Engaging-Coastal-Communities-in-Conservation.

³ Convention on Biological Diversity. 2015. "Why is the Nagoya Protocol Important." Available at <https://www.cbd.int/abs/about/#importance>.

⁴ UNEP Minamata Convention on Mercury. 2015. "Convention." Available at: <http://www.mercuryconvention.org/Convention>.



PEMSEA Executive Director Mr. Stephen Adrian Ross and SOA Deputy Administrator Mr. Chen Lianzeng planted a Camellia tree in the First Institute of Oceanography compound to commemorate the founding of the CPC.

China-PEMSEA Sustainable Coastal Management Cooperation Center

The establishment of the China-PEMSEA Sustainable Coastal Management Cooperation Center (CPC) represents a landmark cooperation initiative between China and PEMSEA. It is a pioneering effort that aims to sustain SDS-SEA implementation in China by strengthening the institutional capacity in a systematic and innovative manner. The CPC, which was established in December 2014 with the signing of the Memorandum of Agreement between the State Oceanic Administration (SOA) of PR China and PEMSEA, is hosted by the First Institute of Oceanography (FIO) of the SOA in Qingdao, Shandong Province. The CPC will provide technical services for Chinese local governments for implementation of the SDS-SEA, conduct training and certification of ICM systems, and develop international cooperation projects to strengthen partnerships and enhanced cooperation in SDS-SEA implementation between China and Partner Countries in the EAS region through PEMSEA.



Providing Solutions through Integrated Coastal Management (ICM)

Over the years, ICM has gained acceptance by PEMSEA countries as a systematic approach to improving governance of coastal and marine areas and resources. At the same time, ICM has elevated coordinated actions at the regional, national and local levels to address the region's greatest challenges to blue economy development, including: climate variation and change and severe weather events; biodiversity loss; pollution of rivers, coastal seas and large marine ecosystems (LMEs); overexploitation of fisheries and other natural resources; food, water and energy shortages; and poverty and economic instability.



Cambodia

Waste Management Improvements and Partnership Building with the Private Sector

Solid waste management is a major environmental concern in Preah Sihanouk Province, where marine and coastal tourism is a growing industry. In 2004, it was estimated that only about 30 percent of the solid wastes being generated on a daily basis was being collected. That amounted to about 80 tonnes of waste collected daily, and about 160 tonnes being thrown in open areas and drainage systems.

To address the concern, solid waste management was identified as a priority in the Preah Sihanouk Coastal Strategy Implementation Plan. In 2005, a pilot-scale solid waste management project was initiated in one village (i.e., Sangkat 4, Village 1) in Sihanoukville Municipality. The pilot-scale implementation project served to provide the necessary experience to local government implementers, community and private sector to work together in solving a waste management problem. Since then, subsequent efforts on scaling up have been undertaken in other sites (**Table 2**).

These experiences in implementation have strengthened the province's capacity to implement waste management initiatives on a municipal scale. The participation of the Sihanoukville Tourism Association (STA) since 2013 has also aided in cleaning up the city center and beach areas. A monthly clean up campaign is being organized by the STA in collaboration with the Provincial Government and a daily clean up is being done with the help of 15 workers employed by the Association.

Table 2. Solid Waste Management Projects in Preah Sihanouk.

Sites	Approximate Number of Households covered
Pilot project	
Sangkat 4, Village 1	1,500
Scaling up sites	
Sangkat 4, Villages 1-5	5,000
Sangkat 1, Village 3	1,000
Tomnop Rolop (Village 3)	1,000



Parallel to local efforts on waste management, the Government of Cambodia enacted Prime Minister Sub-decree No. 113 on Solid Waste Management in Urban Areas on August 27, 2015. Sub-decree 113 provides guidance for the proper waste storage, disposal and enforcement, and allocates an annual budget of US\$ 150,000 to improve waste collection and stakeholder awareness in city centers, such as Sihanoukville.

Guided by its experience on waste management under the ICM program, the Provincial Government of Preah Sihanouk and CINTRI Waste Collection Company are now working together to improve waste collection and transfer. The province and CINTRI have increased the frequency of waste collection and city cleanup by hiring more workers. This has resulted in a cleaner environment with increased volume of wastes collected from 120 tonnes daily to 150 tonnes; that's a 50 to 87.5 percent increase in collection capacity since the project started. During national holidays, the volume of collected wastes is around 180 to 200 tonnes, with more visitors coming to the province.

The solid waste management program of Preah Sihanouk is continuing to scale up and replicate good practices, building on the success of the village projects and the pride and ownership of the communities involved.



The private sector supports cleaning up creeks such as in Otress Beach. (Photo courtesy of Sihanoukville Tourism Association)

China

Land and sea use zoning for conservation

In 2014, Liaoning Province of China adopted an integrated land and sea use zoning plan called the Coastal Conservation and Development Plan. The plan covers 2,110 km of coastline, with 10 km landward and 12 nautical miles seaward, and 14,500 km² of land area and 21,000 km² of sea areas involving 28 counties in six coastal cities. The plan has zoned land and sea areas within the boundary as priority conservation areas and priority development areas. Focusing on conservation of biodiversity and ecosystem services, priority conservation areas allow agro forestry, fishery and tourism practices, while priority development areas are zoned for industries, ports and urban development. Minimum areas in square kilometres for coastal priority conservation zones and priority development zones are also specified in the plan.

PPP policy for increased investments in pollution reduction and energy conservation

In September 2014, the Ministry of Finance of PR China issued the Circular on Promoting Public-Private Partnerships (PPP). With this policy, infrastructure projects such as railways, public hospitals, vocational schools or universities, and urban public services including urban transportation, wastewater treatment facilities and energy infrastructure are expected to receive stronger support from PPP initiatives in China. According to a recent study, this policy facilitated investment of US\$ 130 billion in 500 projects in 17 sectors. Roughly US\$ 6.5 billion was invested in over 130 projects for treatment of wastewater and solid waste, and for building and operating waste-to-energy power plants.



Figure 2. Liaoning Coastal Spatial Planning Map.



Integrated water resource management and pollution reduction project through PPP between CITIC Water and Guiyang Nanyang River.



Sea cucumber farmed in Dongying City.

Ecological Aquaculture

Ecological aquaculture in Dongying City follows a cycle of healthy ecological farming, whereby sea cucumber, shrimps and crabs, and artemia are farmed using the concept of resource sharing and recycling. In this cycle, all aquaculture wastes are fully utilized.

Under the traditional aquaculture mode, sea cucumber feed is added to the farm ponds, and a proportion of the feed and feces end up in the water column and sediment. Under the ecological aquaculture system, different species under various trophic levels are farmed in such a way that nutrients in the farm ponds can be recycled. In the case of Dongying City, the values of chemical oxygen demand (COD), nitrite, ammonia nitrogen and petroleum in the water column in 2014 were lower than those in 2007.

Today, Dongying City is recognized as an important sea cucumber breeding base in China. In accordance with its aquaculture industry development plan, Dongying City has targeted to develop 140,000 ha of aquaculture farms by 2020, with annual outputs of 660,000 tons of aquatic products. This will result in an increase in the annual average income of fishers to US\$ 4,500.

Indonesia

Being the largest archipelagic state in the world, the Long-term National Development Plan (RPJP) of Indonesia (2005-2025) and subsequent National Medium-term Development Plans (RPJMN) include significant focus on sustainable development of the country's marine and coastal areas. While the RPJMN 2005-2009 focused on pollution control and mitigation and management of natural disasters, RPJMN 2010-2014 focused on conservation of natural resources, environment and biological diversity, spatial planning, strengthening marine industries; and climate change adaptation and mitigation, and RPJMN 2015-2019 is focused on conservation of water resources, development of an integrated marine industry and increasing marine productivity.

Through the efforts of concerned national agencies, local governments, local stakeholders and various partners, achievements in 2014-2015 included:

Development and adoption of integrated management plans

- As of 2015, under the guidance of the Ministry of Marine Affairs and Fisheries (MMAF), 6 provinces and 14 districts/cities have adopted their coastal and marine zonation plans through local government regulations. Integration of coastal spatial planning and terrestrial spatial planning, which are covered by separate laws, is also being promoted. Bontang City is the first local government in Indonesia to develop and adopt an integrated land and marine spatial plan as part of their medium-term development plan (2012-2032).
- Strategic Action Plans for Coastal and Marine Environment were also prepared through the support of the Ministry of Environment and Forestry (MOEF) in cooperation with concerned local governments, agencies and stakeholders for three provinces in Tomini Bay, three provinces in Jakarta Bay, two provinces in the Bali Strait and eight provinces in the East Coast of Sumatera.

Habitat protection and rehabilitation and biodiversity conservation

- To protect marine and coastal habitats and biodiversity, the government has set a target to expand the area of marine conservation areas to 15.5 million ha by the end of 2014 or approximately five percent of Indonesian territorial waters, and to 20 million ha by 2020. As of mid-2015, almost 17 million ha have been declared marine conservation areas, including national and local MPAs. One of these is the Pangumbahan Sea Turtle Conservation Area in Sukabumi Regency, which was declared by MoMAF as a Coastal Conservation Area in 2009. This facilitated the mobilization of technical and financial support to establish the conservation center, necessary infrastructure, management committee and technical teams, and implement programs on sea turtle conservation, habitat restoration and community empowerment through collaboration among various stakeholders. The area was further designated as a conservation zone in the Coastal Use Zoning Plan for Sukabumi Regency for 2012-2032. In 2014-2015, more than 2,000 trees were planted in the conservation zone and more



Sea turtle hatchery in Sukabumi Regency.



Mangrove tour in Nusa Lembongan, Klungkung Regency, Bali, Indonesia.

than 5,000 trees in the buffer zone in collaboration with the communities. A Master Plan for the Ujung Genteng-Pangumbahan Integrated Tourism Zone area is being developed, while studies on biodiversity and cultural diversity are being undertaken for geopark development in Ciletuh.

- To assess and recognize the management effectiveness of MPAs in Indonesia, the Evaluation of Effective Management of Aquatic, Coastal, and Small Island Conservation Areas (E-KKP3K), was launched in December 2013. It consists of five levels as follows: (1) Red (MPA initiated); (2) Yellow (MPA established); (3) Green (MPA minimally managed); (4) Blue (MPA optimally managed); and (5) Gold (MPA sustained). In 2014, out of the 100 MPAs assessed, one qualified under the blue level, 16 under green, 43 under yellow, and 40 under red. The Nusa Penida MPA in Klungkung Regency, a popular ecotourism destination in Bali Province, qualified and received an award for the green level.

Pollution reduction and waste management

Various programs have been implemented, including:

- The Program for Pollution Evaluation and Performance Rating (PROPER) implemented by the MOEF, which deals with industry point sources that have significant impacts to the environment covering air and water pollution, and hazardous waste management. From November 2014 to October 2015, the program involved 1,918 companies, contributing to reduction of 1,037,761 tons and 3,673,781 tons of organic and inorganic waste loads, respectively.
- The Clean City Award (Adipura), facilitated by MOEF, recognizes the efforts of local governments in applying good governance to ensure a good and clean environment. It also encourages local authorities and communities to actively participate in environmental management. In 2014, Denpasar City and Badung Regency in Bali, Sukabumi Regency in West Java, and Bontang City in East Kalimantan, priority ICM sites for the GEF/UNDP/PEMSEA Project on Scaling up the Implementation of the SDS-SEA (2015-2019), received the Adipura. Tangerang City in Banten Province, also a priority site for the project, was one of 15 cities awarded the Adipura Kencana, the highest award given to a city that has won in five consecutive years.

Japan

Startup of Five ICM projects

Five model sites in Japan have been implementing ICM as local government initiatives, with the support of the Ocean Policy Research Institute of the Sasakawa Peace Foundation (formerly the Ocean Policy Research Foundation). These initiatives are in line with the revised Basic Plan on Ocean Policy of Japan that adopts ICM as one of its basic policies in the integrated management of land areas and coastal zones. After five years, public participation and community involvement has been crucial across the model sites. Results from the various initiatives have shown that ICM has become an important approach towards the sustainable development and revitalization of these areas.



Figure 4. Map of Five ICM projects in Japan.

In **Shima City, Mie Prefecture**, the New *Satoumi* concept was promoted in the second half of a ten-year city master plan. *Satoumi* is a concept for maximizing ecosystem productivities and biodiversity by balancing public use and conservation of the coastal ecosystem. In 2012, the Shima City *Satoumi* Creation Basic Plan (Shima City ICM Basic Plan) was launched. The multistakeholder ICM *Satoumi* Creation Promotion Council was then formed to implement ICM. Council meetings were held to share information with various government units and the community on how they can contribute to ICM. The community and local government implemented collaborative projects that included tidal flat restoration, branding of community resources and *Satoumi* Education Alliance, which is an implementing network and one-stop service for eco-tours.

In 2013, the ICM study group in **Obama City, Fukui Prefecture** compiled and submitted a proposal to the mayor after holding multistakeholder discussions. The proposal stressed the importance of sea and ocean resources to the development of the city. The Mayor approved and established an ICM council in 2014. The council published an ICM plan in 2015.

The Hinasen Fishery Cooperative Association, which has been involved in coastal restoration and protection, like the restoration of eelgrass beds, led the ICM initiative in **Bizen City, Okayama Prefecture**. ICM activities in the area aimed to address environmental issues that will ultimately enhance the value and sustainability of the area's fisheries industry. In 2013, the ICM area was expanded from the Hinasen area to the entire Bizen city. ICM was included in the new Bizen City Master Plan as an approach to re-boost coastal industries. A city development division was set up to facilitate *Satoumi* and *Satoyama* (forests maintained by local communities) as a priority measure in the city.



Field Workshop in Shima City's restored tidalflat. (Photo courtesy of Dr. Keita Furukawa/OPRI-SPF)

Red tides and rocky shore denudation were affecting the productivity of the Sukumo Bay, which is shared by **Sukumo City** and **Ohtsuki Town, Kochi Prefecture**. ICM was introduced to address the threats and to revitalize the city and town. In order to restore the health of the Sukumo Bay, the Sukumo Bay ICM Study Group was formed. Various sectors including fisheries, agriculture, forestry industries, academia and NPO groups are participating in ICM.

Miyako City, Iwate Prefecture aims to apply ICM through reconstruction after the destruction from the Great East Japan Earthquake in 2011. One of the first steps towards recovery, the ocean health check, revealed that the city's fisheries industry was greatly impacted by the earthquake and there was a need to adapt coastal zone use. After the earthquake, the private sector has acted as important counterpart for local government in the management of coastal areas.

Lao PDR

Implementing the Sedone Riverbasin Sustainable Development and Management Plan at the village level

The Department of Water Resources (DWR), Ministry of Natural Resources and Environment (MoNRE), together with the Provincial Offices of Natural Resources and Environment (PoNRE) of Champasack, Saravanne and Sekong in Southern Laos adopted the Sedone Riverbasin Sustainable Development and Management Plan (2015-2030). The 15-year Management Plan was signed in mid-September 2014 by the heads of the PoNRE and the DWR. The Management Plan embodies the collective vision of various stakeholders for “*sustainable socioeconomic development, improved quality of life and enriched culture for the present and future generations*” in the Sedone basin.

The plan covers 7,229 km² of land area within the 13 districts across the provinces of Saravan, Sekong and Champasack. The implementation of the plan is expected to benefit the 620,790 people living in the basin. Several specific targets included under the Management Plan are in line with the Government of Lao’s targets on poverty reduction and environmental management, including the Natural Resources and Environment Strategy 2015–2030.

Since the adoption of the plan, several activities have been initiated in the Houay Champi Sub-basin to realize the vision and mission of the integrated river basin management plan, while creating a positive impact at the ground level. Among the activities implemented with the support from the Swiss Agency for Development and Cooperation (SDC) and continually strengthened by the local implementers are:

- **Establishment of a Sub-basin Project Steering Committee.** Mandates of the PSC were developed and adopted at the district level by the District Governor. The mechanism involves the participation of key stakeholders including village leaders, district officials and water users from different sectors. Previously, there was no mechanism for integrated management and conflict resolution among the different water users.



Community discussion on livelihood improvement activities at Champi Village.

- **Preparation of the State of the Sub-basin Report**, which analyzes the socioeconomic conditions of the site. The information in the report is used for the development of the Management Plan for the sub-basin, as well as serving as the assessment of baseline conditions in the communities prior to initiation of the Plan.

- **Implementation of the Management Plan**, including livelihood development for 76 families. A revolving fund mechanism was set up in selected villages in the sub-basin as a source of financing for the development of alternative livelihoods. Prior to the implementation of the fund, slash-and-burn cultivation to clear the land for agricultural activities was common. The villagers attest that, by having alternative sources of income, there is a reduction on the incidence of slash and burn. A Village Committee was established to monitor the use of the fund



Consultations on the development of the Houay Champi Management Plan.

including the review of proposal for livelihood among those who want to borrow from the fund. The revolving fund was used mainly to improve livelihood in two ways, namely: (1) developing a collective source of livelihood; and (2) providing loans for individual families. For example, seven fish conservation areas were established where traditional fishing could be practiced by the villagers. The fund was used to set up a small aquaculture area. Families could also access loans for poultry production and growing of cash crops, including cassava and other vegetables.

Based on the experiences in Houay Champi Sub-basin Management, two more sub-basins are initiating sub-basin level approaches to bring the implementation of the Sedone Management Plan to the grassroots level. Houay Paili Sub-basin in Saravanne Province and Houa Se in Sekong Province have initiated the IRBM involving six (6) additional villages. The following activities have been completed thus far:

- Setting up of an institutional mechanism in Houay Paili, Saravanne Province and Houa Se, including project management offices, project task teams and project steering committees that will oversee and coordinate the implementation of water management in the two sub-basins.
- Initiating baseline data gathering to determine socioeconomic conditions of the targeted villages. Based on the results of the baseline data gathering, strategies for on-the-ground actions will be identified to suit the local conditions.

The 15-year Sedone Riverbasin Sustainable Development and Management Plan (2015-2030) embodies the collective vision of various stakeholder groups in the basin for sustainable socioeconomic development, improved quality of life and enriched culture for the present and future generations.

Key principles integrated into the Plan include developing the Sedone Riverbasin based on its ecological capacity, promoting partnerships among various stakeholders and strengthening institutional and stakeholders' capacity to develop and enforce policies, laws and regulations for effective management of the Sedone Riverbasin.

Philippines

Integrated management from source to sea

In March 2014, a Memorandum of Agreement was signed between the Provincial Government of Batangas, PEMSEA and local universities in the province, including Batangas State University, De La Salle Lipa, Lyceum of the Philippines University-Batangas and University of Batangas, for the implementation of the Batangas Bay Watershed Rehabilitation Project. The project is focusing on the Calumpang River, one of the three major watershed areas in the province (see **Box 2**). The objective of the project is to develop and implement a Batangas Bay Watershed Rehabilitation and Sustainable Development Plan as a partnership activity of the Province of Batangas, the seven city/municipal local governments in the watershed and other concerned sectors and institutions, including the agricultural sector, small and medium-sized enterprises and universities.

The initial phase of the project called for the preparation of a demographic, socioeconomic and environmental profile of the watershed area, covering four municipalities, namely: Ibaan, Rosario, San Jose and Taysan. The profile was completed in 2014 and the main biophysical and socioeconomic characteristics of the area were identified, including the environmental problems and existing management practices in the watershed. The State of the Calumpang River Basin Report will be published in the fourth quarter of 2015.

Follow-on activities for the project in 2016 include:

- Establishing the implementing and partnership arrangements between the seven local governments, the Provincial Government, relevant agencies and sectors for the development and implementation of the project; and
- Conducting a total allowable pollutant load (TAPL) assessment for the Calumpang River watershed to determine the total loading of priority pollutants from various activities and sectors in the watershed area, the resulting environmental, social and economic impacts on the river and the receiving coastal and marine waters of Batangas Bay, and an investment strategy and plan for improving the situation.

Box 2

Key Facts about the Batangas Bay (Calumpang River) Watershed

Figure 3. Location of major river systems in Batangas Province.



- **Catchment Area:** 367.4 km²
- **Length:** ~27.5 km (from its upstream in Lipa City down to Brgy. Wawa in Batangas City)
- **Geographic boundaries:** Span seven municipalities and cities namely: Lipa City, Ibaan, San Jose, Rosario, Taysan, Padre Garcia and Batangas City).
- Single major tributary that drains into Batangas Bay.
- Calumpang River Basin (Batangas Bay Watershed) land use includes:
 - 43% agricultural land
 - 26% forest/watershed/grassland
 - 31% built up areas
- **Major environmental issues**
 - Water quality degradation due to proliferation of livestock production (i.e., poultry and piggeries), and other waste discharges coming from households, hospitals, agro-industrial, industrial and commercial establishments.

Nutrient management in Manila Bay

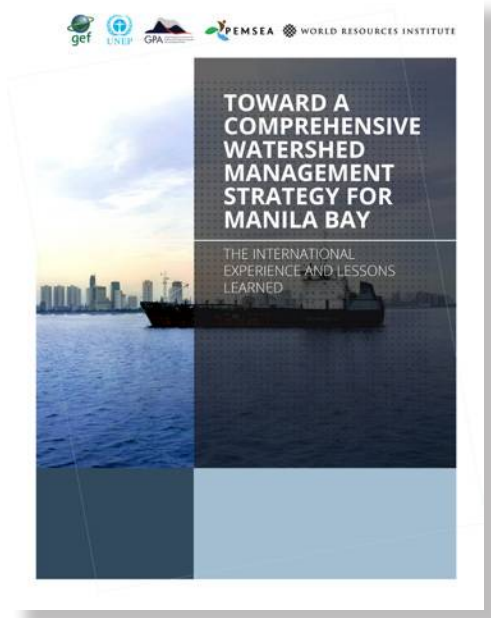
The UNEP/GEF Project on Global Foundations for Reducing Nutrient Enrichment and Oxygen Depletion from Land-based Pollution in support of the Global Nutrient Cycle is facilitating the development and application of pollutant loading and ecosystem response modeling efforts in Manila Bay, Philippines. The purpose of the project is to identify and promote cost-effective approaches for improved nutrient management in the Bay area. The project is being implemented by the University of the Philippines Marine Science Institute, a PEMSEA Regional Center of Excellence, in collaboration with the Faculty of Geosciences, Department of Earth Sciences – Geochemistry, Utrecht University, Netherlands.

Manila Bay is an important water body at the southwestern part of Luzon Island in the Philippines and serves as a major port and source of livelihood for many coastal communities along its 190 km coastline. It has a 19,268 km² catchment area populated by 31 million people or 34 percent of the total population of the Philippines. Only about 20 percent of the population has access to sewerage services, and only about 8 percent of the sewage receives secondary treatment (2005 information). Results from five completed baywide surveys in Manila Bay from 2010-2012 indicated the presence of hypoxia, which worsened through time especially during the wet season. Bottom baywide averages fell as low as 2.10 mg/L. and eutrophication was also observed with elevated chlorophyll-a and inorganic nutrient levels.^{5,6}

Initial results of the modeling work were presented during a workshop jointly organized by the Manila Bay Coordinating Office, Department of Environment and Natural Resources (DENR) and PEMSEA in August 2015. Highlights of the modeling work suggested that:

- Domestic- and agriculture-based sources are the large contributors of nutrient loading in the bay.
- Sewage connection increases nutrient loading to the bay, likely due to the decrease in retention (i.e., faster water flow in the drainage network from the nutrient sources to the bay). The model indicated a 469% increase in nitrogen and 444% increase in phosphorus if there is 100% connection to sewers but no improvement in the current level of treatment.
- Secondary level treatment improves water quality by bringing down biological oxygen demand (BOD) levels and microbial counts but it does not remove nutrients.
- Tertiary treatment will help alleviate nutrient loading to the bay if all sources are connected to sewers and 70% of the sewage receives tertiary treatment. But overpopulation in areas near the coasts and city centers still pose a huge threat.

The modeling results, albeit preliminary, show that the current pollution and eutrophication problem in Manila Bay will not decrease if “sewage connection and treatment” is the only solution. A more holistic approach to managing various sources of nutrient loading is required, including considerations of the expected population growth in the watershed area and the stress that this will put on the bay’s ecosystem. Further efforts to identify innovative and practical policy and management options, as well as investment strategies will be addressed in subsequent initiatives under the UNEP/GEF project, which is scheduled for completion in March 2016.



⁵ Jacinto, G.S., L.P.A. Sotto, M.I.S Senal, M.L San Diego-McGlone, M.T.L Escobar, A. Amano, and T.W Miller. “20110 Hypoxia in Manila Bay, Philippines during the northeast monsoon.” *Marine Pollution Bulletin* 63:243-248. doi:10.1016/j.marpolbul.2011.02.026

⁶ Sotto, L.P.A., G. S. Jacinto, and C.L Villanoy. 2014s. “Spatiotemporal variability of hypoxia and eutrophication in Manila Bay, Philippines, during the northeast and southwest monsoons.” *Marine Pollution Bulletin* 85:446-454. doi:10.1016/j.marpolbul.2014.02.028

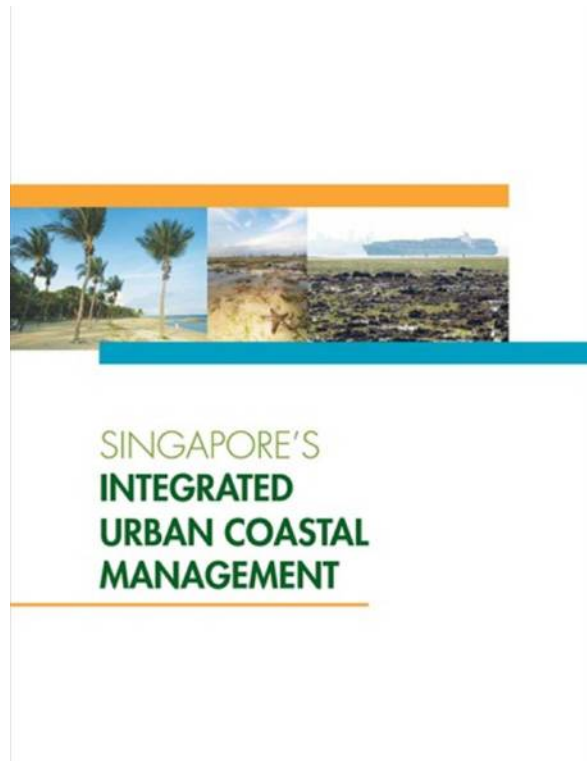
Singapore

Implementing Integrated Urban Coastal Management (IUCM)

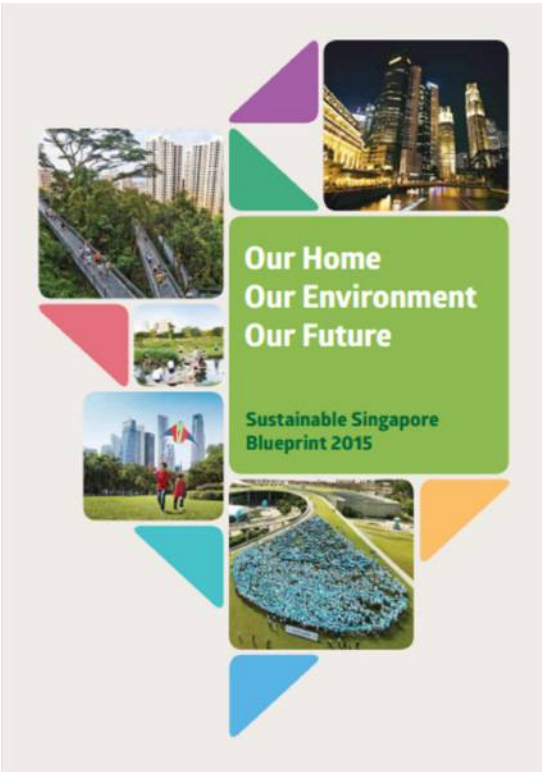
Through a Memorandum of Understanding (MOU) signed between the Government of Singapore and PEMSEA in November 2013, Singapore was recognized as a regional demonstration site for Integrated Urban Coastal Management (IUCM). As an island city state located along one of the world's busiest sea lanes, this specialized form of ICM focuses on the development and management of an urbanized area and the approaches being applied to protect, sustain and manage the coastal and marine environment and resources.

With the guiding principles of proactive planning and management, whole-of-government approach, active partnerships and science-based management, Singapore's IUCM aims to enhance coordination among concerned stakeholders for coastal and marine land use, conserving coastal habitats and optimizing the sustainable use of coastal resources and areas. IUCM is contributing to the achievement of the Sustainable Singapore Blueprint 2015 (SSB 2015), which shares a vision for a Livable and Endearing Home, a Vibrant and Sustainable City, and an Active and Gracious Community.

Singapore has made significant progress towards achieving the green and blue spaces targets of its SSB 2015. Twenty-four "Active, Beautiful, Clean Waters" projects have been completed with 26 more underway. The areal extent of water bodies open for recreational activity has increased from 650 ha in 2009 to 959 ha in 2013, more than 50 percent increase in five years. This is also the trend for the length of waterways open for recreational activity, which has increased to 93 km in 2013 from 72 km in 2009, nearing the 100 km target by 2030.⁷



⁷ Ministry of the Environment and Water Resources and Ministry of National Development. 2014. Sustainable Singapore Blueprint 2015.



In line with achieving its vision of a Liveable and Endearing Home, Singapore is targeting to utilize nine percent of its area for nature reserves and parks. Singapore's first marine park, the Sisters' Islands Marine Park, was established in 2014. The park has a variety of habitats including coral reefs, sandy shores and seagrass areas and spans about 40 ha around Sisters' Islands and along the western reefs of both St. John's Island and Pulau Tekukor. The area supports rich coral diversity as a consequence of the ocean currents that

transport coral larvae to the location.⁸ The Maritime and Port Authority of Singapore (MPA) and volunteers relocated 2,300 hard coral colonies from Sultan Shoal, southwest of Singapore, to the marine park to protect them from the impact of the development of Tuas Terminal.⁹ Over 700 coral colonies, amounting to approximately 60 m² of live coral cover were also relocated from Semakau Landfill's lagoon to the marine park by the National Environment Agency (NEA).¹⁰ As a platform for outreach on conservation efforts, guided walks by volunteers are available in the Sisters' Islands Marine Park to increase the local community's awareness and appreciation of the city-state's marine biodiversity.

Some of the other initiatives undertaken include addressing coastal erosion and mangrove restoration in the northeastern coastline of Pulau Tekong and implementing real-time continuous monitoring of coastal water quality. When the eight buoy-based monitoring stations with sensors are fully operational, alerts related to water pollution incidents will be shared with the public in real-time.

⁸ Chang, A.L. 2015. "Singapore's mother of all coral reefs. The Strait Times." Retrieved from <http://www.straitstimes.com/singapore/environment/singapores-mother-of-all-coral-reefs>.

⁹ Maritime and Port Authority of Singapore. 2015. "Relocated Corals Thriving at New Sites." Retrieved from http://www.mpa.gov.sg/sites/global_navigation/news_center/mpa_news/mpa_news_detail.page?filename=nr150725.xml

¹⁰ National Environment Agency. 2015. "NEA Successfully Completes Relocation of Corals Found In Semakau Landfill's Lagoon." Retrieved from <http://www.nea.gov.sg/corporate-functions/newsroom/news-releases/nea-successfully-completes-relocation-of-corals-found-in-semakau-landfills-lagoon>

Thailand

Protecting marine and coastal ecosystems for sustainable coastal development in Saensuk Municipality, Chonburi Province

Saensuk Municipality is located in Chonburi Province and is about 74 km from Bangkok. It has an area of 20 km² and a population of about 200,000. Saensuk is known for its sandy beaches, fisheries resources, coastal and upland forests, cultural and traditional attractions, and various festivals and events, many of which are related to the sea. It is a popular destination for local and international tourists alike, and receives about 1.5 million visitors annually. As such, most of Saensuk's local people are engaged in coastal fishery and commercial activities and services that rely on a healthy marine and coastal ecosystem.

The sustainability of Saensuk's coastal resources and environment, tourism industry and local livelihoods, however, are facing serious threats from coastal erosion, oil spills, coastal pollution from local and transboundary sources, and habitat degradation. Coastal erosion has recently emerged as a major issue in Chonburi, with Saensuk being one of the most affected areas. With an international port and several oil refineries and industrial estates, Chonburi is a high risk area for oil spills, and Saensuk in particular experienced several oil spills in 2013 and 2015, which affected Bangsaen Beach and seafood safety. Saensuk also has to deal with periodic accumulation of floating wastes from northern provinces, in addition to wastes from domestic and tourism activities.

Considering the importance of the marine and coastal ecosystems and the benefits being derived by the municipality and its people, and the current and future threats to these ecosystems, the local government of Saensuk has taken steps to protect the municipality's natural resources and environment through interagency and multisectoral collaboration and local stakeholders' participation. Key measures undertaken in 2014-2015 as part of the local ICM program include:

- Integrated coastal erosion management: Studies on coastal erosion showed that some areas in Saensuk are eroding at the rate of 5.5 m/year. With funding support from the Department of Marine and Coastal Resources (DMCR) and in consultation with stakeholders, a feasibility study and environmental impact assessment study were undertaken on potential coastal erosion measures. The results of the studies and recommendations on engineering solutions have been submitted for review by the National Committee, after which funding support for construction will be provided by the Marine Department. In parallel, programs on protection and rehabilitation of mangrove areas, coral reefs and sandy beaches to enhance coastal protection continue to be undertaken.
- Strengthening local capacity to respond to oil spills: Saensuk Municipality developed partnerships with research institutions including Burapha University for monitoring of water and seafood quality following oil spill occurrences. A local oil spill contingency plan (OSCP) was also prepared with the support of the Marine Department and other concerned agencies to support the implementation of the national oil spill contingency plan. The local OSCP aims to ensure a coordinated response to minimize detrimental effects of oil spills, and ensure the availability of appropriate equipment and capable human resources for efficient response. An agreement was signed in July 2015 between Saensuk Municipality and key partners in implementing the OSCP. Tabletop exercises and trainings on shoreline response and clean up were also undertaken.



Training on shoreline oil spill response.



Stakeholder consultations on development of oil spill contingency plan for Saensuk Municipality, and training on shoreline oil spill response.

- Engaging stakeholder participation in waste management: The 'Garbage Bank' program, whereby members collect and 'deposit' recyclable materials in order to earn points recorded through a 'passbook' and redeem equivalent rewards in cash or in kind continued to be implemented in three schools in Saensuk. The municipality also issued a regulation banning the use of styrofoam in commercial establishments, which was piloted in Bangsaen Beach and later extended to Burapha University through an official agreement. Implementation of the regulation has prevented the use of around 600,000 pieces of styrofoam containers every month. A packaging material made from natural plant fiber, which can completely decompose after a month, is being introduced to local merchants.
- Conservation of blue swimming crabs continues to be undertaken through collaboration among the local government, fishers, schools and private sector partners, to serve as a tool for public education on marine conservation, ensure continuous supply of crabs to the local market, and improve the livelihood of local fishers.

Timor-Leste

Development and implementation of ICM programs addressing local priorities and needs

In accordance with government priorities and local needs in the youngest country in the East Asian region, development of ICM programs in Timor-Leste in 2009 focused on demonstrating alternative livelihood development alongside sustainable use of coastal resources in the districts of Manatuto and Liquiça under the coordination of the Ministry of Agriculture and Fisheries (MAF). Initial efforts included: (1) conduct of ICM trainings, internships at the PEMSEA Resource Facility and conduct of study tours for key personnel to develop understanding and capacity on ICM program development and implementation; (2) establishing interagency ICM coordinating mechanisms within the context of the existing centralized government system; (3) conduct of rapid appraisal and preparation of baseline State of the Coast reports; and (4) conduct of trainings on livelihood development related to seaweed culture, fish processing and more environment-friendly saltmaking. With a combined coastline of around 140 km, the two districts cover almost 20 percent of the country's coastline.

In parallel with the ongoing development of the local government system in the country, further development of the ICM programs are focusing on strengthening the local ICM governance mechanisms to improve sustainable fisheries management and alternative livelihood development in both Manatuto and Liquiça (which are now called municipalities), as well as disaster risk reduction and management and climate change adaptation in Liquiça, and habitat conservation and rehabilitation in Manatuto. Development of an ICM program has also been initiated in the Municipality of Dili, focusing on enhancing the effectiveness of marine protected area (MPA) management in Atauro Island, building on the efforts of the project on Strengthening Coastal and Marine Resources Management in the Coral Triangle of the Pacific (ADB-CTP) on establishment of a pilot MPA in the island.

In line with priorities on developing local livelihoods and capacities for natural resource conservation, the following were undertaken in Liquiça District/Municipality in 2014-2015:

- Developing local livelihood from fishery products and habitat rehabilitation: As part of the continuing support being provided to seaweed farmers in Suco Ulmera (Ulmera village), the Fisheries Technology Unit of MAF conducted training on fish processing and diversification of fish products in December 2013 for 30 people from 2 community groups in the village. After the training, the community groups were provided with basic equipment including pots and pressure cookers, cold storage facilities and other technical and logistical support. A structure was also built to serve as a common storage and marketing area for the community's seaweed and fish products. The community groups have since been able to process seaweed into gelatin (agar-agar) and ready-to-eat and drink products, as well as produce dried fish, fish balls and fish powder condiments, with sufficient packaging and labels for the local market. MAF, in collaboration with other government agencies, has provided support for the marketing of the products in schools and grocery stores. In parallel with developing local livelihood from fishery products, people in Liquiça have been undertaking mangrove rehabilitation in their area. They have planted at least 1,000 seedlings, and are continuing to plant in adjoining areas. A mud crab demonstration project was also implemented in Suco Ulmera under the Arafura and Timor Sea Ecosystem Action Programme (ATSEA).



Training on seaweed and fish processing in Liquiça.

- Developing local livelihood through ecotourism in Liquiça District: In Suco Vatuvou in Liquiça, the District Administration, MAF and a youth group called Haseko have collaborated to develop an otherwise unproductive beachfront area into a startup ecotourism resort, starting with a few cottages and rooms for rent. There is a plan to include additional cottages and a function room, and to develop other amenities and attractions in the area. The youth group takes care of the maintenance and security of the resort, which keeps them productive and provides them with additional source of income.

In Manatuto District/Municipality, in line with priorities on conservation and rehabilitation of coastal and upland areas and resources, the following were undertaken:

- Enforcement of relevant national and local/traditional regulations in protected areas such as in Lamsana where a 10-ha locally managed marine area (LMMA) was established previously with support from the Coral Triangle Initiative (CTI). The community committee for the LMMA, through regulations developed under the traditional system called 'Tarabandu', has been managing the area including enforcement of fishing ban in designated 'no-take' zones.



Study tour in Bali, Indonesia by Timor-Leste local leaders: Visiting the sea turtle education and conservation center in Serangan Island, Denpasar City.

- Coastal and upland reforestation through collaboration among government agencies, local communities, NGOs and international partners, including coastal tree planting in Balak to rehabilitate the former saltmaking area and develop the vegetation to support the traditional saltmaking industry; establishment of nurseries and forest plantations by local communities and NGOs (such as Beheda and Samlook) to support their local livelihoods including selling of firewood and seedlings; developing local capacity for integrated crop management using industrial trees, industrial crops and perennial crops through the Rural Development Project Phase 4 (2012-2017) being implemented by the GIZ and MAF, which provides technical and material support for developing community nurseries, and processing and marketing of selected products.
- Increasing coastal ecosystem and community protection by repairing a damaged seawall in Suco Maabat, and constructing a floodway to prevent flooding in low-lying areas.

In Dili Municipality, development of a pilot community-based MPA in Suco Vila in Atauro Island under the ADB-CTP Project was well underway by 2014, with a local MPA committee in place, related trainings and community awareness and education activities implemented, and resource assessments, mapping and boundary delineation undertaken. The MPA was formally declared in February 2015 by the issuance of Ministerial Order Number 6/GM/I/2015, after which, the physical boundaries for the MPA were established legally in Suco Vila. Development of an ICM program in Dili is expected to enhance the effectiveness and ensure the sustainability of MPA implementation. In April 2015, an interagency ICM coordination mechanism to facilitate ICM development and implementation in Dili was established. A study visit to Bali, Indonesia, was conducted in August 2015 for key local leaders and personnel to learn and appreciate good practices in establishment and management of MPAs, coral reef protection and transplantation, mangrove protection and rehabilitation, ecotourism development, seaweed processing, and community waste management. Representatives from MAF, Ministry of Commerce, Industry and Environment, Municipalities of Manatuto and Liquiça, the National University of Timor-Leste (NUTL), and the Oriental University of Timor-Leste (UNITAL) also joined the study tour.

Capacity development and technical support services for ICM development and implementation in the country was strengthened through the engagement of MAF, UNTL and UNITAL in PEMSEA regional workshops, which discussed key methodologies and tools for developing ICM programs.

Viet Nam

Promoting sustainable coastal tourism in Da Nang City

In Viet Nam, the Decree No.51/2014/ND-CP of the Government on Licensing Marine Spatial Area for Marine Resources Use and Exploitation was introduced in 2014. Da Nang, a coastal city in Central Viet Nam and national ICM demonstration site, has benefited from zoning.

Known for its pristine sandy beaches, scenic landscape and historical monuments, tourism is a vital component of Da Nang City's economy. The Master Plan Towards 2030 with Vision to 2050 details measures to transform the city into a major tourism hub and designated in particular, Son Tra and Ngu Hanh Son Districts for tourism development. The rapid growth of coastal tourism along the coasts of these districts resulted in increased solid waste generation, sewage discharge and beach erosion. Adding to the challenge is the need to relocate residents and noncompatible activities from the area to make way for the establishment of the necessary infrastructure and facilities and other support services.

The City Government implemented the following measures to develop and implement the tourism development plan in consideration of the city's thrust of balancing conservation, economic and social goals:

- Implement the coastal use zoning plan in line with the planning and investment priorities of the city for tourism development. The coastal use zoning plan for Da Nang City was developed with the objective of enhancing the spatial planning of the city, thus resolving use conflicts and promoting the rational use of the coastal areas and resources.
- Issue supporting legislations to protect and sustain coastal habitats, including coral reefs stretching from Hon Chao to South Hai Van and Son Tra Peninsula.
- Conduct public awareness campaigns to convey the importance of protecting the coastal and marine resources and the benefits to the community's livelihood, including communicating to the public the priorities of the city government on tourism development and the programs that have been put in place to assist the communities in transitioning to other jobs created by the tourism and services sector.
- Ensure the smooth resettlement of affected coastal communities by providing options for resettlement, livelihood programs and other support services, such as access to education, health services and skills development.
- Rehabilitate the coastal areas to support tourism development and continually maintain environmental quality through implementation of strict measures for waste management along the beaches and efficient solid waste collection, waste water treatment, and increased green cover.



Da Nang City, Viet Nam.

The transformation from a formerly mismanaged beach area into a beautiful waterfront with new wide coastal roads and green cover has attracted numerous foreign and domestic investors to build vacation resorts. The rehabilitation of the coastal roads has also provided added advantage in promoting the Central Viet Nam Heritage Road with Da Nang serving as gateway to four UNESCO-designated World Heritage Sites. The City's tourism development has improved the lives of the people in coastal communities – increasing their income, raising cultural standards and reducing their dependence on the coastal and marine resources.

Tourist arrivals in the first quarter of 2015 showed a 17.3 percent increase compared to the same period in 2014, according to the Department of Culture, Sport and Tourism. Revenue from tourism also rose 30.9 percent to VND 2.62 trillion (US\$ 123 million).¹¹

¹¹ Vietnam Tourism. March 2015. "Da Nang records strong increase in tourist arrivals." <http://www.vietnamtourism.com/en/index.php/news/items/9155>.

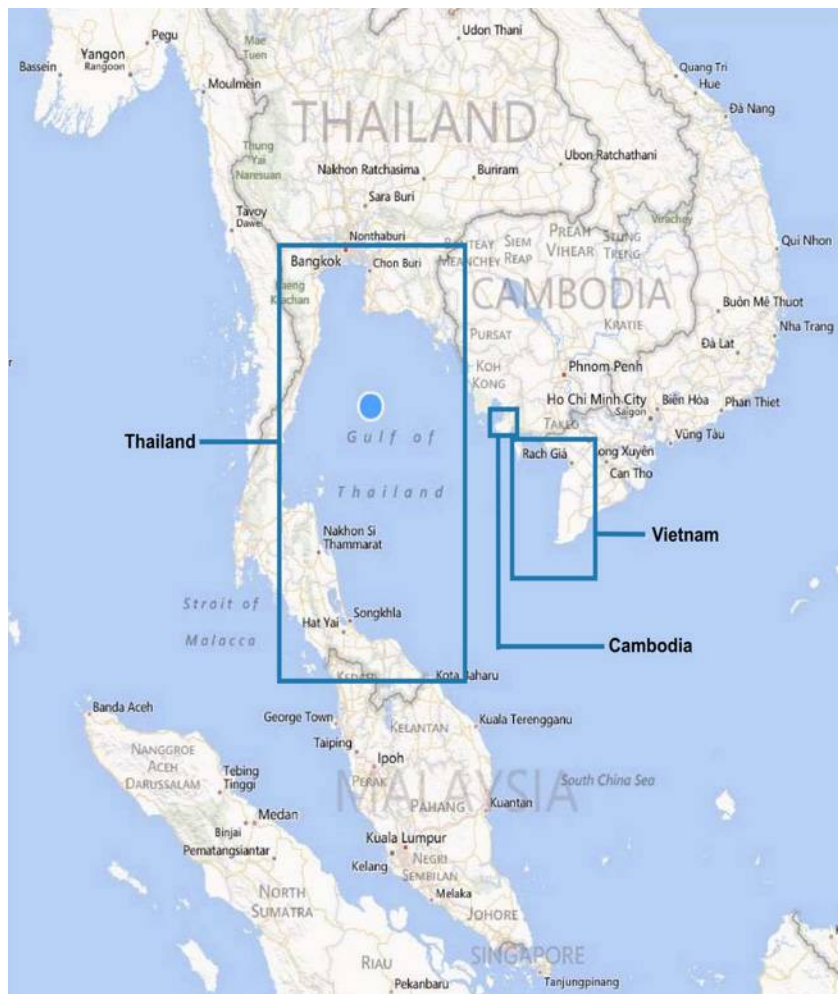
Gulf of Thailand

The Gulf of Thailand's Environmental Sensitivity Index Atlas

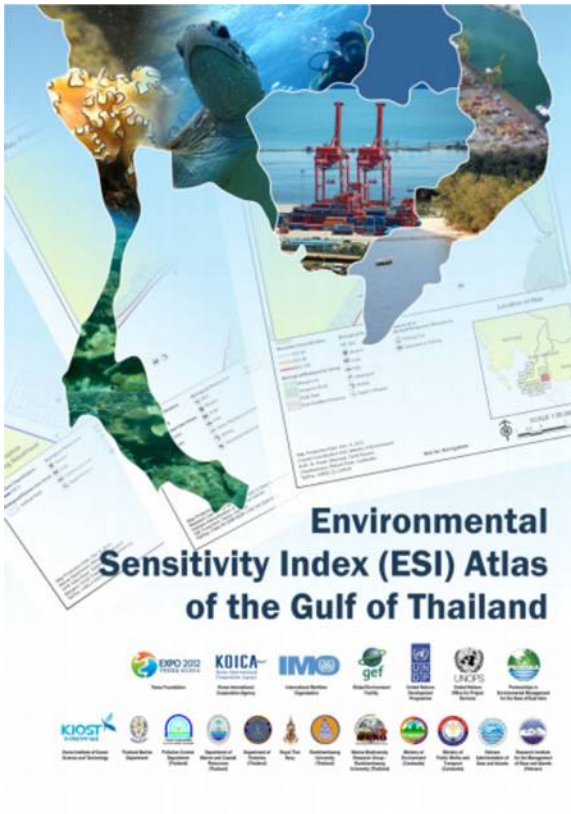
The Gulf of Thailand Environmental Sensitivity Index (ESI) Atlas was jointly developed by Cambodia, Thailand and Viet Nam with technical support from the International Maritime Organization (IMO), Korea Institute of Ocean Science and Technology (KIOST) and PEMSEA. Financial support was provided by the Korean government through the Yeosu Foundation and Korea International Cooperation Agency (KOICA). The ESI Atlas was developed to promote effective planning and oil spill response in the region, as part of a broader goal of building the region's capacity in oil spill preparedness and response. The Atlas consists of composite maps (Scale 1:50,000) summarizing the Gulf of Thailand's shoreline classification and coastal resources that are at risk if an oil spill occurs, as well as the location of oil spill response resources and related services.

Technical Guidelines on ESI Mapping in the Gulf provided direction to national ESI technical teams in the standardization of maps across the three countries. The Guidelines also served as reference for developing national ESI mapping guidelines aimed to standardize and harmonize mapping initiatives at the national level. Through the project, national capacity for ESI mapping was strengthened.

To enhance the functionality of the ESI maps, the participating countries are now exploring funding opportunities for oil spill trajectory modeling in the Gulf of Thailand, thereby providing the coastal states with the capacity to forecast the behavior of an oil spill and its threats and impacts on the region's coastal and marine resources, and to develop and implement preventive and responsive measures to address such threats.



Index Map of the Gulf of Thailand (GOT) Atlas Coverage.



Shoreline Classification	
ESI 1	Exposed rocky shores Exposed, solid man-made structures Exposed rocky cliffs with boulder talus base
ESI 2	Exposed wave-cut platforms in bedrock, mud, or clay Exposed scarps and steep slopes in clay
ESI 3	Fine- to medium-grained sand beaches Scarps and steep slopes in sand
ESI 4	Coarse-grained sand beaches
ESI 5	Mixed sand and gravel beaches
ESI 6A	Gravel beaches
ESI 6B	Riprap
ESI 7	Exposed tidal flats
ESI 8	Sheltered scarps in bedrock, mud, or clay Sheltered, solid man-made structures Sheltered rocky rubble shores
ESI 9A	Sheltered tidal flats
ESI 9B	Vegetated low banks
ESI 10A	Salt- and brackish-water marshes
ESI 10B	Scrub-shrub wetlands; Mangroves



Finding Ways That Work

SEA Knowledge Bank

PEMSEA is set to launch its knowledge management platform, the Seas of East Asia Knowledge Bank (beta. SEAKnowledgeBank.net), part of the World Bank/GEF/PEMSEA Medium-sized Project Applying Knowledge Management to Scale up Partnership Investments for Sustainable Development of Large Marine Ecosystems of East Asia and their Coasts. The platform is a comprehensive collection of lessons learned, best practices, and other relevant content on ICM. It also contains relevant case studies, policy briefs, tool kits, conference proceedings, reports and geographical data. PEMSEA released its first series of knowledge products entitled “ICM Solutions,” which are concise “how to” documents that support scaling up and replication of good practices and investments in ICM. By providing greater visibility of available data, including access to monitoring data, trends and emerging issues, the platform provides the necessary information to stakeholders in a format and manner that facilitates decisions and actions.

Aside from disseminating lessons from the experience of the region, the SEA Knowledge Bank aims to strengthen and scale up investments. By making it easier for investors to discover potential investment projects at ICM sites, the platform is designed to enhance interactions between project developers and investors to address the challenges in the sustainable development of coastal and marine resources.

East Asian Seas Sustainable Business Network

The East Asian Seas Sustainable Business Network is a new forum for business leaders to network with peers and link to science, policy and management best practice for advancing coastal and marine sustainable development and shared value growth strategies. The network aims to identify challenges and risks and opportunities faced by the industry in sustainable development of coasts and oceans, working together with government to facilitate blue economic growth in the region.

PEMSEA's Country Partners previously expressed their interest in blue economy through the Changwon Declaration in 2012, recognizing that innovative partnerships with the business community and others are needed to achieve sustainable ecological and economic health. While the discussion has remained largely the domain of government, the private sector is showing more interest in the potential that blue economy holds. In 2015, PEMSEA published a report entitled, "Blue Economy for Business in East Asia" to illuminate what blue economy means for business and why it will be an important consideration for companies in East Asia in the coming years.

PEMSEA Network of Learning Centers

Another component of building the capacities of local and national governments to support SDS-SEA and ICM implementation is enabling ICM Learning Centers and Regional Centers of Excellence (RCOE) to train, educate and build awareness in coastal and ocean governance. In line with efforts to strengthen engagement to address the capacity building needs of the region, a workshop on Strengthening the Capacity of National and Local Governments involving ICM Learning Centers and RCOEs was conducted on May 11-14, 2015 in Bogor Agricultural University, Indonesia. During the workshop, consensus was reached on the proposed tools, methodologies and indicators to be utilized in the baseline assessments. Capacity needs were also identified in relation to the tools and training required to support each of the sites.

As part of PEMSEA's follow up actions and to begin developing the required training and technical support services across the region, the ICM Learning Centers and other representatives were again brought together in August 2015 for the Regional ICM Training of Trainers Workshop held in Batangas, Philippines. The five-day training course resulted in a new pool of ICM trainers in the region and the 2015-2016 capacity development plans for conducting ICM training in Cambodia, China, DPR Korea, Indonesia, Lao PDR, the Philippines, Thailand, Timor-Leste and Vietnam.

These two regional workshops highlighted the importance of not only working with individual universities and training institutions to scale up ICM, but also the importance of interactions among PEMSEA's RCOEs, ICM Learning Centers and other universities providing technical support to priority ICM sites. As a consequence, workshop participants requested PEMSEA to consider establishing a PEMSEA Network of Learning Centers (PNLC). The PNLC would link these scientific and training institutions through an online platform provided by PEMSEA to facilitate and promote beneficial experience sharing among the members, develop good practices, and disseminate sound information. Most importantly, the PNLC allows for continual communication and interaction among the concerned universities regarding needs and opportunities in protecting, restoring and sustaining marine and coastal ecosystem services across the Seas of East Asia. The PNLC will be launched during the EAS Congress 2015.



Regional ICM Training of Trainers Workshop held in Batangas, Philippines.

East Asian Seas Youth Forum

PEMSEA engages the youth through special events such as the EAS Youth Forum held simultaneously with the East Asian Seas Congress. Launched in 2006, the Youth Forum serves as a platform for young people in the region to become stronger environmental advocates and collaborate on innovative solutions for managing coasts and oceans. It provides an opportunity for youth to interact with thought leaders and integrated coastal management (ICM) practitioners who can impart knowledge and inspire future projects.

The 1st Youth Forum adopted the Youth Agenda for the Seas of East Asia, detailing a plan of action on informing, inspiring and involving the region's youth. In 2009, the 2nd Youth Forum committed to the sustainable development of the seas of East Asia through the Youth Statement and Country Work Plans. The 3rd Youth Forum in 2012 formulated the Changwon Youth Declaration on the Protection of the Seas of East Asia. Now on its fourth cycle, the EAS Youth Forum (YF4) carries the theme, "Charting the Future We Want: Engaging Young Champions for the Ocean Beyond 2015." The YF4 will gather young leaders in the EAS region to showcase their initiatives contributing to the sustainable development agenda. Putting the youth as actors for and stakeholders in a healthy world, YF4 will encourage participants to display ideas and convictions, innovative frameworks, approaches and methodologies in addressing pressing environmental issues in their respective communities.

To encourage the region's youth to play stronger roles in sustainable development, PEMSEA will launch a new initiative in the 2015 Youth Forum. The East Asian Seas (EAS) Youth Forum Grant Competition will be open to youth leaders from PEMSEA's partner countries, aged 18 to 25 years old. Grants are available for the implementation of projects for the sustainable development of the coastal and marine areas in the EAS region, preferably in collaboration with local governments and community organizations, and within the framework of ICM programs.

PSHEMS Certification

PEMSEA's Port Safety, Health and Environmental Management (PSHEM) Code is a voluntary standard that the port authorities, or any other company operating within the port can use to measure the performance of their PSHEM System (PSHEMS) and their operations with regard to quality, safety and health, and the protection of the environment. The PSHEMS provides ports with a procedure for improving operational safety, safeguarding workers and surrounding communities and protecting the environment and port installations, while enhancing the efficiency and quality of services being provided to customers.

The PSHEMS is currently being implemented in several ports in the region namely Port of Tanjung Pelepas (PTP) in Malaysia, Bangkok Port and Laem Chabang Port (LCP) in Thailand, and Port of Iloilo and Port of Cagayan de Oro in the Philippines. These ports are continuously improving their PSHEMS and have achieved relevant improvement in their safety, health and environmental performance. At the same time, the PSHEMS experiences have also contributed to the maintenance of the respective international certifications (ISO 9001, ISO 14001, OHSAS 18001 and IMS for PTP; ISO 9001 for Port of Iloilo; ISO 9001 Port of Cagayan de Oro and ISO 9001 for Oro Port, the cargo handling organization of Port of Cagayan de Oro).

In addition, on-the-ground changes are being effected. For example, Bangkok Port achieved dramatic reduction in the number of incidents/accidents related to dangerous goods (DG) handling and in 2015, the target of zero accidents related to DG handling was achieved.

In Laem Chabang Port, awareness of the need to preserve and protect the environment has improved, as evidenced in the continuous maintenance of mangrove forest in the port area. The natural resources preservation program has also encouraged the local community to participate in various activities such as collecting garbage, surveying types and density of mangrove plantation, replanting of the destroyed areas of the forest, monitoring seawater quality, etc. Moreover, academic activities around the port have been conducted to enhance knowledge about the environment and natural resource preservation for the local communities and students. The forest is used as a recreation site for the general public.

The PSHEMS implementation is being scaled up in Cambodia and the Philippines. The Philippine Ports Authority (PPA) signed the Memorandum of Agreements with PEMSEA in January 2015 for the development and implementation of PSHEMS in the Port of Batangas and the Port of General Santos. The Phnom Penh Autonomous Port and the Sihanoukville Autonomous Port in Cambodia are also implementing the Continual Improvement Phase of their respective PSHEMS. The Port of Batangas, Port of General Santos, Phnom Penh Autonomous Port and Sihanoukville Autonomous Port have completed the PSHEMS development and implementation and are scheduled to be audited for PSHEMS recognition in the first quarter of 2016.



ICM System Certification

The ICM Code and ICM System Certification acknowledge the commitment of governments to protect the environment and to fulfill the needs and expectations of their stakeholders through an ICM program. The ICM Code provides a systematic approach to integrated management that result in improved performance in the sustainable development, management and governance of coastal and marine resources.

The ICM System Certification, which provides a framework to formally evaluate and acknowledge that a local government's ICM system conforms to the requirements of the ICM Code, is structured as a tri-level approach to encourage local governments to strive for excellence through continuous improvement.

Three levels of certification are available:

The PEMSEA Network of Local Governments for Sustainable Coastal Development (PNLG) recognized the value of the ICM Code and included the: "Implementation of the PEMSEA ICM Code and Recognition System across 50 percent of the PNLG membership by 2015" as one of the targets of the Dongying Declaration agreed to by 29 PNLG members. Seventeen (17) PNLG members have submitted the ICM Code Initial Status Review (ISR) checklist. To date, 50 percent of the PNLG membership has already been successfully audited and were qualified for the ICM Code Level 1 Certification. Awarding of certificates will be done during the EAS Congress 2015.



ICM Managers and Practitioners Certification

With the increasing need to further professionalize ICM practice through certification, PEMSEA is working towards establishing a licensing and certification system for ICM professionals. The certification system will recognize qualified ICM leaders and practitioners who can demonstrate competencies on ecosystem-based sustainability and leadership frameworks, and are willing to undergo professional growth.

Based on the tenets of continuous professional development, certification can add value in at least three ways. First, certification can leverage the gains from the other capacity development strategies – i.e., internships, short-term trainings and degree-granting programs that have been instituted before – in setting the standard of the ICM practice. Second, certification can capitalize on communities of practice as well as ICM platforms, institutions and analytical and decisionmaking tools and not to lose the "pools of capacity" already built over the years. This strategy can simultaneously strengthen the communities of practice and help in maintaining their relevance as effective avenues of capacity development. And third, a regular certification process can gauge competencies that have already been met and may reflect gaps in capacity development that are still needed.

The ICM Managers and Practitioners certification program is scheduled for review and approval by the EAS Partnership Council in 2016.



Trainings and Events

From July 2014 to June 2015, PEMSEA conducted 19 training workshops focused on integrated coastal management and its tools including State of the Coasts reporting, Integrated Information Management System (IIMS), Port Safety, Health and Management System (PSHEMS), and ICM Code and System implementation, among others.

In line with developing and disseminating PEMSEA certified ICM and special skills training courses for use in regional, sub regional and national ICM training and capacity development programs, some of training materials have been recently updated. The Coastal Use Zoning Manual, Fisheries Zoning Manual and Tourism Development Zoning Manuals have been reviewed, and the updating, refinement and finalization will be completed within the first quarter of 2016.



Aside from these trainings, consultations and scoping assessments were undertaken as part of scaling up ICM programs in eight participating countries, in collaboration with PEMSEA National Focal Agencies. The purpose of the scoping was to evaluate the conditions, capacities and commitments of prospective sites/local governments to develop, implement and/or scale up ICM. The results of the scoping efforts will be used as input to work plans and budgets for scaling up ICM programs in the respective countries and ICM sites, including capacity development and technical assistance from PEMSEA and other collaborating organizations.



State of the Coasts reporting

On the ground progress is reported through the State of the Coasts (SOC) Reporting System, which serves as PEMSEA's key mechanism in monitoring and assessing progress in ICM implementation.

Twenty-nine local governments implementing ICM reported that they are in varying stages of developing State of the Coasts (SOC) reports in 2014, e.g., data gathering and validation, stakeholders' consultations, drafting and finalizing the reports for publication. Baseline assessments were initiated in three priority sites in Lao PDR in 2015. The PRF and the PNLG Secretariat are working with the PNLG member governments to facilitate 100% of the PNLG membership completing their respective SOC reports by 2015, as committed to in the Dongying Declaration (2011).

Reflecting the focus of SDS-SEA 2015, the SOC indicators will expand to include indicators that cover healthy fisheries and resilient habitats. Because the sustainability of ocean economic activities depends on the health of these ecosystems, tools and methodologies to gather relevant data are needed to accurately measure the region's baseline and subsequent progress. Monitoring the health of coastal and marine resource and linking its contribution to ocean economic activities can encourage support to implement policies and strategies that sustainably develop these resources.

As part of scaling up, ICM sites are moving towards regular monitoring of progress in SDS-SEA implementation. This will be facilitated through an online SOC system that will be developed as part of the SEA Knowledge Bank. The online SOC system will be easily accessible and interactive, providing support to local chief executives, planners and other decision-makers in the public and private sectors, through services like tracking performance and identifying risks and investment opportunities.

Aside from expanding the coverage of the SOC, a regional reporting system is being put into place. One of the SDS-SEA 2015 commitments is to develop and utilize a scientifically sound regional State of Oceans and Coasts (SOC) reporting system, including agreed indicators and data requirements to monitor progress in SDS-SEA implementation at the regional level. The regional SOC will show the critical role and contribution of ocean economic activities and coastal and marine ecosystems to national economies. The regional SOC is being designed to provide input to region-wide ocean policy and decision-making and examine the benefits, costs and impacts at the regional and national levels.

Initiatives of Non-Country Partners

Non-Country Partners are making significant contributions to SDS-SEA objectives through their respective mandates, programs and initiatives over the past two years. Some highlights include:

- **ASEAN Center for Biodiversity (ACB)** flagship program is ASEAN Heritage Parks. Plans are underway to add more marine areas within the program (three in Thailand, one in the Philippines), focusing on wise use of marine areas. The program complements well with the SDS-SEA particularly in ensuring sustainable management of marine habitats in the ASEAN region, promoting wise use of marine areas, and contributing to best practices in ICM.
- **Coastal Management Center (CMC)** collaboration with PEMSEA and World Bank in the development and publication of ICM case studies covering good practices and lessons learned in the region over the past 20 years.
- **IOC/WESTPAC** training workshops on harmful algal blooms, marine toxins and seafood safety, marine alien species, coral reef conservation and restoration, and onset monitoring and its social and ecosystem impact (MOMSEI).
- **IUCN's** Mangroves for the Future (MFF) Grant Facilities, as well as its training courses on project cycle management and ICM.
- Joint training workshops organized and conducted by **Korea Maritime Institute (KMI)** and PEMSEA (2014, 2015) to further develop the skills and capacity of representatives of PEMSEA Country Partners and ICM Learning Centers in the use of INVEST and other ecosystem assessment tools for marine spatial planning.
- **Korea Marine Environment Management Corporation (KOEM)** initiatives/programs including oil spill response, ecosystem survey and management, MPA management, marine litter management, etc. Since joining PEMSEA in 2012, KOEM has conducted joint implementation of projects and trainings with PEMSEA in various topics including climate change, oil spill response etc.
- **NOWPAP's** Annual International Coastal Cleanup (ICC) campaigns and workshops on marine litter management.
- **Ocean Policy Research Institute-Sasakawa Peace Foundation (OPRI-SPF)** supported ICM replication at five sites in Japan in collaboration with local governments and universities, as well as one of its new initiatives on Islands and Oceans Net (IO-Net), focusing on conservation and management of islands; management of surrounding ocean areas; response to climate change variability; and capacity building and institutional strengthening.
- **UNEP GPA** global initiative on sustainable nutrient management and the development of an Asian Platform of the Global Partnership on Nutrient Managements.
- **OSR** focus on better prevention, subsea intervention and preparedness and response to oil spills, including the tiered preparedness and response (TPR) Good Practice Guide (GPG) and the TPR 'Glance Scan' Material.



PEMSEA

FINANCIAL OVERVIEW 2014

PEMSEA's work at the regional, national and local levels entails a lasting commitment to healthy oceans, people and economies of the Seas of East Asia. In order to achieve its targets, PEMSEA must maintain the financial strength that is required to fund the long-term effort.

PEMSEA completed 2014 on sound financial footing with the signing of an Implementing Partner Agreement with the UNDP and the start up of a new five-year regional GEF project on Scaling up the Implementation of the SDS-SEA. Thanks mainly to the GEF grant, which is restricted to approved project activities over the next five years, the total assets of the organization grew from US\$ 2.5 million to US\$ 12.56 million during 2014 (**Table 3**).

Aside from the GEF grant, unrestricted contributions and revenue generated amounted to a little more than US\$ 1.22 million for the year. Unrestricted contributions from Country Partners represented more than 41 percent of this total. Other revenues were primarily sourced from PEMSEA Services that were conducted in 2013 and 2014, as well as from the sale of publications (mainly PEMSEA's 20th Anniversary publication). These contributions and revenues contributed to PEMSEA Resource Facility (PRF) operating costs related to: secretariat services; project planning and implementation; knowledge management and capacity building; ICM and PSHEMS certification; and management, administrative and office operational costs, amounting to US\$ 1.19 million. As a consequence, net unrestricted assets for the organization at the end of 2014 were just over US\$ 1.32 million, which represented a US\$ 33,000 increase over 2013.

PEMSEA highly appreciates the support and cooperation provided by GEF, UNDP, World Bank and UNEP, as well as its Country and Non-Country Partners and collaborating organizations towards scaling up the implementation of SDS-SEA throughout 2014.

In particular, PEMSEA wishes to acknowledge our Country Partners, China, Japan, Philippines, RO Korea, Singapore and Timor-Leste, for the continuing support to the operation of the PEMSEA Resource Facility.

As PEMSEA grows and more stakeholders recognize PEMSEA's innovative and meaningful work program, the ongoing responsibility to steward such investments well – while delivering results for healthy oceans, people and economies for the Seas of East Asia region – remains a high priority of the organization.

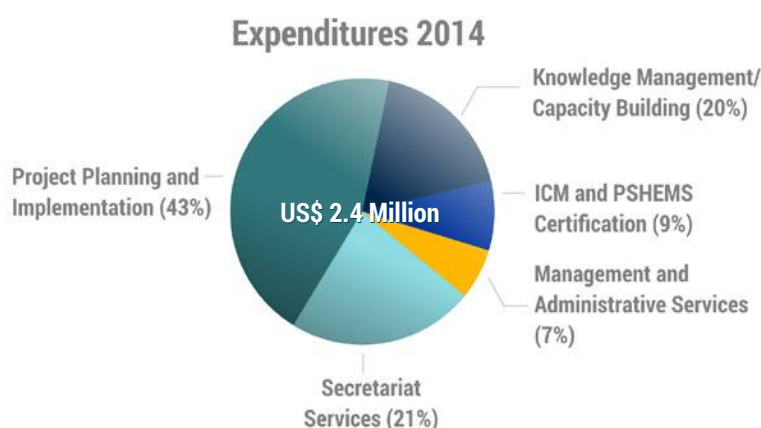
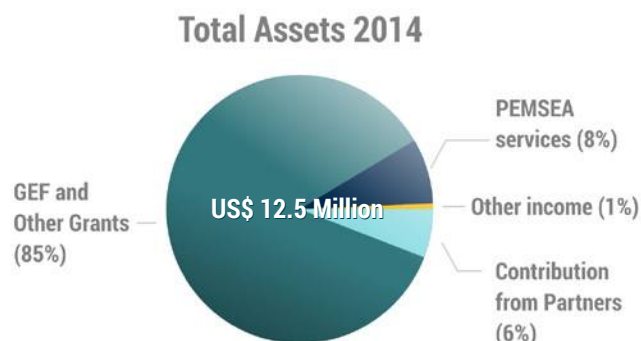


Table 3. Statement of Activities in 2013 and 2014.

YEAR ENDED DECEMBER 31	UNRESTRICTED	RESTRICTED	TOTAL 2014	TOTAL 2013
OPERATING SUPPORT AND REVENUE				
Support:				
Contributions from Partners	507,336	223,465	730,801	817,413
GEF and other grants		10,643,992	10,643,992	1,000,000
Total Support	507,336	10,867,457	11,374,793	1,817,413
Revenue:				
Investment income	3,201		3,201	2,108
PEMSEA Services	610,533	363,856	974,389	
Donation	4,010		4,010	1,000
Other income	101,053		101,053	241
Total revenue	718,797	363,856	1,082,653	3,108
Total support and revenue	1,226,133	11,231,313	12,457,446	1,820,521
PRF OPERATIONS AND PROJECT EXPENDITURES				
Program services:				
Facilitation and Secretariat Services	378,566		378,566	553,978
Project planning and implementation	306,374	717,551	1,023,925	813,077
Knowledge management/capacity building	275,972	201,043	477,015	559,217
ICM and PSHEMS Certification		225,000	225,000	75,284
Travel and meetings	102,239		102,239	
Other	33,459		33,459	
Total program services	1,096,610	1,143,594	2,240,204	2,001,556
Supporting services				
Management and administration		71,380	71,380	136,946
Office operations	56,000		56,000	55,193
Fundraising/partnership development				
Audit	35,381		35,381	10,137
Total supporting services	91,381	71,380	162,761	202,276
Other: Depreciation and Amortization	4,949		4,949	
Total operating expenses	1,192,940	1,214,974	2,407,914	2,203,832
Change in net assets	33,193	10,016,339	10,049,532	(383,311)
Net assets, beginning of year	1,293,198	1,219,767	2,512,965	2,896,276
Net assets, end of year	1,326,391	11,236,106	12,562,497	2,512,965

