

# **PEMSEA: An Effective Marine Environment Institution for Northeast Asia?**

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## **Abstract**

Northeast Asia is striving to protect the marine environment of the region from further pollution and damage. In the line of the efforts, many institutions have been established through the cooperation by littoral states and other international organizations, including Partnerships in Environment Management of Seas of East Asia (PEMSEA). This paper analyzes the effectiveness of PEMSEA as an international environmental institution which aims to protect and manage the various bodies of water in the region. Based on the Integrated Coastal Management (ICM) program, PEMSEA has positively influenced the process of policymaking and implementation by appropriately raising the issues of marine and coastal environment as an agenda, facilitating international and regional agreements between littoral states for protective action, and supporting the implementation of national level measures. Moreover, PEMSEA's ICM projects in the Bohai Sea of China and Nampho of North Korea are meaningful activities among the Northeast Asian marine protection efforts, as no other institutions have been able to address these areas. With PEMSEA's new legal status as an international organization, it stands to exert greater capacity in protecting the oceans and marine ecosystems of Northeast Asia.

### **Keywords:**

marine environment protection, Northeast Asia, PEMSEA, institutional effectiveness, integrated coastal management (ICM)

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# Introduction

The marine environment, home to lively biodiversity, provider of resources for everyday living, pathway for trade and transportation, and granter of recreational leisure, is of vital importance to the Northeast Asian region. However, with continuous economic development and growing population, the natural conditions of the seas of Northeast Asia are evidently deteriorating and inducing serious threats for the people as well as the ecosystems. Pollution from land-based sources, overfishing and resource depletion, oil spills and pollution are just few of the problems. Thus, immediate and effective actions must be taken to alleviate the growing concern and conserve the marine environment. As with environmental problems, marine environmental problems are transboundary in nature and therefore require the cooperation between states to adequately prevent and respond to marine pollution issues. Efforts have been made in this direction, with the formation of international and regional environmental institutions in Northeast Asia. However, it is necessary to question whether these existing institutions, with purpose to address marine environmental issues and protect the seas of Northeast Asia, are in fact working. Thus, the main aim of this study is to assess the effectiveness one of such endeavors, by reviewing the case of an international organization in Northeast Asia devoted to sustainable coastal development and ocean governance, PEMSEA (Partnerships in Environmental Management of Seas of East Asia).

To measure whether or not PEMSEA is an “effective” institution, I have applied the theoretical framework introduced by Haas, Keohane, and Levy, with similar approach actualized by Victor and colleagues. These scholars sought to understand and analyze “effectiveness” by focusing on the influence of institutions on the three-step policymaking process of agenda setting, formulating relevant international agreements and policies, and creating aligned national action measures. Due to the difficulty in measuring the actual improvement in natural conditions of the oceans of Northeast Asia and assessing whether certain marine environmental problems have been completely resolved, this framework was thought to be appropriate. By utilizing this approach, I explored the role PEMSEA played, and continues to play in the Northeast Asian

region's policymaking process on the vital issue of marine environmental protection.

Part 2 will provide brief answers to what PEMSEA is and what PEMSEA does. The following Parts 3, 4, and 5 are the results of analyzing PEMSEA's effectiveness as an agenda setter, international policymaker, and national action facilitator in Northeast Asia's marine environmental issues. Part 6 seeks to probe into other achievements and challenges of PEMSEA that were not captured in the policy-oriented analysis. Part 7 explains the reasons for which PEMSEA is a valuable and meaningful international organization in the Northeast Asian region. Finally, Part 8 will summarize my argument with concluding remarks.

Overall, the analysis has shown that PEMSEA has had a positive influence in fostering marine environment protection as an agenda for the region and facilitating the development and adoption of international and national measures regarding integrated ocean and coastal management.

## **PEMSEA: History and Activities**

PEMSEA is an international organization which aims to sustainably develop and manage the oceans and coastal areas of East Asia. This organization's geographical encompasses six sub-regional seas including the Yellow Sea, East China Sea, South China Sea, Sulu Sea, Celebes Sea and the Indonesian Seas. The total area of the region is approximately 7 million km<sup>2</sup>, with a coastline of 234,000 km, and a total watershed area of about 8.6 million km<sup>2</sup> (PEMSEA 2007, 5). Also, the East Asian region accommodates states of Northeast Asia: China, Japan; North Korea; South Korea; as well as states of Southeast Asia: Cambodia, Indonesia, Lao People's Democratic Republic (hereinafter Laos), Philippines, Singapore, Timore-Lests, and Vietnam. The six sub-regional seas are interconnected, with major ocean currents flowing without restriction across the entire region. These seas are important for the surrounding countries and people as an economic, social, and cultural arena as it is home to approximately 30 percent of the global coral reefs, accounts for 40 percent of the world's fish haul, with about 2 billion people based in the region (PEMSEA 2007a).

The growing number of population, increased economic activities in the seas and development of coastal cities and coastlines have all attributed greatly to augmenting the pressure on the marine environment of East Asian region. Therefore, the urgency for cooperation between states was unequivocal.

## ***History***

The Global Environment Facility (GEF) noticed the pressing need to address the rapidly increasing marine environment problems in the East Asian region and thus launched a project known as the *Prevention and Management of Marine Pollution in the East Asian Seas* in December 1993. The program began operations in January of 1994. The aim of the project was to prevent and manage marine pollution by 1) setting up integrated coastal management (ICM) pilot sites and 2) strengthening the capacity of developing countries. The United Nations Development Programme (UNDP) was responsible for the implementation of the project, the International Maritime Organization (IMO) for execution. The government of Philippines agreed to host the regional project office in Quezon City, Metro Manila.

After six years, the pilot phase project was completed in September 1999. The successful performance of the ICM pilot projects eventually led to the discussion and implementation of the second phase project between 1999 and 2007 (PEMSEA 2007a, 6). This second phase not only addressed marine pollution issues but also focused on building a network of partners that would foster a sense of confidence between the nation states of the region as well as relevant stakeholders to better meet the environmental challenges of the East Asian seas. Therefore, the goal was to build “intergovernmental, interagency, and multisectoral partnerships in environmental management” (PEMSEA 2007a, 6). The name “*Partnerships in Environmental Management of Seas of East Asia: PEMSEA*” was thus created.

PEMSEA, with successful implementation of ICM activities in many sites throughout the region began work on creating a new framework named Sustainable Development Strategy for the Seas of East Asia (hereinafter SDS-SEA) in 2000. The purpose was to further spread and implement ICM activities at the national level and to

help governments do so by implementing related international commitments on oceans and coasts (PEMSEA 2007a, 12).

In June 2007, the GEF Council approved Phase I of a 10-year project that would be carried out from 2007 to 2017 for the implementation of the SDS-SEA. One of the goals of the SDS-SEA was to transform the once project-based operations to a “self-sustaining regional operating mechanism” (PEMSEA 2007a, 7). PEMSEA finally achieved this vision last year, as it became a fully-legal entity in the international community in November 2009.

## ***Core Activities***

PEMSEA’s main activity is the ICM. The ICM can be said to be not only PEMSEA’s core program, but the overarching umbrella mechanism that drives and directs all activities of PEMSEA. It is a practical tool that assists the policymakers, resource managers, and other relevant stakeholders to effectively address the marine and coastal problems of the East Asian region (IWICM 1996, 2). The ICM oversees all activities related to coastal management, i.e., preparing work plans, training staff, environmental profiling, carrying out environmental risk assessment, creating Strategic Environmental Management Plans, program monitoring and evaluation. The significant aspect of the ICM program is that it can evolve, from a small ICM Demonstration Site to a full-fledged national program (IWICM 1996, 12). The first step is to establish an ICM Demonstration Site and implement the ICM program. Successful implementation of the program at the specific site would then lead to further consolidation of achievements and gain confidence by continuous monitoring and assessments. At this stage, the ICM program can be refined to better manage coastal environment problems. The skills, experiences, practices, and methodologies acquired from the successful ICM Demonstration Site can be replicated to another location for implementation, to parallel sites. Again, the flexibility of the ICM programs allows adjustments to better meet the complexities and urgencies of that specific site.

Until now, eight ICM demonstration sites have been established, including a site in Nampo, North Korea, the only demonstration site in North East Asia. This is a notable

achievement, as North Korea continuous to participate in PEMSEA activities through the ICM implementation. The coverage of the eight sites is quite extensive, with a total of 917 km of coastline, and 15,118 km<sup>2</sup> of land and sea area (PEMSEA 2007a, 26). According to PEMSEA, the implementations of the ICM projects at the eight ICM demonstration sites have incurred benefits to more than 7 million stakeholders of the region.

Following the best practices of the ICM demonstration sites, eighteen ICM parallel sites have been established. Five ICM Parallel Sites are located in Northeast Asia, one site in South Korea, and four sites in China. With the extension of the ICM projects to parallel sites, the coverage of the ICM program implementation area has reached 1,674 km of coastline and 27, 508 km<sup>2</sup> of land and sea area, and implementation effects reached 11 million inhabitants (PEMSEA 2007a, 26). The goal of PEMSEA is to further extend the geographical and functional scope of the ICM framework and achieve by 2015 the target of covering 20 percent of the regional coastline (PEMSEA 2007a, 26).

A major development for PEMSEA was the adoption of a new framework strategy, the SDS-SEA with the announcement of Putrajaya Declaration in 2003. The preparation of the SDS-SEA was initiated in 2000 to assist participating governments with the implementation of their major international commitments related to coasts and oceans. The final document was completed and adopted in 2003, after three years of extensive consultations with 12 participating governments and 16 stakeholder partners. The SDS-SEA provides a framework of actions for achieving the goals of key international agreements and action plans, including the UN Millennium Development Goals (MDGs), the World Summit on Sustainable Development (WSSD) Plan of Implementation, Chapter 17 of Agenda 21 and other international instruments related to coasts, islands, and oceans, as well as a platform for regional cooperation (PEMSEA 2003c, 10). It offers a way of realizing the commitments countries have already made without assuming new legal obligations, in an integrated or holistic manner (PEMSEA 2003c, 10).

The SDS-SEA introduced a new paradigm for sustainable development to the East Asian countries. By adopting a shared vision and mission,, the countries of the

region aim to pursue a common integrated strategy, based on which national and local actions can be taken, and share the burden of mitigating the transboundary marine environmental threats of the region. As a part of this strategy, countries will develop new partners that cut across the society, governments both local and central, civil societies, private sector, donor communities, and other international organizations.

## **PEMSEA: The Regional Agenda Setter**

PEMSEA has set the agenda for the East Asian seas largely in three stages, with incremental developments based on ICM at each stage: 1) managing marine pollution through ICM, 2) building partnerships to extend ICM practices, and 3) ocean governance and adapting to climate change. This section tries to assess whether PEMSEA has effectively influenced the agenda setting process for the East Asian region.

### ***Marine Pollution Prevention and Management through ICM as Main Agenda***

During the project phase as a “Regional Programme for the Prevention and Management of Marine Pollution of the East Asian Seas” from 1994 to 1999, the focus of this Regional Programme was to develop and implement the ICM program throughout diverse sites in East Asia. The ICM as explained in previous part is a framework that addresses and alleviates marine and coastal pollution by carrying out activities at demonstration sites then replicating the experience to other parallel sites. Then, what was the rationale behind advocating the importance of marine and coastal pollution management through ICM? Was the extent of the problem accurately perceived?

First, it seems that the impetus for addressing marine environmental problems was apparent at the global level as the international community took action and pronounced specific goals to address global ocean issues.

The 1992 United Nations Conference on Environment Development and the consequent Agenda 21, which advocated sustainable development, addressed international marine and ocean issues. It included components such as integrated management of coastal areas, marine environment protection and sustainable use of living marine resources (GEF/UNDP/IMO 1996, 7). More specifically in Chapter 17, which explains that regional, national, and local actions are needed to achieve global objectives, has been noted as the document which “underscores the basic theme of the Regional Programme (GEF/UNDP/IMO 1996, 7).”

Furthermore, in November 1995, the Global Programme of Action for the protection of the Marine Environment from Land-Based Activities was adopted by an intergovernmental conference in Washington, D.C. The Global Programme of Action recognized that,

*“roughly 80% of the contaminant load of the oceans emanates from sea based and land based activities and affects the most productive areas of the marine environment, including estuaries, bays and the near shore coastal areas. These areas are likewise threatened by physical alteration of the coastal environment, including destruction of habitats of vital importance for ecosystem health and biodiversity. Persistent contaminants originating on land are transported great distances by watercourses, ocean currents and atmospheric processes, posing risks to human health and living resources on a regional and global scale (GEF/UNDP/IMO 1996, 7).”*

The Global Programme of Action once again reconfirmed the importance and necessity of addressing marine environmental issues. Thus, the spirit of the time created a friendly atmosphere in the international community, including in the East Asian region, to take cooperative action in addressing marine environmental issues.

Second, the natural conditions of the marine environment of East Asia was clearly deteriorating at the time, with prospects for further deterioration if appropriate response



actions were not taken. The level of marine pollution was serious. In a 1997 statistics, it was estimated that every year, approximately 60 million tons of hazardous waste and 80 billion tons of sewage were being produced in the region (GEF/UNDP/IMO 1998, 6). Also, with 60 percent of the region's population living within 60 km of the coastline, there was little doubt that human activities would continue to have a major impact on conditions of the coastal areas and seas. Depletion of marine resources is another major problem, and has been said to be "proceeding into unsustainable degree in this area (Koo 2000, 11)."

With increased volume of trade into and within the region, sea-based pollution was another source of concern. Risks of oil and chemical spills were augmenting with increase in number of actual incidents. Within a ten year period from 1992 to 2001, ten separate accounts of oil spills have been identified (Nobuhiro et al. 2005, 118). The visibility of oil and chemical attracted much public attention as well as media coverage toward issues of marine pollution. The increasing number of and aspects of the marine related issues thus pointed out the urgency in taking initiative to tackle marine environmental problems of the East Asian Seas in a concerted manner.

The pressure from the international community and the deteriorating marine environment conditions thus created the momentum for states to take action. However, the East Asian region lacked at that time an appropriate and working institution to address marine environmental problems.

Although institutions carrying out marine pollution monitoring activities did exist in the region, GEF has reported that the information gathered were not necessarily 1) in a form readily usable by managers and policymakers, 2) utilized for and translated into management strategies and interventions, or 3) reliable or relevant because of deficiencies in planning and design of the program (GEF 1995, 7). Another problem was that the value of the monitoring activity itself lacked appropriate assessment (GEF 1995, 7). From this we can see that marine pollution issues were not appropriately dealt with at that time, although formerly established institutions on marine environment existed.

A pollution-prevention and monitoring program of the East Asian Seas can be said to have been at a rather primitive stage at the inception of the Regional Programme.

The GEF/UNDP/IMO recognized that institutional efforts were needed in the region, and thus launched the Regional Programme with the specific aim to protect the seas of East Asia from pollution through ICM. It has been asserted that “a monitoring program that targets selected critical problems and inputs to the formulation of cost-effective strategies is believed to be better suited for the East Asian region (GEF 1995, 7).” The Regional Programme with the agenda to reduce pollution in the Seas of East Asia by implementing the ICM program seems to be reasonable.

### ***Shift in Agenda to Focus on Building Partnerships***

The Regional Programme successfully developed and implemented the ICM program, and demonstrated in sites dispersed throughout East Asia the effectiveness of the program. The Regional Programme also laid the groundwork in building awareness and capacity to implement international conventions related to marine environment and environment management in general. Thus, the Regional Programme has built the foundation with the ICM on which further actions could be taken by the participating countries. It seems the force by which this action would be driven was identified as “partnerships”. In the 1999 Terminal Report, it states that “the next step is to build upon this base of experience and knowledge, and replicate and extend the practice beyond the three sites that were involved in the project (GEF/UNDP/IMO 1999, 77)” It seems logical that GEF/UNDP/IMO would shift the focus of the programme to building “intergovernmental, intersectoral and interagency partnerships” to achieve collective commitments of the stakeholders. Thus, PEMSEA now has partners from all levels of the international society, i.e., national governments, the private sector, international organizations, NGOs, the civil society, and etc.

This shift in focus can be evidently found in the renaming of the program title, from the prior “Regional Programme for the Prevention and Management of Marine Pollution of the East Asian Seas” to the “Building Partnerships on the Environmental Management of the Seas of East Asia: PEMSEA.” This change was evaluated to be “very appropriate” (PEMSEA 2003b, 2). The rationale behind such change was that an integrated approach such as the ICM requires partnerships from different sectors and at

various levels for better protection and management of the coastal areas. Moreover the new title incorporates wider scope of content coverage from pollution management to environmental management (PEMSEA 2003b, 2).

PEMSEA, with extended partnerships, can incur more effective outcome, especially in the ICM implementation, for it bring together “various uses and custodians of the marine management intervention processes (GEF 1995, 7)”. Creating such innovative networks can also strengthen the linkages among scientists in the East Asian region. Thus, PEMSEA expanded its network of partners in order to gain the extra expertise that cannot be acquired internally within the organization as well as the region.

### ***Agenda Encompassing Ocean Governance and Climate Change Adaptation***

PEMSEA had first identified the marine and coastal areas as the key concern for dealing with marine environmental issues for East Asia. Since 2003, the focus has been extended to cover not only the coastal areas, but to overarching “coastal and ocean governance” as well as issues of climate change, inducing the introduction of a new strategy called the “Sustainable Development Strategy for the Seas of East Asia (SDS-SEA).” The title of the strategy inherently displays the focus of the framework which is to continue implementing the ICM projects but also cover diverse aspects of marine environmental issues.

The broadened area of concern seems to be related to new movements in the international community as climate change emerged as an important agenda. The UN Millennium Development Goals announced in 2000 includes a specific goal to ensure environmental sustainability, with specific target to reduce diversity loss including in fish stocks and marine areas. Moreover, the 2002 World Summit on Sustainable Development (WSSD) and the successive reports from Intergovernmental Panel on Climate Change (IPCC) has brought to the world community the issue of climate change as an agenda.

PEMSEA recognized the importance of taking into consideration the impact of climate change on the coastal and marine environments of the East Asian region and

has thus come to regard climate change as an emerging issue. In this context, the 2009 Manila Declaration was formulated, which incorporated aspects of climate change and ocean governance and has thus named the declaration, “Manila Declaration on Strengthening the Implementation of Integrated Coastal Management for Sustainable Development and Climate Change Adaptation.” The title of the agreement again incorporates the ICM as a key part of PEMSEA.

### *Adequacy of PEMSEA Agendas for East Asia?*

PEMSEA has come a long way since its inception by building on past agendas and experiences, developing the agendas so that it is more comprehensive and integrative. However, PEMSEA may be criticized for the fact that it does not include a very heatedly disputed matter closely relevant to marine environment, the territorial disputes. Territorial disputes persist in the East Asian region and continue to plague the cooperative efforts between national governments.

The territorial issues are certainly an area of concern regarding marine environment as it involves the conflicts over jurisdiction of the coastal areas, which directly influences the scope of fishery activities for the neighboring countries. In the same manner, the jurisdiction will decide which country is responsible for the clean-up and mitigation of adverse impacts of coastal and marine pollution.

However, it seems that PEMSEA has made a strategic choice to exclude such political aspects as it may only serve to be an obstacle in decision-making and implementing processes of the ICM and the SDS-SEA. Moreover, as East Asian countries have a relatively short history in participating in regional cooperative mechanisms, it may be more appropriate that the territorial issues be excluded from PEMSEA agendas until cooperation mechanisms and countries gain the experience needed in achieving effective cooperation before extending the agenda to include territorial matters.

# PEMSEA: The Regional Policymaker

PEMSEA's efforts to effectively and sustainably manage the marine environment by implementing ICM and building partnerships, which were the two main agendas, were partially actualized through three key regional agreements signed by the littoral countries of the East Asian region: the Putrajaya Declaration in 2003; the Haikou Partnership Agreement in 2006; and the Manila Declaration in 2009. The agreements can be seen as milestones in PEMSEA's works as it proclaims the formulation and implementation of the SDS-SEA to the international community. Also, PEMSEA has facilitated littoral states to enter into sub-regional arrangements. Although not legally binding, these institutional measures call for collective application by signatory nation states for effective protection and management of the oceans.

## ***Regional Policy Formulation and Adoption of Three International Agreements for the SDS-SEA Implementation***

Twelve ministers each from respective coastal states<sup>1)</sup> gathered in 2003 and signed "The Putrajaya Declaration of Regional Cooperation for the Sustainable Development for the Seas of East Asia". This Declaration recognized the deterioration in natural environment of the region as a problem and the need to strengthen cooperation between riparian states of East Asia in addressing issues of transboundary environmental resources. The Declaration formally announced the formulation of the SDS-SEA.

*The SES-SEA addresses, amongst others, key concerns of our coasts and oceans, providing a platform for cooperation for regional, subregional, national and local levels, and for intergovernmental, interagency and intersectoral collaboration on:*

- *WSSD targets for sustainable development;*
- *Implementation of integrated ocean and coastal management*

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1) The signatory states are: Brunei Darussalam; Cambodia; China; North Korea; Indonesia; Japan; Malaysia; Phillipines; South Korea; Singapore; Thailand; and Vietnam

*approaches; and*

- *Action programs aimed at solving problems and deficiencies in ocean and coastal governance. (Putrajaya Declaration, 2003)*

The endorsement of the SDS-SEA has been called an “unprecedented output of PEMSEA”, as it was adopted by not only twelve national governments but also by sixteen international and regional partners. The importance of this declaration is that it provides the overarching framework for formulating regional and national policies, taking strategic actions, and furthering regional cooperation.

Secondly, “The Haikou Partnership Agreement on the Implementation of Sustainable Development Strategy for the Seas of East Asia” was signed among eleven countries in 2006<sup>2)</sup>. This agreement mandates the transformation of PEMSEA from a project-based arrangement into a self-sustaining regional collaborate mechanism to more effectively pursue the implementation of the ICM and the SDS-SEA through collaborative, synergistic, and responsible actions.

This agreement specifically affirmed the priority targets for the SDS-SEA implementation.

- *Mobilization of the necessary resources, capacities, and services, as well as legal, financial, and economic arrangements, including adoption of a rolling ten-year regional partnership programme and the production of a regional State of the Coasts report by 2009, building on the existing relevant national and regional initiatives and programmes.*
- *Formulation and implementation of national policies and action plans for sustainable coastal and ocean development in at least 70 percent of the participating countries by 2015, in order to develop and strengthen integrated coastal and ocean governance at the at the national level.*
- *Implementation of integrated coastal management programmes*

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2)The signatory countries are Cambodia, China, North Korea, Indonesia, Japan, Laos, Philippines, South Korea, Singapore, Timor-Leste, and Vietnam

*in at least 20 percent of the Region's coasts by 2015, to achieve the sustainable development of coastal lands and waters and to promote intra-and inter-regional partnerships in ICM Capacity building. (Haikou Partnership Agreement 2006)*

The agreement is also significant in that it introduced a more advanced and refined operating arrangements so that implementation of the SDS-SEA would be effective.

Finally, “The Manila Declaration on Strengthening the Implementation of Integrated Coastal Management for Sustainable Development and Climate Change Adaption in the Seas of East Asian Region” is the latest development in PEMSEA. Eleven countries<sup>3)</sup> signed the declaration in 2009, which reaffirmed the commitments made in previous agreements with emphasis on accelerating the implementation of the ICM for sustainable development and climate change adaptation. It also states to report the progress of the ICM programs, including the measures taken for climate change adaptation.

Moreover, in the same year and place, the 2009 East Asian Seas Congress, the “Agreement Recognizing the International Legal Personality of the Partnerships in Environmental Management for the Seas of East Asia” was signed. This is a notable and a historical event for PEMSEA as well as for the East Asian countries, as PEMSEA became a full, legal entity which could enter into legal contracts on its own. PEMSEA has elevated its status in the international community to a formal international organization and thus can enjoy the privileges and immunities of an international organization. Also, as an international organization, PEMSEA can exercise greater influence over the region through increased autonomous capacity.

### ***Fostering Sub-regional Arrangements***

PEMSEA has also been successful in fostering institutional arrangements at the sub-regional level. In 2006, a “Joint Statement on Partnerships in Oil Spill Preparedness and Response in the Gulf of Thailand” was signed by Cambodia, Thailand and

3)The signatory states are: Cambodia, China, Indonesia, Japan, Laos, North Korea, Phillipines, South Korea, Singapore, Timor-Leste, and Vietnam.

Vietnam. The Statement calls for the implementation of a three-year work program with a separate coordinating body.

### *Effective International Measures?*

The establishment of formal declarations and agreements at the regional and sub-regional measures are meaningful steps toward fostering further cooperation and implementing the overarching strategy and the ICM for the Seas of East Asia. Almost all coastal countries of the region recognized the SDS-SEA as a vision and mission for the region, with volition to take action on priority targets at the national level. However, only few priority targets were expressed in these agreements and even those are not legally binding. The signatory states are not obligated to follow and apply the measures domestically. Therefore, many of the activities of the ICM and SDS-SEA are waiting for implementation at the local level.

Nevertheless, this kind of soft-law approach may ensure greater participation by governments and relevant stakeholders, allowing more flexibility. Considering the political, economic and social diversities of the East Asian region, the leniency provided by the soft-law approach may be more appropriate. Moreover, the countries did express actual commitments, even if they may not be legally binding, to accept and implement the SDS-SEA domestically.

The pace of action of PEMSEA in converting agenda into international or regional policies and measures can be said to have been relatively expeditious, once the Regional Programme was transformed into PEMSEA. If the project phase was a basic stage for sprouting and spreading the ICM practices over the region, PEMSEA was able to create a more elevated stage for gathering the partner countries and forging international agreements and measures by which the partner countries came to agree on. The announcement of three major agreements and declarations came one after the other, one in every three years, which can be said to be a rather speedy advancement.



## **PEMSEA: The National Policymaker**

Following the accomplishment of publicizing the issues of marine pollution prevention and ocean governance as substantial agendas for the East Asian region, the coastal states of East Asia succeeded in achieving regional level agreements on alleviating further degradation of marine environment and fostering a comprehensive strategy. Moreover, PEMSEA's activities boosted national level efforts of the littoral states by expediting the ratification process of international conventions on marine environment and by stimulating formulation of relevant national laws and measures.

### ***Facilitating Ratification of Existing International Conventions***

Various international conventions related to marine pollution were already formed, and some countries of the East Asian region had ratified the convention, others not, at the inception of PEMSEA activities. PEMSEA recognized from the initial phase of the project the importance of encouraging the individual nations to ratify such international conventions in order to effectively address marine environmental issues at the national level.

For the period between 1994 to 1998, it has been reported that the number of ratifications of international conventions related to marine pollution by East Asian countries almost doubled, from 34 ratification to 64 (GEF/UNDP/IMO 1998, 17). From the period between 1994 to 2003, a total of 77 international conventions have been ratified by the coastal states of the East Asian region (PEMSEA 2003, 111-112). Also, improvements have been seen in the administrative and legal systems on marine matters of some countries

Then what role did PEMSEA play in this great surge in number of ratifications by countries of East Asia? First, the International Conventions component was established in 1995 as a part of the Regional Programme. This component formed the Regional Network of Legal Experts in order to examine and identify the constraints to ratification of international conventions in the region by assessing the appropriateness and

adequacy of existing national legislation and regulations. From their work, it was found that only a few countries in the region had ratified the key international agreements on marine pollution (GEF 1995, 14). Moreover, although many countries already had enacted national laws regarding marine issues, many of these laws were not being enforced or complied with, and some laws required amendments if to achieve greater affectivity (GEF 1995, 14). Another observation was that provisions related to marine pollution were scattered in many separate pieces of legislation and sometimes stated in general terms with little definition of authority or mechanisms of enforcement (GEF/UNDP/IMO 1996, 22). The exploration on status of national legislations thus provided the partner countries with a realistic view of the gap between international conventions and national legislations, which enabled the identification of the flaws and weaknesses of the national law. With such clearer perspective, the Regional Programme and partner countries were able to work together to create action plans for implementing the international conventions related to marine problems (GEF/UNDP/IMO 1998, 18).

Second, a special project called “Ratification and Implementation of MARPOL 73/78” funded by the Norwegian Government was launched in 1996. This project focused on four countries that were lagging in the ratification process, namely, Cambodia, Indonesia, the Philippines, and Vietnam. Special workshops facilitated the formulations of practical work plans for ratification of MARPOL (GEF/UNDP/IMO 1996, 25).

Third, new networks and tools were created to facilitate the ratification process at the national and local levels. As aforementioned, the Regional Programme established the Network on Legal Aspects of Marine Pollution, and also developed tools such as the Legal Information Database and Guidelines for National Legislation on Marine Pollution. These instruments all were aiming at facilitating and inducing governments to ratify and implement international conventions regarding marine pollution at the national and local levels. By providing guidance and legal expertise to countries that lacked awareness and capacity, PEMSEA was able to induce action at the national level.

Fourth, training programs, workshops and/or conventions which aimed to build capacity for ratification of international conventions were held. These programs not

only emphasized the importance of making commitments at the international level, through conventions or agreements, but tried to show that economic benefits could be gained from implementing the international conventions at the national and local levels (GEF/UNDP/IMO 1999, 51). The table below shows the high participation of countries in the Regional Programme’s activities regarding international conventions. From the table, we can see that all eleven countries participated in training on “international conventions” and in workshops and conferences on “marine legislation” and “international conventions.”

Table 1. Country Participation in Programme Activities. Source.

Country	Brunei	Cambodia	China	North Korea	Indonesia	Malaysia	Philippines	South Korea	Singapore	Thailand	Vietnam
<b>Types of Programme Activities</b>											
<b>1. Training</b>											
Oil Spill Response	✓	✓	✓	✓		✓	✓	✓		✓	✓
Integrated Coastal Management (ICM)		✓	✓	✓	✓	✓	✓	✓		✓	✓
Integrated Environmental Impact Assessment (IEIA)	✓	✓	✓		✓	✓	✓		✓	✓	✓
Marine Pollution Monitoring Techniques			✓		✓			✓			✓
<b>International Conventions</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Risk Assessment Management	✓	✓	✓		✓	✓	✓		✓	✓	✓
Natural Resource Damage Assessment	✓	✓	✓		✓	✓	✓		✓	✓	✓
Internship/Staff Exchange		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>2. Workshop and Conferences</b>											
Marine Electronic Highway					✓	✓			✓		
Marine Pollution Monitoring		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>Marine Legislation</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ICM Technical Conference		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Risk Assessment Management					✓	✓	✓		✓		
<b>International Conventions</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sustainable Financing		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Resource Valuation			✓		✓	✓	✓		✓		

Oil Spill Modeling			✓		✓	✓	✓	✓	✓		
Recovery Of Oil Spill Clean-Up Cost		✓	✓		✓	✓	✓	✓	✓	✓	✓
Public Awareness And Education	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3. Equipment		✓	✓	✓			✓				✓
4. Publications											
Newsletters/Updates	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Technical Reports/Conferences	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5. Host of Programme Events	✓		✓		✓	✓	✓	✓	✓	✓	✓

Source: GEF/UNDP/IMO 1999, 6.

Overall, PEMSEA’s activities led to an enhanced awareness of the benefits of the global instruments by policymakers as well as the general public. Since 1994, it has been found that the political will and public interest in the marine and coastal environments in the East Asian Seas have grown, and international conventions were clearly seen as a factor in the collective effort to protect the global oceans and its resources (GEF/UNDP/IMO 1998 17-18).

### ***Development of National Measures based on the ICM***

Along with the ratification of international conventions related to marine pollution and environment, PEMSEA has seen some success cases in facilitating the development of national laws and policies which incorporated aspects of the ICM.

First, in the case of the Philippines, the Manila Bay had been identified as a Pollution Hotspot by the ICM program and consequently, the Manila Bay Project was launched. This effort was furthered by proclamation of the “Manila Bay Declaration” in 2001, by which the national and local governments of the Philippines committed to the implementation of the Manila Bay Coastal Strategy. This strategy forms the basis of several project activities currently being developed and implemented by the local and national governments in the Philippines (PEMSEA 2007a, 14).

Furthermore, the Philippines signed “Executive Order 533” in 2006, which declares the ICM program as the national strategy for sustainable development of the country’s

marine and coastal resources.

Just as in the case of the Manila Bay, China's Bohai Sea was designated as a Pollution Hotspot. PEMSEA launched the Bohai Sea Project in the region and in the year 2000, the "Bohai Sea Declaration" (Bohai Declaration on Environmental Protection) was signed by relevant municipalities and administrations. The Declaration took initiative to reduce waste and marine pollution in the Bohai region by adopting relevant principles, objectives, policy measures and actions (PEMSEA 2007a, 14). Subsequently in 2003, the Bohai Sea Sustainable Development Strategy (BS-SDS) was formulated. Two years later, an environmental risk assessment of the Bohai Sea was carried out. Moreover, a national legislation on the Bohai Sea, the "Bohai Sea Management Law", based on the implementation of the ICM and SDS-SEA has been devised and waiting for adoption (PEMSEA 2006, 47-48). Another achievement for China is the development of "Xiamen Legislation on Integrated Management of Sea Uses", which aims to focus on "multiple coastal use issues using ICM approaches (GEF/UNDP/IMO 1999, 27)." This law represents a shift in focus of the law to a more integrated approach, where as early laws aimed to regulate a specific sector. Moreover, China has already promulgated "Ocean Agenda 21" in 1996 and "National Law on Sea-Use Management (PEMSEA 2006, 28)". An evaluation by PEMSEA on China's status on developing national coastal and marine policies has revealed that China has shown significant progress in implementing international conventions through the development and implementation of national legislations regarding marine issues (PEMSEA 2003b, 1).

Japan has enacted "Ocean Basic Law" in 2007. In the same token, South Korea has developed "Ocean Korea 21" and enacted the "Coastal Management Act" in 1999 that spells out the national policy dealing with oceans (PEMSEA 2006, 28). Also in 1999, the "Marine Pollution Prevention Act" was amended. The "Coastal Management Act" and the amended "Marine Pollution Prevention Act" cut across different sectors and agencies in approach. "Marine Environment Management Act" was also enacted in 2007 in South Korea.

## *Effective National Measures?*

Some success cases of PEMSEA in influencing the formulation of national measures based on the ICM approaches can be explained by PEMSEA's strategy of combining a "top-down" and "bottom-up" approach on national policymaking (PEMSEA 2006, 28).

There are three sources of top-down pressures: the coordinating office of PEMSEA: the Putrajaya Declaration; and PEMSEA Network of Local Governments (PNLG). First, the coordinating office for PEMSEA is responsible for monitoring the progress of the ICM and other national measures. It also helps to solve problems countries may face in national project implementation. Second, the Putrajaya Declaration provides a mandate for action. The SDS-SEA, adopted through the Declaration lists commitments that partners agreed to and signed. Third, the PNLG includes local executives who have the authority to enforce action.

The bottom-up pressures are from people who work in technical areas and in actual work-sites. They create teamwork and coordinate further action from the grassroots level (PEMSEA 2006, 28). Such approach has facilitated the integration of the ICM principles and strategies into the national policy frameworks of PEMSEA member countries.

PEMSEA also promoted the development of national marine and coastal policies and legislations by providing policy guidelines, policy briefs and organized workshops.

International conventions relating to marine environmental protection have been ratified and relevant laws, policies, and measures for marine environmental protection and conservation have been pronounced, some enacted, in many of the East Asian partner countries. It would be a stretch to say that PEMSEA's programs and strategies have been the key factor, or the sole variable, that has led to the significant progress in the East Asian countries in developing effective national measures. The efforts are not comprehensive enough to argue that PEMSEA has been successful and had been influential over the entire region. However, it would be appropriate to accredit the relationship between PEMSEA and national marine environmental protection measures with a positive causation.

## **PEMSEA: Other Achievements and Challenges**

It is may be rather early to assess the overall improvement in the marine environment quality of East Asian seas. Neither is it the aim of PEMSEA to seek meaningful reduction in marine pollution in the short term (GEF 1995, 1) nor is it included in the scope of this study. Nevertheless, PEMSEA has been able to achieve considerable progress in influencing and assisting the political process of the East Asian region in agenda setting, in formulating international and national measures. This section tries to include the other untouched areas of the main analysis that have been evaluated as both achievements and challenges.

### ***Achievements***

PEMSEA's more than a decade of operations has been evaluated by internal and external experts on the progress of achieving the stated goals. In 1997, the Regional Programme underwent two separate evaluations, one by UNDP, and one by GEF. PEMSEA, or the Regional Programme, received a positive evaluation on several aspects of the Programme, specifically for its managerial, strategic and participatory approach (GEF/UNDP/IMO 1998, 1). A Mid-Term Evaluation in 2003 has reported a "substantial progress" on meeting the overall development objective. Another evaluation in 2006 has evaluated PEMSEA's efforts, again, as showing "substantial progress", this time, in meeting the Immediate Objectives.

The positive features of PEMSEA that has led to meaningful outcomes in progress can be attributed to four factors: the success of ICM program; the inherent flexibility in framework design; building of intellectual capital; and institutional development.

First, PEMSEA's ICM program itself is a major accomplishment in its own. PEMSEA's success in the ICM can be explained on largely three grounds: the replication and scaling-up approach; the adoption of the SDS-SEA; and fundamentally, the application of a "soft approach".

The uniqueness of the ICM program is the replication and scaling up strategy in implementing experiences earned in one Demonstration Site to another Parallel Site,

spreading the program as well as the lessons learned throughout the various sites. The advantages of the site-based approach of the ICM are the practical field experiences that can be earned, and the quick response from the people that can be received with the implementation of the program (PEMSEA 2003b, 2). Moreover, the national governments are more ready to take quick action in these ICM sites because these are areas where they already have interest in achieving something (PEMSEA 2003b, 2).

The ICM's site-first approach has inspired the development and adoption of the SDS-SEA in 2003, which is a milestone for PEMSEA. The SDS-SEA aims to take a more comprehensive and integrative approach towards East Asian ocean governance, a shift from the previous on-site management of activities. PEMSEA has thus played a leading role in making this comprehensive and collaborative framework possible (PEMSEA 2006, 29).

Both the ICM program and the SDS-SEA is designed based on a "soft approach". The soft approach of the programs and strategies has the advantage of diverging away from potential areas of conflict, i.e. security and territorial boundary issues, and focus on marine environmental concerns. The operation of the ICM program can be applied within a country, prior to often difficult and complicated, formal national policy-making procedures, and still make improvements in marine environmental status of that specific site. It is possible to use the ICM principles, guidelines, and concepts to address national coastal and marine environmental problems then further the efforts by developing national regulations and measures at a later stage. This soft approach also focuses on getting the partner countries to ratify the already existing international conventions on marine environment protection, and therefore utilizes them as the goal for effective regional ocean governance. This may be able to facilitate easier and faster acceptance by countries (PEMSEA 2003b, 3).

Furthermore, the non-legally binding nature of the ICM and SDS-SEA may be more fitting for the East Asian region which encompasses countries of diverse economic, political and social systems. This "soft institution building" approach has been explained as a "more informal process to achieve consensus among the actors," which does not aim to achieve agreement on binding rules or fixed systems (Chung 1999, 15).



Second, the flexibility that is built into PEMSEA’s program has allowed relatively quick action and response to meet the concerns of the member countries. This flexibility also leaves room for further refinements and modifications to the program, so that the diverse circumstances of participating countries can be taken into consideration. In the same manner, the number of participating countries and stakeholders can fluctuate.

Third, PEMSEA has been successful in building intellectual capital. Through its 17 years of experience in carrying out various action programs and activities in the East Asian region, especially through the implementation of the ICM, PEMSEA has generated and accumulated what has been termed as “intellectual capital.”<sup>4)</sup> This intellectual capital has been created through PEMSEA activities in the forms of “human capital, social capital, organizational capital and stakeholder capital related to the implementation of ICM in the region (PEMSEA 2003b, 1).” Certainly, the intellectual capital would provide meaningful insights that could not have been otherwise accumulated, which can be utilized to further promote and implement PEMSEA’s activities throughout the in diverse countries of the East Asian region.

Finally, PEMSEA has matured as an institution over its history. It started out as a project based regional program funded by GEF, implemented by UNDP, and executed by IMO. The substantial progress achieved during the project phase led to Phase II of the program, during which the ICM went through a change in paradigm to better meet the apparent and rising challenges in the coastal regions of East Asia. New operational arrangements and mechanisms were introduced to better carry out PEMSEA activities. The status of PEMSEA has been further elevated in 2009 as a legal entity in the international community. The recognition of PEMSEA as an international organization will grant PEMSEA with greater capacity to carry out activities in the region.

## ***Challenges***

PEMSEA faces many challenges in effectively taking action to address marine environmental issues as an international environmental institution in the East Asian

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4)Intellectual capital has been explained as “more than what is in people’s heads. It is about the competence of people developed through capacity building exercises and enabling environments at PEMSEA, namely human capital (PEMSEA 2003, 44).”

region. They include the three aspects: complexity in approach; complexity in program design; and the power of national governments in decision-making.

First, the integrated management approach of the ICM ambitiously tries to address many aspects of the marine environment problem, which can work as an advantage of the ICM, because the nature of marine environment is dynamic and involves many natural, human and ecosystem processes. However, that exact approach may complicate the process of achieving an immediate result. The achievements of major outcomes take a considerable period of time and requires the development of strong political commitment to take integrated rather than sectoral approaches in sustainable coastal development activities (PEMSEA, 2003b, 11).

Moreover, the most difficult aspect of PEMSEA is the many institutional levels- from local to national, regional, and global- involved in the program. It can create a web of “management complexities.” The following explains the complicated linkages among the diverse partners in different levels when coordinating and carrying out PEMSEA activities (PEMSEA 2003b, 4):

- Linking various focal points – the focal points of IMO, UNDP and GEF in the 12 countries involved
- Development of relationships at the local, national, subregional, and regional levels with establishment of appropriate coordinative mechanisms
- Linking national agencies in charge of land-based concerns with those for marine and coastal resources
- Consideration for other coastal and marine resources management projects at the regional and country levels that are supported by other donor agencies
- Differences in site and focal implementing agency and the tendency to focus on its own approach

Lastly, more often than not, it is the national governments that hold the decision-making power over the general direction for each country’s development plans. It is the

governments who decide whether or not to accept the ICM activities within its territory. Therefore, the implementation of the ICM activities and strategies in local sites depend on the decision made by the host government. Therefore, there is concern that the ICM strategies and zoning at local sites would be very difficult to enforce (PEMSEA 2003b, 29).

Moreover, it has been found that when countries actively incorporate aspects of the ICM approach into national development plans, the possibility for successful ICM implementation is greater (PEMSEA 2007a, 33). Therefore, it seems that PEMSEA's efforts can be fully realized, only when national governments of participating countries empower PEMSEA's programs and strategies through implementation at the national and local levels.

## **PEMSEA: Significance in Northeast Asia**

### ***Participation of North Korea***

North Korea has been a part of PEMSEA as a participating country since the inception of the project in 1994. North Korea is a signatory country of the major three international agreements introduced by PEMSEA: the Putrajaya Declaration, Haikou Agreement, and Manila Declaration. The most significant aspect of North Korea's participation in PEMSEA is the completion of the ICM project in Nampho Demonstration Site. The Nampho Coastal Strategy was developed in the process, and the lessons gained from the implementation of the project were reported in the EAS Congress in 2006 (PEMSEA 2007b, 11). This achievement made at the demonstration site is meaningful as Nampho area is an essential body of water for North Korea with economic and military strategic importance (Interview).

In 2007, North Korea had expressed will to continue its involvement in PEMSEA, despite the moratorium in UNDP operations in the country (PEMSEA 2007b, 11)<sup>5)</sup>.

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5) The UNDP has reopened the North Korean office and is currently working to resume its program in North Korea.

However, North Korea was removed from the GEF/UNDP Project Document on the SDS-SEA (PEMSEA 2007b, 11), reflecting the fact that no budget was allocated for PEMSEA activities in North Korea. Even with such setbacks, North Korea has stated that it will maintain its relationship with PEMSEA and its Partners and “make efforts to overcome such difficulties through partnerships (PEMSEA 2007b, 11).” Thus, North Korea’s volition to continue relations with PEMSEA and implement the SDS-SEA still stands.

### ***China and Inclusion of Bohai Sea in the Geographical Coverage of PEMSEA***

China is another country of Northeast Asia who has continuously interacted with PEMSEA since 1994. PEMSEA was able to, in agreement with China, include the Bohai Sea area in its geographical scope. This is a notable achievement since neither YSLME nor NOWPAP has been able to touch upon the area. The Bohai Sea is considered an area of great importance to China, especially so in economic terms.

The Bohai Sea region accounts for only 6 percent of China’s territory but the economic activities resulted in gains of 2,418 billion Yuan, which is 23 percent of China’s gross GDP in 2002 (SOA and SEMP 2003, 1). However, the rapid economic growth in the Bohai Sea area has resulted in deterioration of environmental quality in the Bohai Sea, threatening the ecosystem values and services.

With the assistance of PEMSEA and additional efforts by State Oceanic Administration (SOA) of China, an environmental risk assessment of the Bohai Sea was carried out in 2005, revealing information on the conditions and seriousness of marine environmental problems in the area. The assessment showed significant reduction in natural resources and habitats, especially in fisheries and natural wetlands (PEMSEA and BSEMP 2005, 2). Ecosystems and human health face some risks as well.

In the same line of efforts, China has achieved some tangible results in relation to the Bohai Sea, such as the Bohai Sea Declaration, the Bohai Sea Sustainable Development Strategy, and the Bohai Sea Management Law.

However, China shows lack of enforcement and implementation of these national measures as the country faces constraints in management capacity and available resources (PEMSEA 2003b, 60). Moreover, despite all the efforts, marine fish resources are continuously being depleted. Also, Chinese position on the management of Bohai Sea is rather reserved, as economic development seems to be of greater priority.

### ***South Korea as a Leading Partner Country***

South Korea has been a member of PEMSEA since the project phase. Among the many member countries, South Korea took action from an early stage by creating a ministry devoted to handling specifically the marine environmental issues, the Ministry of Maritime Affairs and Fisheries (MOMAF) in 1996 (PEMSEA 2003a, 1). It was assessed that the establishment of MOMAF improved the institutional capacity needed for ICM (PEMSEA 2003a, 24).

South Korea has also announced ambitious plans to expand its ICM program coverage to 100 percent of its coastline, from prior coverage of over 60 percent (PEMSEA 2007b, 12).

Moreover, South Korea has taken on the leadership role of Twinning Arrangements, a component of PEMSEA's activities to build capacity by sharing experiences, knowledge and techniques between sites within and of different regions, by establishing the Twinning Secretariat in South Korea in 2008. The Secretariat will assist in implementing a three-year program on Twinning Arrangements.

South Korea will also host the next EAS Congress in 2012, in Yeosu, in concurrence with the Yeosu EXPO 2012. The two events will be able to bring together relevant stakeholders from all over the world and create a forum where lively discussion on marine environmental issues will be possible.

Overall, South Korea has been evaluated as one of the most active participating countries. After hosting the next EAS Congress in the upcoming 2012, it has been forecasted that South Korea's participation in PEMSEA may be further enhanced with South Korea having greater influence in PEMSEA.

## ***Japan: Sharing Experiences***

During the project phase of PEMSEA, Japan was not a part of the Regional Programme and joined during the second phase of the project. At the time, Japan had already ratified a greater number of international conventions related to marine environment domestically in comparison with other countries of the region. Since then, Japan has taken initiative to enact national measures such as the Basic Ocean Law. Moreover, Japan has introduced new activities with the aim to preserve the environment, such as Research Initiative on Northwest Pacific Marine Environment Protection and introduction of support for the total pollutant load control system (PEMSEA 2008, 26). With Japan's increasing focus on sustainable coastal and ocean management, it is expected that the country will play a stronger role in protecting and securing the oceans (PEMSEA 2008, 1). Also, Japan's experience regarding the development of national laws and pollution reduction/management can be a source of practical and helpful information for those countries that are at an earlier stage of taking action.

## ***Differences in Geographical and Thematic Scope of YSLME, NOWPAP, and PEMSEA: Opportunity for Cooperation through PEMSEA***

The three marine environmental institutions in the Northeast Asian region, namely the GEF/UNDP Yellow Sea Large Marine Ecosystem(YSLME), NOWPAP (Northwest Pacific Action Plan) and PEMSEA differ in the geographical coverage of operation and in the focus of marine environmental activities.

The YSLME has the smallest geographical coverage of focusing on only the Yellow Sea with the governments of South Korea and China making collaborative efforts to address the issue of degrading Yellow Sea Ecosystem. North Korea has been recognized as a country of importance if to achieve better management of the Yellow Sea. Currently, North Korea is considering the participation in the YSLME project during the second phase. In its scope of work, the YSLME has focused on accurately

assessing the condition of the Yellow Sea in order to facilitate development and adoption of national action plans by participating governments.

NOWPAP region is more expansive than the YSLME area and includes the Yellow Sea and the East Sea. The participating governments are China, Japan, South Korea, and Russia. NOWPAP has aimed to address the marine environment issues of the region by building comprehensive database and information management systems through assessments and monitoring of the seas especially on marine litter and algal bloom; exchanging the gathered information; and preparing response measures for marine emergency incidents.

PEMSEA exhibits the greatest geographical scope among the three institutions. In Northeast Asia it includes the Yellow Sea and the Bohai region which is technically a part of the Yellow Sea, as well as the East China Sea. Four other sub-regional seas are covered for the Southeast Asian region. PEMSEA has focused its efforts on fostering the development and spread of the ICM, throughout the region through creating partnerships with various levels of relevant stakeholders. PEMSEA has furthered these efforts by creating a regional strategic plan and a framework for sustainably developing and managing the marine environment of the region.

The differences in the geographical and thematic scopes of the three institutions can create obstacles for effective marine environment protection in Northeast Asia such as overlap in agendas and mandates, increased competition for funding as well as human resources, and complexities in coordinating efforts between diverse ministries and stakeholders.

PEMSEA does face difficulties in creating and implementing specific and detailed action plans. It lacks the capacity, especially financial capacity, to further carry out action and expand their agendas. The capability of PEMSEA to propel specific and practical cooperative actions for the Northeast Asian seas have been questioned (Chung 2006, 12).

However, with the greatest geographical coverage, greatest number of participating partners and with overarching framework for ocean governance based on the ICM, and successful the ICM program implementation along with lessons and experiences earned in the process, PEMSEA certainly has advantage over the other marine

environmental institutions in creating a forum where governments as well as other relevant stakeholders can gather to deliberate on marine environmental issues. More specifically, PEMSEA can further spread and scale up the ICM activities to various parts of Northeast Asia for better protecting the coastal areas. Moreover, the expansive scope of PEMSEA can reflect the ecological characteristics of the entire East Asian region through its programs and creating synergy (Chung 2006, 121). There is indeed an opportunity for PEMSEA to foster enhanced cooperation on marine environmental protection in Northeast Asia, especially through the application of the ICM practices in the coastal areas of Northeast Asia.

## Concluding Remarks

The efforts to protect and preserve the marine environment of Northeast Asia have been strengthened over the years with national governments and other relevant stakeholders taking a more active stance toward addressing this matter. PEMSEA, an international organization, dedicated to achieving sustainable ocean governance in East Asian region through the ICM program and building partnerships has positively influenced the political process of creating agendas, formulating international policies, and creating national policy measures regarding marine environmental protection, with minor setbacks.

In agenda setting, PEMSEA recognized the emerging global agendas of the time and accurately perceived the increasing seriousness of marine environmental problems in the East Asian seas, which lacked appropriate mechanisms at the time to take actions in alleviating the issue at hand. Therefore, PEMSEA adequately identified the problem area for collective action and since then has made considerable efforts to address issues of marine pollution management by carrying out the ICM program in Demonstration and Parallel sites spread throughout the East Asian coastal region, building partnerships, and striving to achieve overall effective sustainable ocean governance.

The agendas advocated by PEMSEA led to the adoption of international agreements and declarations by PEMSEA partner countries and stakeholders. The



Putrajaya Declaration, Haikou Partnership Agreement, and Manila Declaration are each a milestone for PEMSEA and are meaningful steps in fostering further cooperation between coastal countries of the region. Moreover, this formulation of marine environment measures at the international level was accomplished at a rather speedy rate.

PEMSEA also effectively influenced the process of creating national policies and measures regarding marine environment issues. PEMSEA actively supported partner countries to ratify existing international conventions related to marine environment protection. Also, countries were able to develop and enact national legislations and measures in line with PEMSEA's framework and strategies based on the ICM and SDS-SEA.

Although PEMSEA's geographical scope includes not only the oceans of Northeast Asia but Southeast Asia as well, PEMSEA's activities, indeed, have great significance, specifically for the Northeast Asian region. North Korea continues to participate in PEMSEA meetings and activities, despite apparent troubles in operations, and the ICM project in Nampho was successfully completed. China has also allowed the implementation of the ICM project in its Bohai Sea region, which is a vital part of China's economy. PEMSEA's activities in Nampho and Bohai region are meaningful as both of these areas are not included in the scope of neither the YSLME nor NOWPAP.

From this analysis, it is my argument that PEMSEA activities, especially the ICM program, has had a positive effect on the political process of creating and implementing marine environmental policies and measures within the countries of Northeast Asia. In other words, PEMSEA proves to be an effective international environmental institution for Northeast Asia from a policy-oriented perspective, which addresses issues of marine environment protection and management, specifically through the application of the ICM in the region and continuously expanding the ICM activities along the coastlines. At the same time, this study is mindful of the fact that PEMSEA and its activities are not the sole variable for fostering such developments in marine environment protection in the region.

As PEMSEA was recognized as a full legal entity in the international community last year as a working international organization, it stands to play a greater role in

protecting the oceans and marine ecosystems of Northeast Asia. With China, Japan, North Korea and South Korea as partner countries, and by integrating the endeavors of the YSLME and NOWPAP, PEMSEA surely has large potential in becoming an influential international organization in the Northeast Asian region in fostering extensive cooperative efforts among the littoral states in protecting and managing its seas.

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