East Asian Seas Stocktaking Meeting:

Chair's Summary

ADB Auditorium A, Manila, Philippines

September 2011

Partnerships in Environmental Management for the Seas of East Asia

EAST ASIAN SEAS STOCKTAKING MEETING
CHAIR'S SUMMARY

ADB AUDITORIUM A
MANILA, PHILIPPINES
28-29 OCTOBER 2010

Executive Summary

The East Asian Seas Stocktaking Meeting was held at the Asian Development Bank (ADB) Auditorium A, Manila, Philippines from 28-29 October 2010. The ADB and Government of the Philippines through the Department of Environment and Natural Resources hosted the meeting. The objective of the meeting was to assess the status and identify the constraints to sustainable management of the regional seas, and to prioritize the interventions and the potential role of the GEF over the next 4 years (i.e., 2011 to 2014).

Country representatives from Australia, Cambodia, China, DPR Korea, Indonesia, Japan, Lao PDR, Malaysia, Philippines, Singapore, Thailand, Timor-Leste and Vietnam attended the meeting, along with representatives from regional programmes and organizations including: Arafura-Timor Sea Experts Forum (ATSEF)/Arafura-Timor Sea (ATSEA), UNEP Coordinating Body on the Seas of East Asia (COBSEA), Mangroves for the Future (MFF), Northwest Pacific Action Plan (NOWPAP), Partnerships in Environmental Management for the Seas of East Asia (PEMSEA), Southeast Asian Fisheries Development Center (SEAFDEC), Sulu-Sulawesi Marine Ecoregion (SSME), Sulu-Celebes Project, Western and Central Pacific Fisheries Commission (WCPFC), and Yellow Sea Large Marine Ecosystem (YSLME). Representatives from the GEF agencies were also present, namely: GEF Secretariat, Asian Development Bank (ADB), Food and Agriculture Organization (FAO), United Nations Development Programme (UNDP), United Nations Environment Programme (UNEP), United Nations Industrial Development Organization (UNIDO), and World Bank (WB). Representatives from the GEF Evaluation Office were present as observers.

Mr. Manuel Gerochi, Undersecretary of the Department of Environment and Natural Resources, Philippines, and Dr. Nguyen Chu Hoi, Deputy Administrator of the Vietnam Administration for Seas and Islands, were the Co-Chairs. The PEMSEA Resource Facility served as the Secretariat and two GEF Stocktaking Consultants served as resource persons.

The Stocktaking Meeting concluded the following:

1. The Stocktaking Background Paper was well received and considered to be a good and useful document in the context of the stocktaking effort. It will undergo refinement based on inputs provided during the meeting. The refined paper will then be disseminated to GEF agencies, GEF Secretariat, participating countries and concerned regional organizations.

2. Country ownership and country-drivenness to address transboundary issues in the Seas of East Asia have developed and strengthened over the years with GEF support, as evidenced by the development and adoption of the SDS-SEA and the YSLME and SCSLME SAPs with their associated national action plans as well as by the implementation of the pollution reduction investment fund.

3. PEMSEA and the SDS-SEA, respectively, can provide a regional governance mechanism, framework and scope for integrated and collaborative planning, coordination, and monitoring and reporting of outputs and impacts of regional, subregional and national projects for sustainable management of the seas of

East Asia, as well as to promote knowledge management and associated good practices.

4. There are recognized needs for increased programmatic GEF investments in the EAS region according to a programmatic agenda covering:

   a. Knowledge-sharing, advocacy, communication, development and dissemination and good practices, and capacity development/training, awareness building and education;
   b. Thematic priorities including: the blue agenda with marine and coastal habitat and resource conservation and management (with an increase attention to fisheries resources); and the brown agenda: land-based sources of marine pollution. In addition, climate change adaptation is a cross-cutting priority to be mainstreamed in the two above thematic priorities.
   c. Scaling up of investments at the local and national levels in support of capital works identified and developed in coastal areas in the context of ICM, when possible, through linkages with the public and private sectors, using domestic and international finance ;
   d. A shift from projects that have a planning focus to projects that promote good practices, implement agreed plans and result in desired on-the-ground changes.

   A programmatic agenda to scale up entails:
   a. Working across sectors and in several countries;
   b. Mobilizing resources programmatically within and across different sources of finance and different sectors; and
   c. Making effective and efficient use of available human and financial resources by increasing synergy and alignment.

5. GEF agencies now need to work with countries to develop the regional and national projects using a programmatic approach for submission to GEF in order to support the regional implementation of SDS-SEA (final phase), the YSLME SAP and the SCSLME SAP as well as to scale up country-based actions along the lines of the identified thematic priorities.

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CHAIR'S SUMMARY

A. INTRODUCTION

i. The East Asian Seas Stocktaking Meeting was held at the Asian Development Bank (ADB) Auditorium A, Manila, Philippines from 28-29 October 2010. The ADB and Government of the Philippines through the Department of Environment and Natural Resources hosted the meeting.

ii. The Meeting was attended by representatives from Australia, Cambodia, China, DPR Korea, Indonesia, Japan, Lao PDR, Malaysia, Philippines, Thailand, Timor-Leste and Vietnam. The representative from Singapore observed during the first hour of the meeting.

iii. Representatives from the regional programmes or organizations were present, namely: Arafura-Timor Sea Experts Forum (ATSEF)/ Arafura-Timor Sea (ATSEA), UNEP Coordinating Body on the Seas of East Asia (COBSEA), Mangroves for the Future (MFF), Northwest Pacific Action Plan (NOWPAP), Partnerships in Environmental Management for the Seas of East Asia (PEMSEA), Southeast Asian Fisheries Development Center (SEAFDEC), Sulu-Sulawesi Marine Ecoregion (SSME), Sulu-Celebes Project, Western and Central Pacific Fisheries Commission (WCPFC), and Yellow Sea Large Marine Ecosystem (YSLME).

iv. Representatives from the GEF agencies were present, namely: GEF Secretariat, Asian Development Bank (ADB), Food and Agriculture Organization (FAO), United Nations Development Programme (UNDP), United Nations Environment Programme (UNEP), United Nations Industrial Development Organization (UNIDO), and World Bank (WB). Representatives from the GEF Evaluation Office served as observers. GEF Stocktaking Consultants were also present at the Meeting.

v. The representative of the Philippines, Mr. Manuel Gerochi, Undersecretary of the Department of Environment and Natural Resources, and the representative of Vietnam, Dr. Nguyen Chu Hoi, Deputy Administrator of the Vietnam Administration for Seas and Islands were elected Co-Chairs of the meeting. The PEMSEA Resource Facility served as the Secretariat

vi. The meeting agenda and list of participants are attached as **Annex 1 and 2**.

1.0 Introduction to the Existing Strategic Approach and Implications of the GEF 5 Replenishment

1.1 Dr. Alfred Duda, Representative of the GEF Secretariat, introduced the existing strategic approach in the East Asian Seas Large Marine Ecosystems, presented the rationale and objectives of the Stocktaking Meeting and provided information on the GEF 5 Replenishment Strategy for International Waters. He highlighted the need for countries to confirm if further GEF funding and other investment projects (i.e., with World Bank, ADB, etc.) was needed and should be pursued to support the implementation of regional/subregional Strategic Action Plans (SAPs) and National Action Plans (NAPs) developed under GEF-supported projects in the region.

1.2 Dr. Duda reflected that, since 1995, the GEF International Waters portfolio has: provided funding to countries with progressive commitments to joint action on shared waters; contributed to foundational capacity-building projects; supported implementation of commitments to national and local reforms and investments; and enhanced learning and experience sharing through the GEF IW:LEARN.

1.3 The GEF projects funded in the East Asian region include the: (a) Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) with UNDP; (b) South China Sea (SCS) and Gulf of Thailand (GoT) LME with UNEP; (c) YSLME with UNDP; (d) seven national projects implemented under the GEF/WB Strategic Partnership Investment Fund; (e) Sulu-Celebes LME with UNDP; (f) Arafura-Timor Seas with UNDP; (g) Coral Triangle Initiative (CTI) with ADB; (h) Shrimp By-catch Reduction with FAO; (i) WCPFC with UNDP/FFA; and (j) 29 other national and regional projects. These GEF projects amounted to a total funding of USD 197 million and leveraged about USD 1.91 billion in co-financing.

1.4 The EAS region has achieved several milestones over the years, such as: the development of SAPs for SCS/GoT and YSLME, including NAPs; adoption of the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA); establishment of seven national investment projects for nutrient pollution reduction which generated USD 695 million co-financing vis-à-vis USD 35 million funding from GEF; establishment of CTI with USD 63 million funding from GEF and USD 380 million co-financing; establishment of intergovernmental and intersectoral partnerships (i.e., EAS Partnership Council); development of coastal strategies (i.e., through ICM programme development and implementation); adoption of marine zoning/spatial planning policies and programmes (i.e., Xiamen, China); organization of parliamentary dialogues (i.e., YSLME); and tackled key management issues such as blue forests and fisheries refugia (i.e., SCS/GoT), among others.

1.5 The GEF 5 International Waters (IW) portfolio has been allocated USD 440 million for 2011-2014. Its key strategic objectives are as follows:

(1) Catalyze multi-state cooperation to balance conflicting water uses in transboundary surface/groundwater basins while considering climatic variability and change;
(2) Catalyze multi-state cooperation to rebuild marine fisheries and reduce pollution of coasts and LMEs while considering climatic variability and change;

(3) Support foundational capacity building, portfolio learning, and targeted research needs for ecosystem-based, joint management of transboundary water systems; and
(4) Promote effective management of Marine Areas Beyond National Jurisdiction directed at preventing fisheries depletion.

1.6 Of these four IW strategic objectives, the implementation of SAPs and NAPs in the region relate more closely to the second objective. This pertains to the need to address multiple stresses or drivers through rebuilding of fish stocks, "Blue Forests" habitats, reduction of nutrient pollution, ICM or spatial planning for addressing climatic variability and change, among others. It calls for various processes including, establishment of national inter-ministry committees, multi-country sustainable frameworks for joint cooperation on the LMEs, national and local policy, multi-GEF agency partnerships with issues incorporated within country assistance strategies/UN frameworks. Further, it promotes results-based management and programmatic approaches that are transformational and have results frameworks.

1.7 In view of the GEF 5 IW Strategic Objectives, the GEF IW Projects are expected to be more costly as new considerations need to be incorporated, i.e., climatic variability, pollution reduction, sustainable fisheries and habitats, regional/national/local policy and institutional changes, regional LME frameworks, etc.

1.8 The replenishment reforms as agreed to by donors and recipients at the GEF Council are expected to result to: more stringent programmatic approaches that would bring about transformational impact; more financing along with GEF incremental costs being justified by modification of actual "baseline projects"; new project cycle requirements for results-based management with up-front specification of results, targets and indicators of meeting targets; and the GEF CEO will also enforce the agency's comparative advantage.

1.9 The full presentation of Dr. Duda is attached as **Annex 3**.

2.0 Panel 1: Objectives, Strategic Approaches, Achievements and Future Perspectives on Sustainable Development of the East Asian Seas

2.1 The panel was comprised of representatives from GEF agencies, including the ADB, FAO, UNDP, UNEP, UNIDO, and the World Bank.

2.2 The panel discussion and open forum focused on the following questions:

- What are the major trends in the region that are impacting (positively and negatively) on its sustainable future?
- Do we have the right drivers and innovative dynamics for moving away from a business as usual situation? What are they?

Trends and Gaps

2.3 On the governance aspect, there are a number of initiatives and programmes in the region that are not harmonized and hence, do not promote effective use and management of resources and investments. The region should adopt a comprehensive programmatic approach that will synergize the activities in the region. There is a consensus on the need to put in place a common political framework and regional mechanism that promotes partnerships, effective use of resources, and harmonization of initiatives at the local, national, subregional and regional levels.

2.4 Advocacy and awareness are important aspects of governance. The region has to exert more effort in sharing information on activities and initiatives and scientific knowledge as well as educating the people.

2.5 In the absence of supranational authorities, countries can enter into cooperation agreements and treaties for joint programmes and activities. Multi-country cooperation will reduce environmental management costs and harmonize initiatives. It was noted that PEMSEA, as a regional organization, has a comparative advantage because of its capacity to convene region-wide meetings and provide the platform for partnerships, sharing of ideas and collaborative actions.

2.6 The Sustainable Development Strategy for the Seas of East Asia (SDS-SEA), which was developed in consultation with various government and non-government stakeholders and adopted by countries of the East Asian region, was identified as an overarching framework and platform for collaborative action for the region.

2.7 A number of social issues continue to affect and impact on coastal and ocean management and governance in the region, including poverty, population, gender and tribal issues. There is a need for a mechanism that will ensure equitable sharing of benefits.

2.8 Despite the various environmental initiatives, the region continues to experience biodiversity loss, declining fish stock, erosion, sedimentation, and pollution, among others.

2.9 A number of economic opportunities exist in the East Asian Seas region, however, some industries need to be given more attention, particularly the fisheries industry, which includes small-scale fisheries, mariculture, and aquaculture, and address fisheries-related issues such as fish poaching and illegal, unreported and unregulated (IUU) fishing.

2.10 Climate change is an emerging concern in the region that impacts on various aspects of sustainable development. It is integral for the region to build its resilience by looking into appropriate climate change adaptation and mitigation measures, including setting in place disaster risk assessment and management mechanisms and vulnerability assessment, particularly of coastal communities.

Drivers

2.11 Climate change, innovative technologies, and various economic drivers (i.e., subsidies, incentives and other economic instruments) are some of the elements considered to influence decisionmaking and approaches in the management of coasts and LMEs of the East Asian Seas region. These drivers of change underscore the need to harmonize regional initiatives in order to lessen transaction costs, maximize limited funding resources, reduce overlapping initiatives, and promote effective use of available human, facilities, equipment and financial resources.

2.12 Countries of the region have highlighted the need to further increase capacity-development efforts at the local and national levels in order to strengthen the countries' competence to address country-specific issues and needs.

3.0 Accomplishments, Gaps and Future Investment Needs in the East Asian Seas Region

3.1 The Stocktaking Consultant, Dr. Anna Tengberg, introduced the background paper for the EAS Stocktaking Meeting entitled "Preparation of a Programmatic Approach for the Coordinated Sound Management and Development of the East Asia Seas Region.

3.2 Dr. Annadel Cabanban, Stocktaking Consultant, led the facilitated discussion on the Background Paper.

3.3 The following conclusions were made by the Stocktaking Meeting with regard to the Background Paper:

3.4 The Background Paper provides useful information on the progress achieved in past GEF projects, common approaches taken by the GEF projects, review of regional coordination and governance mechanisms for LME management, and identified various transboundary issues that remain to be addressed.

3.5 The information in the Background Paper can help the region in planning and identifying a regional management arrangement that is appropriate to the Asian situation.

3.6 Future planning needs to consider a country-oriented approach to highlight the needs, available resources, and capacities of the countries of the region. Some of the needs requiring assistance include: support for conduct of baseline studies/surveys; more investments similar to the World Bank Pollution Investment Fund to be applied within the context of ICM; enhancement of integrated management systems; development of monitoring, reporting and assessment mechanisms (i.e., State of the Coasts reporting); capacity building of institutions at national and local levels, including local governments and communities.

3.7 The Background Paper does not provide information on project results and impacts as a separate study is being undertaken on this by the GEF Evaluation

Office. However, in order to strengthen the report, the GEF agencies should provide the consultants with summaries of results of their respective projects for inclusion in the Paper.

3.8 To maintain the focus of the Paper, the following global projects should be removed from the analysis of investments:

- GIWA – UNEP
- Shrimp trawling – FAO/UNEP
- Coral reef targeted research – World Bank
- GloBallast
- Artisanal gold mining – UNIDO

3.9 A reference should be made to the World Bank progress report on the Pollution Reduction Investment Fund under the section on the review of regional coordination and governance mechanisms for LME management of the paper.

3.10 The analysis of country priorities and progress in implementing National Action Plans (NAPs) and policy reforms needs to be further strengthened. In this regard, the consultants will follow up on the questionnaire survey and the GEF agencies will provide completed NAPs that will be reviewed and used as reference in revising Chapter 6 of the Background paper.

3.11 The report shows multiplicity of governance mechanisms in the region. The comparative analysis of regional mechanisms in the EAS region as presented in **Table 4b** of the Background paper can be misleading as comparisons are made on different types of mechanisms. The table should be removed and replaced with information on regional mechanisms and their status for better reference.

3.12 Governance in the region is complex. Thus, there should be a determination on how to improve governance in the region as well as identification of the necessary elements and processes to establish a common framework based on a programmatic approach. The report identified PEMSEA's SDS-SEA as a viable regional framework with a mechanism for common reporting and assessment of impact. It can serve as the umbrella that will benefit sub-regional projects and thus, avoid duplication of activities.

3.13 The Background Paper, as revised based on comments during the Stocktaking Meeting, is attached as **Annex 4**.

4.0 Panel 2: Opportunities and Challenges in Developing and Implementing Collaborative Investment Projects in the East Asian Seas Region

Opportunities and challenges

4.1 The panel was comprised of representatives of Executing Agencies including ATSEF/ATSEA, PEMSEA, SCSLME, SSME, Sulu-Celebes Project, WCPFC, WB, and YSLME.

4.2 The panel discussion and open forum addressed the following questions:

- The Background Paper suggests that there has been a lack of coordination and synergy among regional and subregional projects. Is this an actual or perceived problem?
- What are the lost opportunities and impacts?
- What needs to be done and by whom?

Coordination and Synergy

4.3 The knowledge and experiences gained across projects as well as the available resources in the region provide strong foundation for implementing various initiatives, but additional investments are still necessary to support the implementation and scaling up of key initiatives including the SDS-SEA, SAPs, and NAPs.

4.4 In general, the coordination and synergies among projects/programmes at the regional and national levels is weak. The adoption of the SDS-SEA, SAPs and NAPs by governments provides a good opportunity to improve collaborative planning among regional and subregional projects. Through these efforts strategic partnerships, collaborative planning and reporting/information sharing mechanism can be improved.

Opportunities

4.5 Issues such as pollution reduction, biodiversity conservation, water supply use and management, etc., require investment capital (soft and hard engineering). Most environmental investments are undertaken at the local level, however, for the most part, local governments lack the capacity to develop and implement bankable projects, and to access affordable funding for undertaking environmental investments. There is a need to build capacities of local governments through knowledge and capacity transfer and formal and informal training to enable them to adopt innovative financing mechanisms and leverage various sources and other types of support for environmental investments at the local level.

4.6 While WB PIF is making progress in these areas, further collaboration is needed in leveraging additional sources and other types of support for these investments (i.e., cash/financing, knowledge and capacity transfer and formal and informal training).

Actions Needed

4.7 The following actions were recommended to be undertaken at the regional level, in order to address challenges as well as take advantage of new opportunities for the region:

- Joint planning both in project preparation and implementation;
- Strengthen opportunities for investment through linkages to scaling up of ICM programmes across the region and providing capacity development programmes that address the technical, financial and management limitations of the many local governments in the region; and

- Explore and adopt innovative financing mechanisms that support investments in pollution reduction and conservation management and identify and access sources of funding that are readily available to local governments, non-government stakeholders and the private sector.

4.8 The following actions were recommended to be undertaken at the national level:

- Strengthen national interagency coordinating mechanisms to improve coordination and efficacy through integrated coastal and ocean management;
- Promote joint planning and implementation across national agencies and levels of government as appropriate;
- Focus on policy and legislation that will facilitate implementation of on-the-ground management interventions;
- Engage with legislators so that they clearly understand and appreciate the importance of, and challenges associated with, sustainable coastal and marine development; and
- Report and share information across projects through various vehicles/forums (i.e., EAS Congress and similar in-country events)

5.0 Summary of Country Statements

Australia

5.1 An important element for Australia's involvement in the East Asian Seas region is partnerships. In the spirit of partnership, Australia has been involved with several initiatives, including the ATSEF and CTI. In particular, Australia provides support to work undertaken in various countries in the region focusing on policy development, establishment of coordinating mechanisms, evaluation of ecosystem services and improve domestic level of work. Australia noted that in order for the region to move forward, it is important to develop a clear focus and to work on key decisions.

Cambodia

5.2 Cambodia highlighted the significant progress made at the local, national and regional level in line with the implementation of the SDS-SEA. To overcome the challenges on sustainable development, Cambodia believes that a guiding framework, as provided by the SDS-SEA, is necessary to help pursue practical projects and address immediate needs from local to regional level. PEMSEA as the regional implementing mechanism for the SDS-SEA is seen to be in the best position to coordinate partners' initiatives and ensure complementarities. Cambodia is faced with a number of challenges. The key ones include climate change and rapid urban and economic expansion resulting to severe pressure to coastal and marine resources and environment. The initial vulnerability assessment in Koh Kong indicated that 4,444 hectares (mostly mangrove areas) will be submerged with one-meter sea level rise equivalent to an economic loss of USD 20 million. The pressure to coastal and marine areas brought about by the economic development in the country resulted to increasing demand for food, pollution, water and energy, and irresponsible use of space and resources. In order to address these concerns, Cambodia calls for further support to strengthen capacity development particularly in local communities to enable better understanding, adaptation and mitigation of climate change impacts. To

ensure orderly development in coastal areas, Cambodia incorporated within its draft National ICM Policy the need for zoning. However, political support and technical assistance are needed to get the zoning plans developed and implemented at the local level. With the common vision and mission advocated by the SDS-SEA, Cambodia urged the Country and Non-Country Partners of the region, including the GEF and other donor agencies to further strengthen the implementation of the SDS-SEA. Full Country Statement of Cambodia is found in **Annex 5**.

China

5.3 As a signatory to the SDS-SEA, China has undertaken a number of initiatives, including: promotion of integrated management of river basins and coastal seas to reduce marine pollution; setting up of MPAs to protect biodiversity; strengthening preparedness and response of local governments to address natural and man-made hazards; enactment of legislations and development of plans to enhance sustainable development of coasts, islands and seas (i.e., Sea Use Management Law of 2002, Island Management Act of 2009, Outline of China Marine Cause Development Plan, etc.); and increased investments in coastal and ocean management through marine zoning schemes. China also serves as host secretariat for the PEMSEA Network of Local Governments for Sustainable Coastal Development (PNLG). China is confident to achieve the SDS-SEA target of 20% coverage of its coastline by ICM through scaling up initiatives aimed at 10 sites. China is also one of the signatories to the Agreement Recognizing PEMSEA's International Legal Personality. The country has contributed about 1 million RMB to PEMSEA since 2006 and will continue to support PEMSEA. In support of the SDS-SEA, China entered into a bilateral agreement with the Philippines to achieve the goal of the strategy, and has agreements with Indonesia, Malaysia and other countries to strengthen collaboration in marine research and marine affairs. In planning for the future, China identified the various characteristics and key issues in the region that should be considered (i.e., transboundary issues, pollution, climate change). China hopes for the continued support of GEF to regional efforts in coastal and ocean governance particularly in strengthening local and national capacity to implement the SDS-SEA, as well as regional and sub-regional cooperation through networking of institutions and local governments. Full Country Statement of China is found in **Annex 5**.

DPR Korea

5.4 The DPR Korea regards man as the most precious being and that everything should serve man. This *Juche* principle has guided the DPR Korea and strengthened its resolve to protect and manage its resources to promote prosperity and enhance the lives of its people. The DPR Korea participated from the first phase of PEMSEA in 1994 and signed the Agreement recognizing PEMSEA's International Legal Personality in 2009. While DPR Korea was not eligible to participate in the GEF/UNDP Project on the Implementation of the SDS-SEA in 2007, the country continued with its efforts on coastal and marine development and management in line with its commitment as signatory of the Putrajaya Declaration, Haikou Partnership Agreement as well as the Manila Declaration. DPR Korea acknowledged PEMSEA's efforts for mobilizing other sources of funds to implement collaborative projects in DPR Korea. The resumption of UNDP's cooperation in DPR Korea last November 2009 is a good

signal to put on the right track the relationship of cooperation between DPR Korea, PEMSEA and the GEF. DPR Korea is hopeful that the recent developments will enable them to source funds from the GEF to help in the scaling up of ICM and SDS-SEA implementation in the country. Full Country Statement of DPR Korea is found in **Annex 5.**

Indonesia

5.5 Some of the key regional initiatives wherein Indonesia is involved include: PEMSEA, COBSEA, CTI, SSME, ATSEA, MFF, BOBLME, and working groups in APEC and ASEAN, among others. The Seas of East Asia provide important services to the development of the countries of the region. To help the region move forward, there is a need for a comprehensive approach. One framework that can be used is the SDS-SEA, wherein various strategies developed by other initiatives can be complemented and synchronized. Since the adoption of the SDS-SEA in the Putrajaya Declaration 2003, PEMSEA has continuously facilitated capacity-building activities using the ICM approach at both the national and local levels. This initiative also facilitated integration of regional strategies and programs for coastal and marine management in the country. Indonesia promoted internal cooperation between and among ministries (Ministry of Environment, Ministry of Marine Affairs and Fisheries and National Planning Agency) to establish and promote ICM and to meet the 20% target of coastline coverage in the region. The Ministry of Environment, which serves as the PEMSEA Focal Agency urged local governments to apply integrated approaches to coastal and marine management and to participate in the PEMSEA Network of Local Governments. Indonesia values the various programs in the region and allocates budget as counterpart funding for the implementation of various activities. Some of the key priorities proposed by Indonesia for GEF support include: ICM Learning Center; Adaptation to Climate Change Center (under CTI); and scaling up of demo site ecoregion approach. Indonesia supports the programmatic approach to help ensure achievement of long-term benefits for the region.

Japan

5.6 Japan sees the need for more efficient and effective implementation of various environmental management activities in the region. It is important for activities, particularly those related to the SDS-SEA, to be accelerated. In Japan, relevant Ministries have contributed and will continue to implement projects in accordance with the Basic Ocean Plan which was promulgated in 2008. Japan will continue to provide technical assistance to PEMSEA partners, and contribute in capacity building efforts using its experience and know-how in addressing ocean deterioration and contamination. The country is also committed to continue providing financial support of USD 120,000 to the operations of the PEMSEA Resource Facility. Full Country Statement of Japan is found in **Annex 5**.

Lao PDR

5.7 Lao PDR is a land-locked country, but 80% of the Mekong River flows through it providing the country with the highest per capita water allocation in the region. The Sedone River, a PEMSEA project site, is also close to Vietnam's ICM sites in Quang Nam, Hue and Danang. Lao has made much progress, which contributes to the objectives of the SDS-SEA. In particular, Lao has developed a National Water Policy, Strategy and 5-year Action Plan, which is currently

undergoing review by the Government and is up for approval. The Prime Minister of Lao has also signed Decree No. 293 on the establishment of the River Basin Committee as the intergovernmental and multisectoral body on the sustainable management of priority river basins and sub-basins of the country. River Basin Committees for five priority river basins and supporting Secretariats are being prepared to function from 2011-2015. The key needs of the country include: capacity building of various institutions particularly the Department of Water Resources and its departments, the River Basin Secretariats and the local, provincial and district government levels; strengthening of leadership competencies to engage various agencies and institutions; and human and financial resources to effectively implement policies. The existing project in Sedone River requires further support to strengthen on-the-ground actions which can be shared to other riverbasins. Lao calls on PEMSEA's assistance for technical support and to match the needs of countries similar to Lao with countries which have more experience in integrated river management. Lao hopes to demonstrate and further enhance its efforts on riverbasin and water management as an integral part of GEF initiatives in the region. The Department of Water Resources of Lao expressed its full support to the implementation of the SDS-SEA in the region and reiterated its commitment to implement the SDS-SEA at the national and local levels through on-the-ground implementation of the National Policy, Strategy and Action Plan. Full Country Statement of Lao PDR is found in **Annex 5**.

Malaysia

5.8 Malaysia is contributing to the CTI and COBSEA, and provided support in the development of the South China Sea SAP, continuous implementation of ICM, capacity building, networking of professionals and partnership building. Malaysia's 5-year plans continue to allocate money in the national budget including for environmental management. Environmental management at the national level contributes to overall efforts for the regional seas. However, Malaysia underscored that not all countries get the optimum benefits from funded projects at the regional level. Some countries also need assistance in developing project proposals and preparation of reports in order to access funding. While countries need additional resource, and funds from donors provide significant support to project implementation, it is critical for programs to be synergized or aligned with the country needs. Clarity of projects and funding are keys to the sustainability of political support. To ensure sound regional governance there is a need to look into the various programs and entities in the region to avoid duplication of efforts. The SCS project, for instance, should be returned to and managed by COBSEA. In terms of a regional governance framework, the ASEAN Working Group may also be considered as a regional mechanism for coastal and marine affairs.

Philippines

5.9 In support of the SDS-SEA implementation, the Philippines has undertaken a number of initiatives. To implement the Executive Order 533 (signed by the President of the Philippines in 2006, declaring ICM as the national strategy and policy framework for sustainable development of coastal and marine resources in the country), the government spearheaded the development of a national ICM program and capacity development program. Part of the ICM program is the replication of experiences and achievements of Batangas, Bataan and Cavite in

ICM implementation in the Provinces of Bulacan and Pampanga and coastal cities of the National Capital Region, Region 6 (Western Visayas), Region 1 (Ilocos Region), and Macajalar Bay. To ensure harmonization across the Department of Environment and Natural Resources and other concerned agencies and LGUs, a national interagency coordinating mechanism is also being established. An ICM Act has also been developed and is currently undergoing review. ICM Learning Centers were also established at two universities to support capacity development for ICM scaling up. In Manila Bay, one of the identified pollution hotspots in the region, the Operational Plan for the Manila Bay Coastal Strategy is being implemented, which is backed up by a Supreme Court ruling requiring 13 government agencies to implement the Operational Plan. Apart from the Supreme Court ruling, a monitoring and reporting system is set in place to ensure conformance to the Court ruling. The Philippines has also developed a national action plan for coastal and marine in line with its commitment to the CTI. The Philippines underscored the need for assistance and funding support from various sources to be aligned with country programs to ensure that all efforts are country-driven.

Thailand

5.10 Thailand believes that in general the progress made in the region and the initiatives undertaken show that the region is on the right track. However, key issues such as climate change, coastal erosion, biodiversity loss, etc., need to be considered and given attention. Thailand established a National Environment Board which serves as a coordinating committee on coastal and marine affairs. The Department of Marine and Coastal Resources of the Ministry of Natural Resources and Environment of Thailand is proposing for approval of the National Environment Board a Marine and Coastal Management Strategy. Thailand has made significant accomplishments in a number of areas. In particular, the ICM demonstration site and scaling up efforts in Chonburi province has: established a functional inter-agency and multi-sectoral coordinating mechanism for ICM implementation; adopted a coastal strategy and implementation plan; integrated ICM Action Plan into annual local government development plans; scaled up from 5 to 26 coastal local governments; developed local oil spill contingency plan in support of the national plan; and conducted/participated in various capacity-building activities. At the subregional level, the Joint Framework for Oil Spill Preparedness and Response in the Gulf of Thailand was adopted together with Cambodia and Vietnam. A Port Safety, Health and Environmental Management System was also established and is being implemented in Bangkok and Laem Chabang Ports. Building on these achievements, Thailand suggested new areas or initiatives that should be considered for the future, including: conduct hotspot mapping; tourism and recreation zoning; establish a common framework or strategy for actions at the national, subregional and regional levels; develop champions; establish partnerships with/among existing initiatives; develop communication and advocacy plan; promote scaling up of ICM; encourage community participation; and strengthen technical support.

Timor-Leste

5.11 Timor-Leste is a relatively new country. In support of its various in-country efforts, Timor-Leste has been a recipient of various assistance from GEF, Australia, Japan, Indonesia and Malaysia, among others. The country is involved in three key initiatives: ATSEF, CTI and PEMSEA. As part of its commitment to these

projects, the Government of Timor-Leste allocates USD 100,000 on an annual basis to each initiative. Also, to promote complementarity and ensure efficient use of resources, Timor-Leste established a shared office for the project management offices and assigned a national coordinator for the three projects. Under the PEMSEA project, Timor-Leste has undertaken the following: trainings to support alternative livelihood development for local communities and to mitigate unsustainable resource use (i.e., use of firewood for salt-making); trainings on ICM and technical tools, internship to PEMSEA Resource Facility; and knowledge sharing forums that benefit government officials, personnel and project implementers. Timor-Leste has also hosted the ATSEA inception workshop and will serve as Secretariat for ATSEF. In order to scale up outputs and sustain efforts, the country needs to conduct more capacity development activities and would require further technical support. Timor-Leste is also planning to develop supporting policies and legislations and integrate projects/programs into government plans as well as integrate coordinating mechanisms into the government structure to improve coastal and marine governance in the country.

Vietnam

5.12 In Vietnam, about 20 million people depend on coastal and marine resources for livelihood. The coastal and marine economic activities that have contributed to the national economy were mainly from oil and gas, fisheries, navigation and tourism activities. The dependence on coastal and marine resources have resulted to a number of concerns, including: overfishing, biodiversity loss, habitat and ecosystem degradation, coastal and marine pollution, and oil spills. Vietnam was also identified by the IPCC as one of the areas to be seriously impacted by climate change and sea level rise. Recognizing these concerns as well as the lack of coordinated planning in the country, the Government of Vietnam established the Vietnam Administration of Seas and Islands (VASI) under the Ministry of Natural Resources and Environment to conduct the function of integrated and unified state management for the coasts, seas and islands in the country. The Governmental Decree No. 25/2009/ND-CP on Integrated Marine Resources Management and Environmental Protection (in force in May 2009) is the first integrated governance policy in the field of coast, sea and island management in Vietnam. A number of laws related to sustainable coastal and marine management have been enacted and a Law on ICM is expected to be developed in the coming years. The implementation of national program on ICM for 14 coastal provinces in Central Vietnam is in progress and this year 6 other coastal provinces initiated their ICM programs with technical assistance from PEMSEA. In May 2010, the national system of 16 MPAs has been approved and 6 of which are effectively managed. Through the financial support and technical assistance of GEF, UNEP GPA, COBSEA, MFF, IOC-UNESCO, UNDP and other countries like the USA, Denmark, ROK and Russia, the coastal and marine priorities for coastal development and management of Vietnam are in the process of implementation. Vietnam will continue to promote and improve its international cooperation for sustainable coastal and marine development and management, and hopes to continuously receive assistance and support for its initiatives and to address transboundary environmental issues in the region. Full Country Statement of Vietnam is found in Annex 5.

6.0 Panel 3: Governance Mechanisms: The Way Forward in the East Asian Seas Region

6.1 The panel was comprised of representatives of regional organizations or programs including ATSEF/ATSEA, COBSEA, MFF, NOWPAP, PEMSEA, SEAFDEC, YSLME and WCPFC.

6.2 The panel discussion and open forum addressed the following questions:

- What level of change is required in EAS regional governance: renewal; innovation; or system change?
- Who will/should define the incentives and mechanisms for change?

Level of change reqired

6.3 The situation in the region is complex due to the presence of multiple players and interrelated lines of decisionmaking particularly within countries. It is important for countries to drive the process, provide incentives, identify priority areas or activities, and ensure implementation and delivery of commitments.

6.4 Direct collaboration is one of the weak points of the region. Various experiences and assessments showed the need for stronger cross-sectoral and vertical consultation and coordination particularly at the local level.

Mechanism for change

6.5 While various bilateral, trilateral and regional mechanisms and projects have actively integrated programs or collaborated with other regional initiatives (e.g. Sulu-Sulawesi with the Coral Triangle Initiative and SDS-SEA), collaboration could be further enhanced through a programmatic approach, which focuses on integration at the program level rather than at the organizational level. A programmatic road map with spatial and temporal details would contribute to better coordination.

6.6 It is important to start translating the “software” developed into “hardware” (i.e., actual benefits on-the-ground and in-the-water).

6.7 Further improvement is needed in terms of information sharing and management, development of organizational and legal/institutional capacity, and monitoring and reporting.

6.8 To apply for GEF support, a programmatic/strategic approach paper should be developed and submitted by end of March 2011 or September 2011 at the latest. The programmatic/strategic approach paper may include the SDS-SEA, South China Sea and Yellow Sea SAP implementation, as well as the investment fund. Key organizations such as the World Bank, FAO, UNDP, etc., can provide assistance in the development of the proposal.

6.9 GEF agencies need to work with countries to develop the regional and national projects using a programmatic approach for submission to GEF in order to support the regional implementation of SDS-SEA (final phase), the YSLME SAP

and the SCSLME SAP as well as to scale-up country-based actions along the lines of the identified thematic priorities.

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Annex 1
Meeting Agenda

28 October, Thursday

08:00 – 09:00 Registration

09:00 – 09:30 Opening of the Meeting

Opening remarks from PEMSEA
Welcoming Messages from:

- Philippines Department of Environment and Natural Resources (DENR)
- Asian Development Bank (ADB)
- Global Environment Facility (GEF) Secretariat

09:30 – 09:45 Election of the Stocktaking Meeting Co-Chairs

09:45 – 10:00 Adoption of Meeting Agenda

10:00 – 10:30 Introduction to the Existing Strategic Approach and Implications of the GEF 5 Replenishment
Dr. Alfred Duda, Senior Advisor International Waters, GEF Secretariat

10:30 – 11:00 Coffee break

11:00 – 12:30 Panel Discussion and Open Forum: Objectives, strategic approaches, achievements and future perspectives on sustainable development of the East Asian Seas
Panel Members: Representatives of GEF agencies (i.e., ADB; FAO; UNDP; UNEP; UNIDO; World Bank) and GEF Secretariat

12:30 – 14:00 Lunch break

14:00 – 14:30 Background Paper for the EAS Stocktaking Meeting
Dr. Anna Tengberg, Stocktaking Consultant

14:30 – 16:00 Facilitated Discussion on the accomplishments, gaps and future investment needs in the East Asian Seas region
Dr. Annadel Cabanban, Stocktaking Consultant

16:00 – 16:30 Coffee break

16:30 – 17:30 Panel Discussion and Open Forum: Opportunities and challenges in developing and implementing collaborative investment projects in the East Asian Seas region
Panel Members: Representatives of Executing agencies (ATSEF/ATSEA; PEMSEA; SCSLME; SSME/Sulu-Celebes project; WCPFC; World Bank; YSLME)

17:30 – 18:00 Chair's recap of the day's activities

29 October, Friday

08:30 -10:30 Reinforcement of national and regional capacities and mechanisms for sustainable development and management of coasts and oceans in partnership with GEF
Country statements on accomplishments, gaps, needs, challenges and program sustainability

10:30 – 11:00 Coffee break

11:00 – 12:30 Summary of geographical and thematic gaps, emerging issues and future investment needs in the East Asian Seas
Dr. Christophe Crepin, Lead Environment Specialist and Program Manager East Asia and Pacific Region, World Bank

12:30 – 14:00 Lunch break

14:00 – 15:30 Panel Discussion and Open Forum: Governance mechanisms: What is the way forward in the East Asian Seas region?
Panel Members: Regional organizations/secretariats (ATSEF/ATSEA; COBSEA; MFF; NOWPAP; PEMSEA; SEAFDEC; YSLME; WCPFC)

15:30 – 16:00 Coffee break

16:00 – 16:30 Follow-up actions to Stocktaking Meeting
Representatives of the GEF Agencies and the GEF Secretariat

16:30 -17:00 Meeting conclusions and recommendations
Meeting Chair

17:00 – 17:30 Closing of the Meeting

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Annex 3

Large Marine Ecosystems of the East Asian Seas---Stocktaking Meeting

Al Duda, GEF Secretariat

Objectives for Today

- Introduce 15 years of GEF IW programming for Large Marine Ecosystems (LMEs) + their Coasts in East Asia
- Why are We Here? Why a stocktaking meeting?
- Briefing on new money for 2011-2014…GEF 5 Replenishment and GEF 5 IW Strategy
- Decision of countries is needed: **do you want new GEF funding to help as you implement the SAPs, NAPs, and ICM targets**; if so, do you want to build on and expand the current strategic partnership approach: regional projects + national investment projects with the World Bank and maybe ADB

GEF International Waters Focal Area

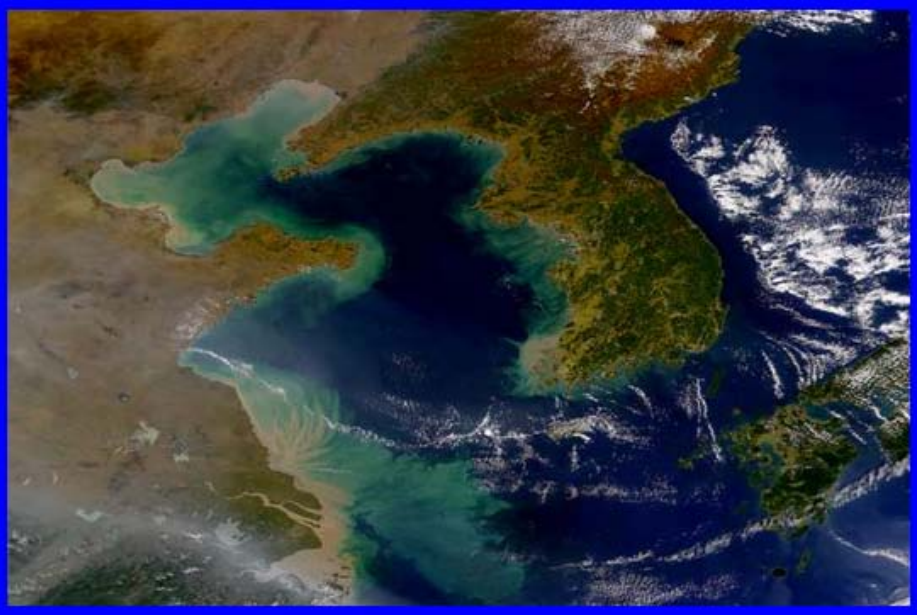
International Waters (IW) includes transboundary river lake, and groundwater basins; also oceans, coasts, Large Marine Ecosystems and connected river basins

Supports Agenda 21 Chapters 17/18 and 2002 WSSD Targets

GEF/WB Nile Basin Transboundary Environmental Action Project

The Nile Basin Initiative: 10 nations and many development partners promote transboundary peace, security, & stability, toward sustainable development and MDGs.

Yellow Sea Large Marine Ecosystem

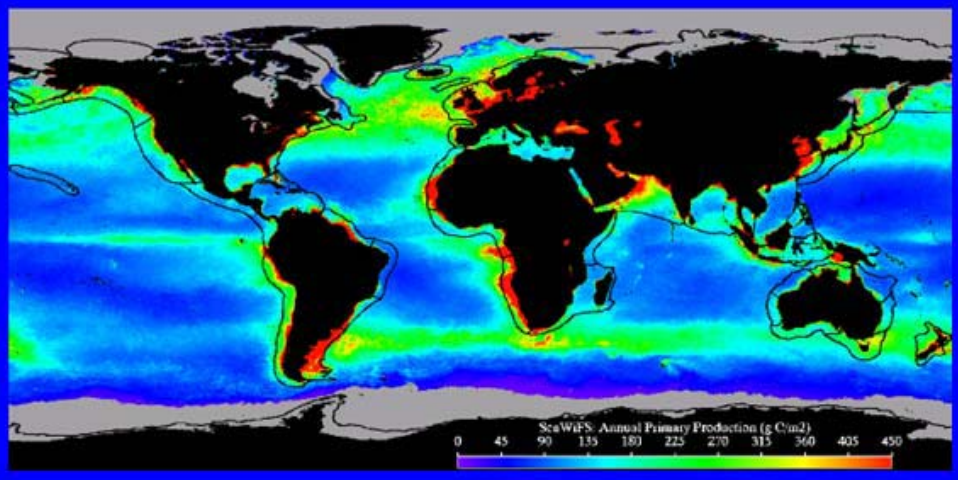


GEF Strategy for International Waters GEF Council- 1995

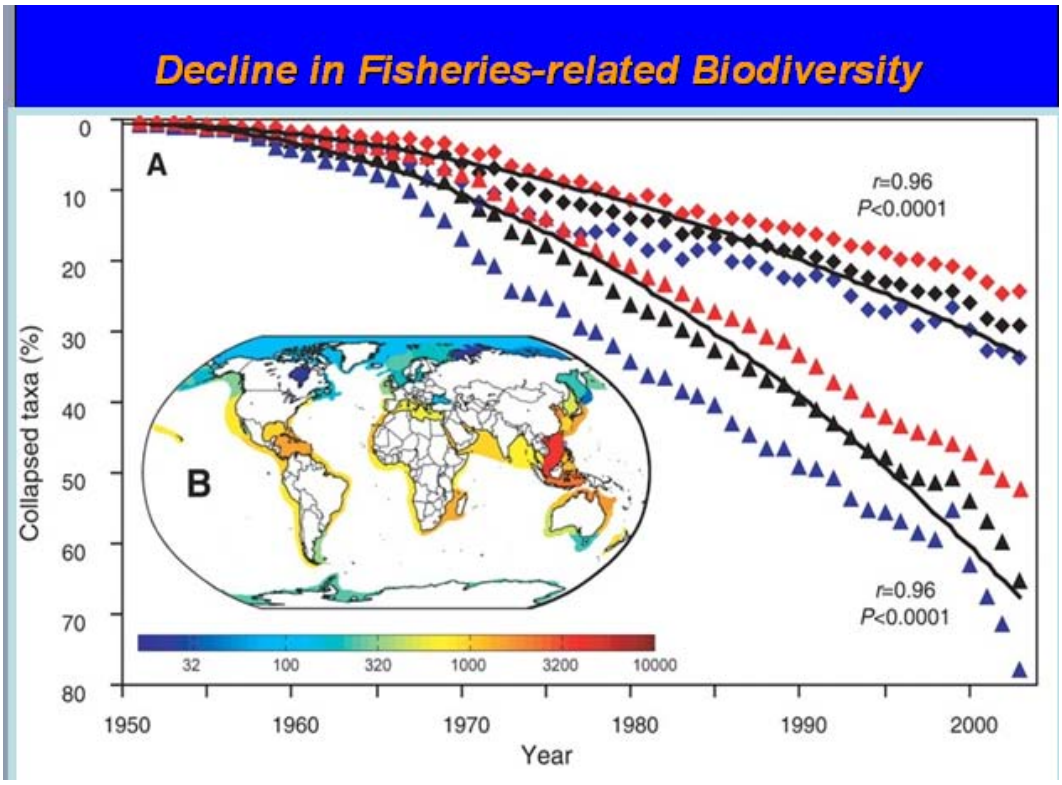
- Progressive funding provided to countries adopting progressive commitments to joint action on shared waterbodies
- Foundational capacity building projects- build trust & confidence, undertake joint fact-finding in Transboundary Diagnostic Analysis, & commitments in SAP/NAPs for LMEs
- Follow-up projects & programs to help implement joint commitments to national/local reforms and investments and support for waterbody-based adaptive management institutions
- Portfolio learning, experience sharing-GEF IW:LEARN

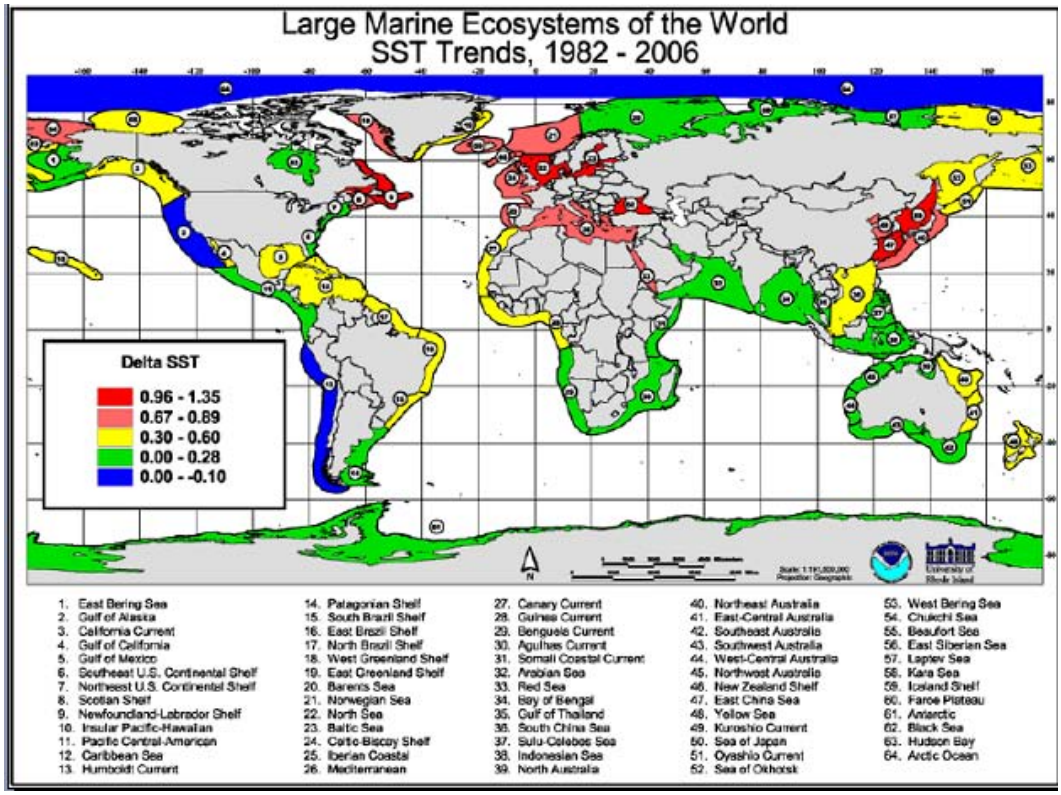
GEF LME/Coastal Projects Funded in East Asia

*PEMSEA-UNDP…first one 1994; demo project on ICM
*SCS + GT LME-UNEP
*YSLME-UNDP
*GEF/WB Strategic Partnership Investment Fund
Programmatic Approach (7 national projects, so far)
*Sulu-Celebes LME-UNDP
*Arafura-Timor Seas LME-UNDP
*Coral Triangle Programmatic Approach-ADB
*Shrimp By-catch Reduction-FAO
*Fisheries/tuna W + C Pacific- UNDP/FFA
29 Nat/Regional GEF projects: $197 M GEF; $1.91 B others



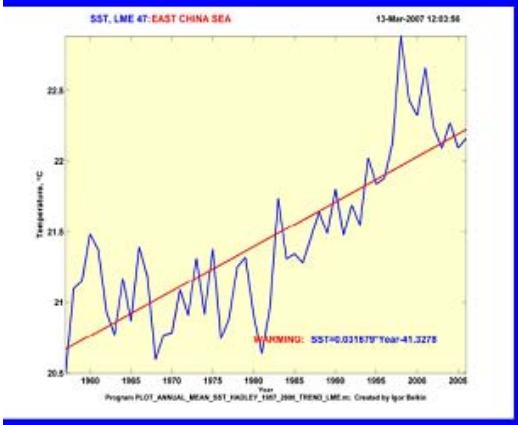
82 % of World's Marine Fishery Catch Produced in 64 LARGE MARINE ECOSYSTEMS

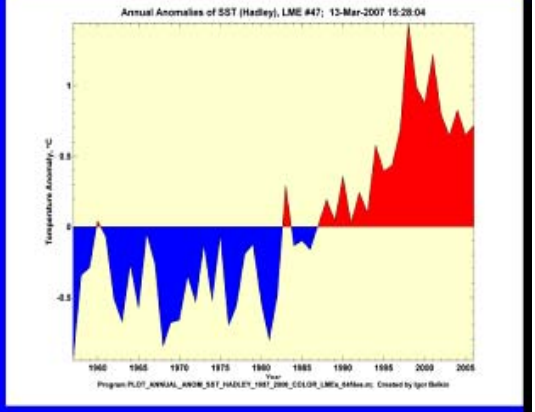

Decline in Fisheries-related Biodiversity
A
B
r=0.96
P<0.0001
r=0.96
P<0.0001
Collapsed taxa (%)
Year
0
10
20
30
40
50
60
70
80
1950
1960
1970
1980
1990
2000
32
100
320
1000
3200
10000


Large Marine Ecosystems of the World
SST Trends, 1982 - 2006
Delta SST
0.96 - 1.35
0.67 - 0.89
0.30 - 0.60
0.00 - 0.28
0.00 - -0.10
1. East Bering Sea
2. Gulf of Alaska
3. California Current
4. Gulf of California
5. Gulf of Mexico
6. Southeast U.S. Continental Shelf
7. Northeast U.S. Continental Shelf
8. Scotian Shelf
9. Newfoundland-Labrador Shelf
10. Insular Pacific-Hawaiian
11. Pacific Central-American
12. Caribbean Sea
13. Humboldt Current
14. Patagonian Shelf
15. South Brazil Shelf
16. East Brazil Shelf
17. North Brazil Shelf
18. West Greenland Shelf
19. East Greenland Shelf
20. Barents Sea
21. Norwegian Sea
22. North Sea
23. Baltic Sea
24. Celtic-Biscay Shelf
25. Iberian Coastal
26. Mediterranean
27. Canary Current
28. Guinea Current
29. Benguela Current
30. Agulhas Current
31. Somali Coastal Current
32. Arabian Sea
33. Red Sea
34. Bay of Bengal
35. Gulf of Thailand
36. South China Sea
37. Sulu-Celebes Sea
38. Indonesian Sea
39. North Australia
40. Northeast Australia
41. East-Central Australia
42. Southeast Australia
43. Southwest Australia
44. West-Central Australia
45. Northwest Australia
46. New Zealand Shelf
47. East China Sea
48. Yellow Sea
49. Kuroshio Current
50. Sea of Japan
51. Oyashio Current
52. Sea of Okhotsk
53. West Bering Sea
54. Chukchi Sea
55. Beaufort Sea
56. East Siberian Sea
57. Laptev Sea
58. Kara Sea
59. Iceland Shelf
60. Faroe Plateau
61. Antarctic
62. Black Sea
63. Hudson Bay
64. Arctic Ocean

Regional Institutions Needed for Adaptive Management-- EAST CHINA SEA LME

Mean Annual SST and Annual Anomalies of SST

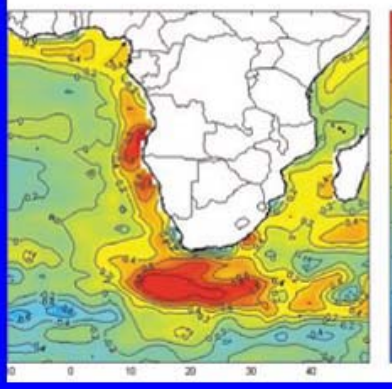




IW SAG 4/10/07 - 22

Is the BCLME feeling the effects of global climate change?

In May, 40 oceanographers and regional experts gathered in Cape Town to discuss the changing state of the Benguela ecosystem. At an intensive three-day workshop, the participants analysed the patterns in long term data sets, identified the possible drivers of climate change and the prospects for adapting to the social and economic consequences of climate change in the Benguela region.



They noted that the BCLME is a highly productive, complex and variable ecosystem. In such a system, it is extremely difficult to separate the climate change "signal" from "noise". Other large ocean basins, such as the North Atlantic and the North Pacific, have well defined inter-decadal changes. In contrast, the Benguela has a higher degree of variability than its counterparts in other parts of the world such as the Humboldt, Canary and California Current systems. This has to be taken account of when managing the ecosystem and its response to climate change. The Benguela Current LME is at the confluence of three major ocean systems, ithe Atlantic, Indian and Southern oceans) and is subject to

not only the marine resources in the coastal regions, but also terrestrial rainfall and weather patterns over the entire region.

Major findings were:

- One of the strongest trends in the data has been a warming at the northern and southern boundaries of the Benguela system. In the north the warming has occurred across the boundary, while in the south, warming has occurred just south of the Agulhas Bank. In the inshore areas of the Agulhas Bank and southern Benguela it has cooled slightly, increasing the gradients across the southern boundary region.
- There has been an increased

Legal Treaty/Institution Critical for Ecosystem-based Area Management

Benguela current news

THE NEWSLETTER OF THE BENGUELA CURRENT LARGE MARINE ECOSYSTEM PROGRAMME

The Benguela Current Commission

by Dr Mick O'Toole

The Benguela Current Commission Interim Agreement was signed by Angola in ... institutional support necessary for effective transboundary management and to put in place legal and governance mechanisms to restore

Inside News July 2007 Issue 5

United Nations Environment Programme | UNEP/GEF South China Sea Project | Global Environment Facility

REVISED DRAFT STRATEGIC ACTION PROGRAMME
(DRAFT 3)

PROPOSED FRAMEWORK FOR MANAGEMENT OF THE MARINE ENVIRONMENT OF THE SOUTH CHINA SEA

MEMORANDUM OF UNDERSTANDING
SIGNED BY ENVIRONMENT MINISTERS

STRATEGIC ACTION PROGRAMME | SUB-REGIONAL AND BI-LATERAL AGREEMENTS | NATIONAL ACTION PLANS

BASED ON
Sound Science: Ecologically effective action: Cost effective actions: Appropriate economic valuations: Consensual knowledge base: Knowledge based decision making: Communication: Periodic assessment: Adaptive Management

July 26th 2007

SCS & GT SAP

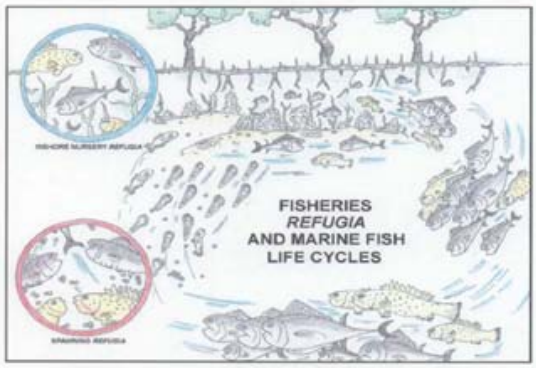
Plus National Plans-NAPs

UNEP/GEF South China Sea/Gulf Thailand Project: Raised Issue of Blue Forests

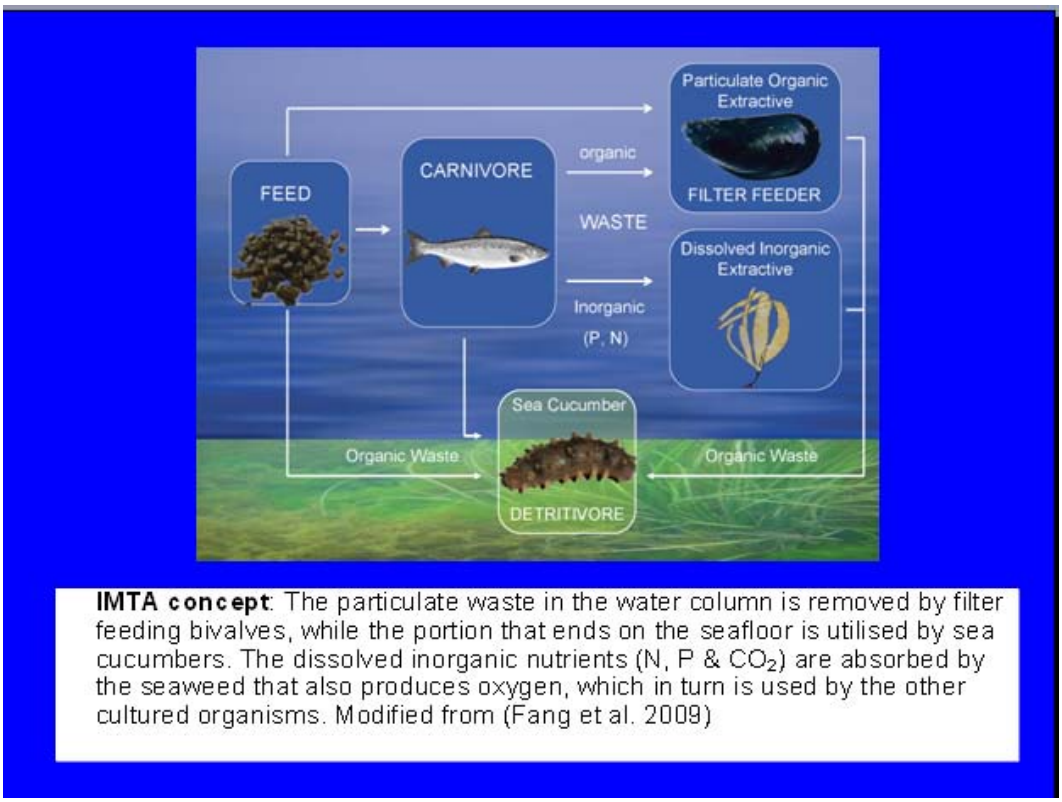
UNEP SCS GEF

Procedure for Establishing a Regional System of Fisheries *Refugia* in the South China Sea and Gulf of Thailand in the Context of the UNEP/GEF Project Entitled:

"Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand"



South China Sea Knowledge Document UNEP/GEF/SCS/Inf.4



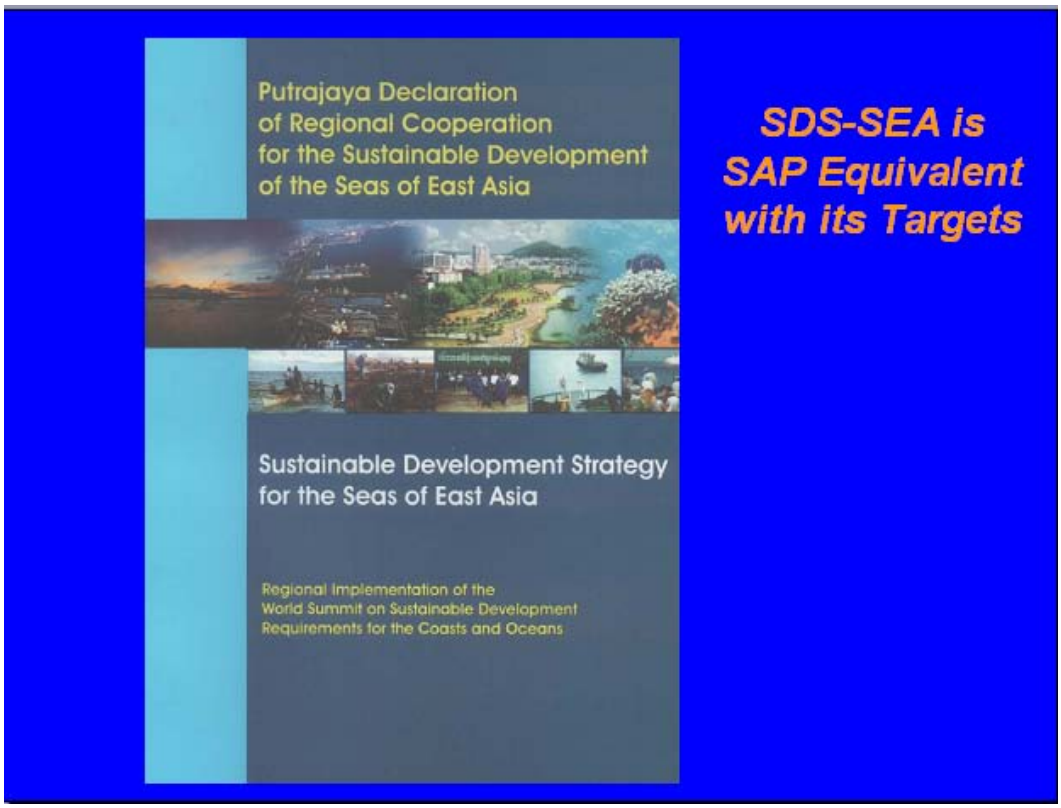
IMTA concept: The particulate waste in the water column is removed by filter feeding bivalves, while the portion that ends on the seafloor is utilised by sea cucumbers. The dissolved inorganic nutrients (N, P & CO_2) are absorbed by the seaweed that also produces oxygen, which in turn is used by the other cultured organisms. Modified from (Fang et al. 2009)

Important Parliamentary Dialogues-YSLME

Parliamentary members' participation

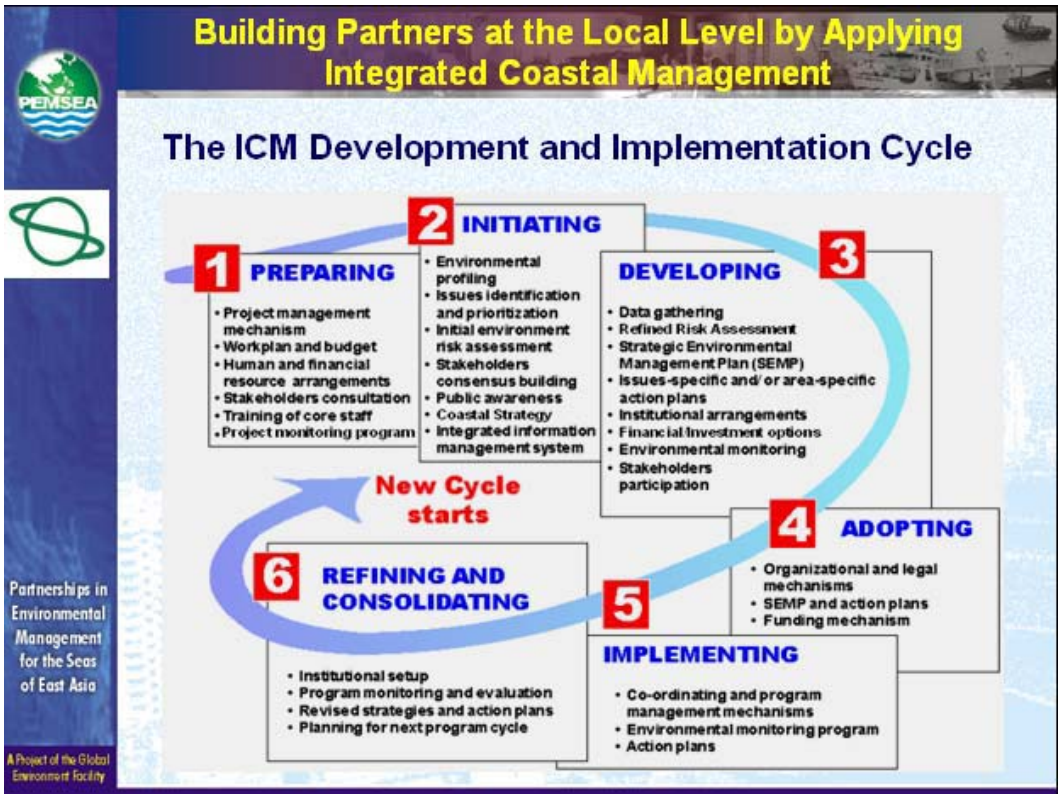
GEF International Waters Ecosystem-Based Approach to Management at Multiple Scales

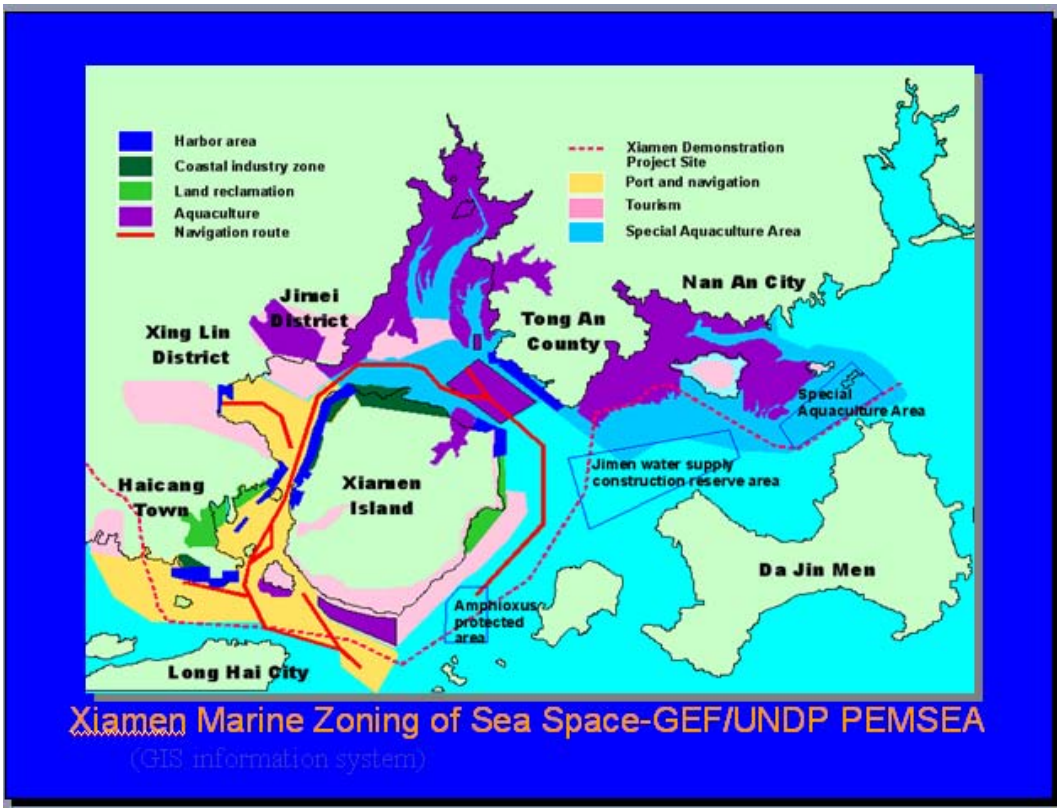
- **Large Marine Ecosystem Scale** (South China Sea LME-UNEP)
- **Coastal Municipality/Provincial ICM scale** (Da Nang, Vietnam - UNDP PEMSEA)
- **River Basin Linkage Scale** (GPA Mekong River Basin/delta - World Bank)
- **Local Community-based Demo Sites** (Phu Quoc *Fish Refugia* Vietnam- UNEP)


Putrajaya Declaration
of Regional Cooperation
for the Sustainable Development
of the Seas of East Asia
Sustainable Development Strategy
for the Seas of East Asia
Regional Implementation of the
World Summit on Sustainable Development
Requirements for the Coasts and Oceans
SDS-SEA is
SAP Equivalent
with its Targets


Another Scale – GEF PEMSEA Experience
in Building ICM Partnerships
Building partnerships at the local level
Partnerships at work
Building intergovernmental partnerships
PEMSEA
Partnerships in
Environmental Management
for the Seas of East Asia


Coastal Strategies at Different Scale than LME
Manila Bay Coastal Strategy
Coastal Strategy of Danang City
Danang 2001
THE BATAAN COASTAL STRATEGY
BATAAN
MANILA BAY
BULACAN
CAVITE
FEBRUARY 2002
Coastal Strategy for the Southeastern Coast of Bali
Partnerships in Environmental Management for the Seas of East Asia
A Project of the Global Environment Facility


Building Partners at the Local Level by Applying Integrated Coastal Management
The ICM Development and Implementation Cycle
1 PREPARING
• Project management mechanism
• Workplan and budget
• Human and financial resource arrangements
• Stakeholders consultation
• Training of core staff
• Project monitoring program
2 INITIATING
• Environmental profiling
• Issues identification and prioritization
• Initial environment risk assessment
• Stakeholders consensus building
• Public awareness
• Coastal Strategy
• Integrated information management system
3 DEVELOPING
• Data gathering
• Refined Risk Assessment
• Strategic Environmental Management Plan (SEMP)
• Issues-specific and/or area-specific action plans
• Institutional arrangements
• Financial Investment options
• Environmental monitoring
• Stakeholders participation
4 ADOPTING
• Organizational and legal mechanisms
• SEMP and action plans
• Funding mechanism
5 IMPLEMENTING
• Co-ordinating and program management mechanisms
• Environmental monitoring program
• Action plans
6 REFINING AND CONSOLIDATING
• Institutional setup
• Program monitoring and evaluation
• Revised strategies and action plans
• Planning for next program cycle
New Cycle starts
Partnerships in Environmental Management for the Seas of East Asia
A Project of the Global Environment Facility



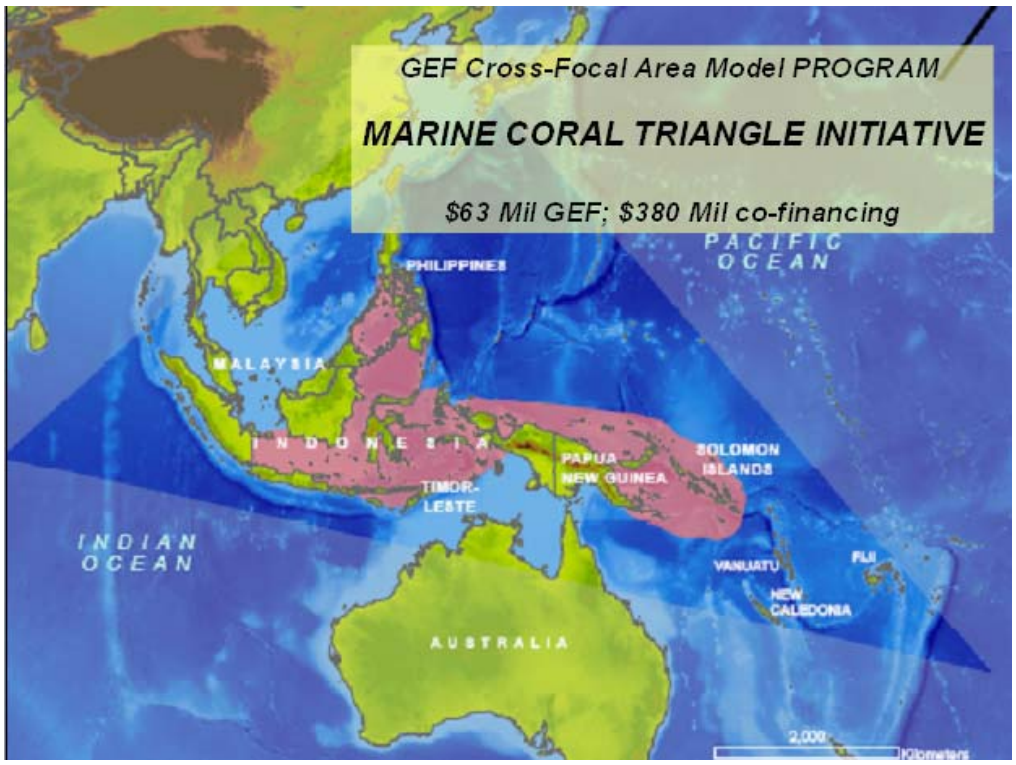
World Bank/GEF Partnership Investment Fund for Nutrient Pollution Reduction

*Approved 2005; results from the SDS-SEA Putrajaya Declaration & targets countries adopted

*$35 Mil GEF; $695 Mil Co-financing (2006-2010)

*7 National lending/grant projects—5 China; 1 Vietnam; 1 Philippines; commitment to policy dialogue & incorporation into CAS; dialogue with PEMSEA

*Innovative Sewage treatment; constructed wetlands; agriculture nutrient reduction



Why Are We Here?

- $197 M GEF spent; $2 B co-financing—what was accomplished? What is progress so far on SAPs; NAPs; ICM targets; investments; governance, including convention ratifications?

- If countries desire more GEF $, a summary is needed on accomplishments so far in the 15 years of support and specifically the 5 years since 2005 to justify continued effort—RBM.

- Do countries wish to pursue the existing strategic partnership approach (regional projects + national investment projects)? If so, need to identify them in the national GEF portfolio formulation exercises, contact agencies, and be consistent with GEF 5 Strategy; FAO is GEF's fisheries agency…

GEF 5 International Waters Strategic Objectives

$440 Million for 2011-2014

Objective 1: Catalyze multi-state cooperation to balance conflicting water uses in transboundary surface/groundwater basins while considering climatic variability and change

Objective 2: Catalyze multi-state cooperation to rebuild marine fisheries and reduce pollution of coasts and Large Marine Ecosystems (LMEs) while considering climatic variability and change

Objective 3: Support foundational capacity building, portfolio learning, and targeted research needs for ecosystem-based, joint management of transboundary water systems

Objective 4: Promote effective management of Marine Areas Beyond National Jurisdiction (ABNJ) directed at preventing fisheries depletion

Implications of GEF 5 IW Strategy for East Asia LMEs and Coasts

- **IW projects incorporate considerations of climatic variability and change so multiple drivers will be addressed together for specific water systems—not just pollution reduction but also sustainable fisheries and habitat need to be in investment projects and regional/national policy and institutional changes**
- **New Coastal and LME projects will need to incorporate ICM/marine spatial planning & consider sea level rise/coastal storm flooding and protection of blue forests (mangroves, tidal marshes, sea grass)**
- **GEF IW projects will be more costly so that climatic variability & multiple drivers are included; regional, national & local policy/legal/institutional changes are needed for sustainability; regional LME frameworks are key**
- **Results-based Management means community scale will also be addressed with stakeholder participation & gender—results on-the-ground**
- **What are implications of recent Coral Triangle Initiative—Heads of State**

Implications of Replenishment Reforms
(agreed by donors and recipients in GEF Council)

•New project cycle requirements for Results-based management with up-front specification of results, targets, and indicators of meeting targets

•More co-financing is expected along with GEF incremental costs being justified by modification of actual "baseline projects"

•Agency comparative advantages will be enforced by the CEO

•Agencies and countries must have the subject of the GEF project included as a priority in their internal policies & development plans

•Countries can undertake NPFEs (country priorities for GEF $)

•Programmatic approaches are now more stringent in substance and process... and need to make a "transformational impact"

IW Strategic Objective 2: Catalyze Multi-state Cooperation to Rebuild Marine fisheries and Reduce Pollution of Coasts and LMEs while Considering Climatic Variability and Change-SAP/NAP Implementation

•Key elements of projects: multiple stresses/drivers all need to be addressed---"Blue Forests" habitat; rebuilding of fish stocks; reduction of nutrient pollution; ICM/spatial marine planning for addressing climatic variability and change;

•Key processes: national inter-ministry committees; multi-country sustainable frameworks for joint cooperation on the LMEs; national & local policy, legal and institutional reforms; multi-GEF agency partnerships with issues internalized into their country assistance strategies/ UN frameworks; development partner coherence.

•Results-based management means indicators for the above are to be chosen and included in project document; programmatic approaches need to be transformational and have results frameworks.

Targets and NAPs are Key Elements

TARGETS

Table 8 presents general status of coral reef management in the South China Sea geographic region of the six countries based on information assembled for 83 individual coral reef areas. The area to be added to the total area managed sustainably by the year 2015 is 53,577ha, thereby increasing the total area under sustainable management to 153,820ha which represents 20% of the total reef area of the South China Sea or 71% of the area of the target sites.

Table 8 Status of Coral Reef Management in the South China Sea Biographic Region of the Participating Countries.

	Cambodia	Indonesia	Malaysia	Philippines	Thailand	Viet Nam	Total
Total coral reef area in the South China Sea (ha)	2,807	39,287	43,411	464,000	90,000	110,000	749,505
Total coral reef area of the 83 target sites	2,807	39,287	43,411	36,662	89,530	5,710	217,407
Coral reef area under existing management at the 83 sites	293	12,511	28,779	2,390	54,000	2,270	100,243
Number of target sites with management information	7	7	37	9	14	9	83
No. of sites with low management effectiveness	6	2	7	1	4	4	24
No. of sites with medium management effectiveness	1	2	26	6	4	5	44
No. of sites with high management effectiveness	0	0	4	0	0	0	4
Existing management types*	FMA, MPA, NP	MMA, MR	MP	PLS, MCDP, MTS, MBR, ECPZ	NP, MNP, NCA	MPA, NP, CBM, WH	
Target area to be added for management by 2015 (ha)	1955	5,590	14,632	10,100	18,000	3,300	53,577
Total area to be under management by 2015 (ha)	2,258	18,091	43,411	12,490	72,000	5,570	153,820

Nutrient Reduction Projects in the GEF/WB Danube/Black Sea Basin Investment Fund

Tranche	Project title	Status	GEF $
1	Romania: Agricultural Pollution Control	Approved	5.15
1	Bulgaria : Wetland Restoration and Pollution Reduction	Approved	7.50
1	Moldova: Agricultural Pollution Control	Approved	4.95
1/2	Turkey: Anatolia Watershed Rehabilitation	Approved	7.00
2	Serbia and Montenegro: Reduction of Enterprise Nutrient Discharges	Approved	9.02
2/3	Bosnia-Herzegovina : Water Quality Protection	Approved	4.25
3	Hungary: Reduction of Nutrient Discharges	Approved	12.50
3	Moldova: Wastewater, Environmental Infrastructure	Approved	4.56
3	Romania: Integrated Agriculture Nutrient Pollution Control	Approved	5.00
3	Croatia: Agricultural Pollution Control	Approved	4.81
3	Kosovo Agriclture Nutrient Reduction(Dec 2010)	Pending	5.00

Annex 4

Background Paper for the East Asian Seas Stocktaking Meeting:

Preparation of a Programmatic Approach for the Coordinated Sound Management and Development of the East Asia Seas Region

(See separate document)

Background Paper for the
East Asian Seas Stocktaking Meeting

Preparation of a Programmatic Approach for the Coordinated Sound Management and Development of the East Asia Seas Region

Anna Tengberg and **Annadel S. Cabanban**

September 2011

Background Paper for the East Asian Seas Stocktaking Meeting:

Preparation of a Programmatic Approach for the Coordinated Sound Management and Development of the East Asia Seas Region

Anna Tengberg and Annadel S. Cabanban

September 2011

1. EXECUTIVE SUMMARY

The Seas of East Asia (EAS) are bordered by China, Japan and the Korean Peninsula in the north and the Southeast Asian nations in the south. The region harbours a significant part of the world's coral reefs and mangroves and also produces about 40 percent of the world's fish catch and more than 80 percent of aquaculture. The human pressure on marine and coastal resources is very high with approximately 2 billion people living in the region. The EAS region encompasses a series of large marine ecosystems (LMEs), subregional seas and their coastal areas. This includes the Yellow Sea, the East China Sea, the South China Sea, Gulf of Thailand, the Sulu-Celebes Sea and the Indonesian Seas — six LMEs of great ecological and economic importance.

The objective of the stocktaking is to provide a background document of past and current GEF operations and other investments in the EAS region in support of a consultative review meeting of GEF and partners in the region. The stocktaking review intends to: (1) identify geographical and thematic gaps and future investment needs in the East Asian Seas region; (2) identify governance mechanisms and their mandates; and (3) identify emerging issues in the EAS region and recommendations for future actions. The background paper will support the formulation of an agreed common vision as the basis for the development of a common agenda or programming framework to be financed by the International Waters (IW) Focal Area with possible linkages to other GEF Focal Areas. The study is carried out as a desk study using all relevant documentation from the Global Environment Facility website, as well as project publications and evaluations and interviews with relevant partners.

The stocktaking found that the region is comprehensively covered by assessments, including Transboundary Diagnostic Analysis (TDAs) and Strategic Action Program (SAP) processes, with the exception of the East China Sea, which could benefit from such a process to better identify the key transboundary issues related to rapid coastal development. However, the main focus for the future should be to implement the existing SAPs for the South China Sea and the Yellow Sea, as well as other existing planning frameworks, such as the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA), in order to move from planning to implementation and scaling up of investments.

Fisheries stands out as the issue not given adequate attention by GEF, in relation to its importance and in comparison to other transboundary concerns, such as pollution and habitat destruction and community modification. This issue is crucial in view of growing populations, and the need to secure food supply from the sea and to alleviate poverty. The Ecosystem Approach to Fisheries (EAF) management, incorporating the Integrated Coastal Management (ICM) management concept, could provide the necessary framework and process for addressing multisectoral conflicts in the coastal zone that contribute to the decline of fishery resources. Long-term investments for EAF are needed.

In order to scale up investments and to leverage larger amounts of co-financing to future GEF projects, there should be an increased emphasis on funding to single country projects, as they are, on average, mobilizing almost ten times as much co-financing as regional and global projects. This approach may also speed up policy reform at the

national level in support of ICM and other integrated approaches, as closer attention can be paid to national coordination issues in projects only dealing with one country.

GEF and partners have made substantial investments in the EAS Region and yet there is no regional agency that collates information and conducts harmonized monitoring of results gathered by the riparian countries, which impedes the sharing of information and lessons from past experiences among LMEs and adaptive management within an LME . A coordinating mechanism and agreed procedures and methodologies are necessary to monitor improvement of the status of the LMEs in the EAS as a result of interventions. In this regard, the institutionalization of PEMSEA provides an opportunity to bring different initiatives together under one single umbrella. Better coordination of GEF support to the EAS region would also strengthen the extent to which ecosystem-based management could be applied in the EAS and interventions harmonized from local to national to regional levels. Different planning frameworks, such as the SDS-SEA and the South China Sea SAPs, should be linked spatially and operationally to ensure that different Ecosystem-based Management (EBM) tools are applied in an integrated and coordinated manner.

Strengthened regional coordination of interventions in the EAS also need to be reflected in enhanced inter-sectoral coordination in coastal and marine management at the national level to enable countries to better respond to transboundary management challenges, such as monitoring management interventions on marine pollution, fisheries recovery, or habitat improvement. The lack of resources and the difficulty in changing governmental structures are some reasons why establishing coordinating mechanisms have not progressed significantly. New policies that meet present issues, such as transboundary pollution, poaching, etc., require fiscal allocations; otherwise the policy remains an academic document.

A wide range of emerging issues that are affecting the EAS have been identified by different agencies, forums and by the countries themselves. The countries are concerned with land-based sources of pollution, habitat destruction and community modification, fisheries issues, and climate change, while invasive marine species is generally not so high on the agenda. Climate change and population growth are the main drivers of many of the emerging problems or worsening trends in the EAS environmental status. There is hence a need to address climate change impacts both in terms of adaptation needs and possible mitigation actions. The costs of climate change to countries in the region could be equivalent to a loss of 6.7 percent of GDP by 2100, which is more than twice the world average.

Sustainable use of resources in LMEs should be addressed at both the supply side of and the demand side for natural resources. On average, the per capita consumption of fish in the region is about 30 kg per year and this could increase to 50 kg per year. With increasing demand and population growth, there will be greater pressure to expand exploitation of natural fish stocks or increase aquaculture production. Growth of human population should thus be managed in parallel with efforts on environmental and resources management.

2. BACKGROUND/INTRODUCTION

The Seas of East Asia (EAS) are bordered by China, Japan and the Korean Peninsula in the north and the Southeast Asian nations in the south (Figure 1). The region harbours a significant part of the world's coral reefs and mangroves and also produces about 40 percent of the world's fish catch and more than 80 percent of aquaculture. The human pressure on marine and coastal resources is very high with approximately 2 billion people living in the region.[1]

The EAS region encompasses a series of large marine ecosystems (LME), subregional seas and their coastal areas. This includes the Yellow Sea, the East China Sea, the South China Sea, Gulf of Thailand, the Sulu-Celebes Sea and the Indonesian Seas — six LMEs of great ecological and economic importance. The physical extent of each LME and its boundaries are based on four linked ecological, rather than political or economic, criteria: (1) bathymetry; (2) hydrography; (3) productivity; and (4) trophic relationships. Globally, the LMEs are centers of coastal ocean pollution and nutrient over-enrichment, habitat degradation (e.g., seagrasses, corals, and mangroves), overfishing, biodiversity loss, and climate change effects.[2]

This report is taking stock of results of GEF projects in these LMEs, including overlaps with two LMEs bordering Australia:

1. Yellow Sea (LME #48)
2. East China Sea (LME #47)
3. South China Sea (LME #36)
4. Gulf of Thailand (LME #35)
5. Sulu-Celebes (Sulawesi) Sea (LME #37)
6. Indonesian Sea (LME #38)
7. North Australian Shelf (Arafura Sea, Gulf of Carpentaria) (LME #39)
8. Northwest Australian Shelf (Timor Sea) (LME #45)

The countries that border these LMEs are: Australia; Brunei; Cambodia; China; DPR Korea; Indonesia; Japan; Malaysia; Philippines; RO Korea; Singapore; Thailand; Timor-Leste; and Viet Nam.

Figure 1. Overview Map of EAS region (adapted from PEMSEA).

Since its establishment, in the early 1990, the GEF has allocated US$1.1 billion in grants with over US$4 billion in co-financing for 183 projects in the International Waters (IW) focal area. The GEF is the largest financial institution with the mandate, ability and experience to address current and future challenges to shared freshwater and marine systems. The GEF has supported regional collaborative efforts for 22 transboundary surface water basins, 16 large marine ecosystems, and 5 cross-border groundwater systems globally.[3] This report (Chapter 4) analyzes the share of total GEF IW funding that has been allocated to the EAS region.

3. OBJECTIVES AND METHODS FOR THE STOCKTAKING

3.1. Objectives

The objective of the stocktaking is to provide a background document of past and current GEF operations and other investments in the EAS region in support of a consultative review meeting of GEF and regional partners. The stocktaking review intends to: (1) assess the accomplishments (Outcomes and Outputs) of projects undertaken under GEF 1-4 in addressing transboundary issues, that were identified in the TDAs of the LMEs in the East Asian Seas; (2) identify geographical and thematic gaps and future investment needs in the EAS region; (3) identify governance mechanisms and their mandates; and (4) identify emerging issues in the EAS region and make recommendations for future actions. The background paper will support the formulation of an agreed common vision as the basis for the development of a common agenda or programming framework to be financed by the IW focal area with possible linkages to other GEF focal areas.

3.2 Methods

The study is carried out as a desk study using all relevant documentation from the GEF website as well as project publications and evaluations and also includes interviews with relevant partners. All projects have been reviewed and scored using the following criteria:

1. Progress achieved in past GEF Projects in the LMEs in the EAS and other investments that contribute to impacts in the EAS and the extent to which the following priority transboundary issues have been addressed:

    i. Water pollution from land-based sources;
    ii. Water resources uses and management in coastal zones and small islands, including groundwater;
    iii. Unsustainable exploitation of fisheries — coastal and oceanic;
    iv. Protection of riverine, coastal and other marine habitats;
    v. Invasive species; and
    vi. Climate change impacts.

2. Common approaches taken by the GEF Projects in the LMEs, to address these concerns including the use of:

    i. Transboundary Diagnostic Analysis (TDA) and development of Strategic Action Programs (SAPs);
    ii. Integrated Coastal Management (ICM);
    iii. Ecosystem-based Management (EBM);
    iv. Integrated Water Resources Management (IWRM);
    v. Rights-based approaches to habitat and fisheries management (e.g., establishment of community-based fisheries refugia and limited entry fisheries); and
    vi. Conservation-based approaches to habitat and fisheries management (e.g., establishment of marine protected areas).

3. Impact of the projects in influencing regional and national policies to address these concerns.

The results of this analysis are complemented by the evaluation reports of projects and other relevant project publications.

In addition, an analysis is conducted of the existing regional coordination and/or governance mechanisms in the EAS region for management of international waters. Criteria for evaluating the regional mechanisms loosely follow the approach presented by Haas (2008)[4], but adapted to the needs of this study. The criteria for evaluating the effectiveness of governance in the EAS region are thus:

i. Level of collaboration
   - Monitoring Program and Information Sharing;
   - Action Plan – Legally Binding Agreement;
   - Legal Personality of Institution

ii. Sustainable financing
   - Sustainable financing plan;
   - Sustainable financing of Secretariat in the short to medium term or in the medium to long term;
   - Medium to long term financing for programs and activities secured

iii. Involvement of riparian countries
   - Single country;
   - 2 or more countries;
   - All countries bordering the LME

iv. Involvement of national stakeholders
   - 1 National Institution per country
   - Multisectoral;
   - Participation of Local Government/civil society.

To determine the commitment of the countries in addressing the transboundary issues in the LMEs and to identify the transboundary issues that are highest in the priorities of the countries, a survey of the national policies with regards to the transboundary issues was conducted from websites of relevant governmental agencies coupled with a survey of key agencies using a questionnaire (Annex 3). The questionnaire was distributed to heads of agencies in the countries that are responsible for addressing the thematic issues of interest to GEF International Waters. Telephone interviews were conducted two weeks after the distribution of the questionnaires.

To determine which transboundary issue/s remain/s to further address, the following criteria are used:

- Urgency (based on scientific reports in the last 5 years) – 25 %
- Identified priorities by governments – 25 %
- Level of investment is low over the last 15 years – 25 %
- “Tipping point” aspect (a small additional investment is needed to make it achieve its outcome) – 25 %

4. OVERVIEW OF PAST AND CURRENT ACTIVITIES IN THE EAS REGION

4.1 Assessments of Transboundary Concerns in EAS LMEs

GEF has supported many investments in the last 15 years to assess and improve the status of the Large Marine Ecosystems in the EAS region (Annex 1). The GEF Projects were implemented at global, regional, or national levels. The global projects were implemented across all LMEs and were intended to contribute to improving the LMEs in the EAS region. The regional projects are implemented at the LME level by several countries surrounding the LME. There are also projects that are implemented in one country that address one transboundary issue. The LMEs in the EAS region that were assessed are:

i. Yellow Sea – using the Transboundary Diagnostic Analysis (TDA) and Global International Waters Assessment (GIWA) methodologies[5]
ii. East China Sea – using the GIWA methodology[6]
iii. South China Sea – using the TDA and GIWA methodologies[7]
iv. Sulu-Celebes Sea – using the GIWA methodology[8]
v. Indonesian Seas – using the GIWA methodology[9]
vi. Mekong River Basin – using the GIWA methodology[10]

Strategic Action Programs (SAPs) are approved for the Yellow Sea and South China Sea. The TDA/SAP development is underway in the Sulu-Celebes (Sulawesi) Sea and Arafura-Timor Seas Projects. Table 1 below summarizes the priority transboundary concerns in the different EAS LMEs, as assessed through TDAs or GIWA:

Table 1: Priority Transboundary Concerns and SAP Targets in EAS LMEs.

LME	Priority Transboundary Issues	Status of SAP and Agreed Targets
Yellow Sea	**1.** Pollution (eutrophication and harmful and toxic algal blooms, contaminants and their effects, etc.) **2.** Ecosystem degradation (changes in biomass abundance, species composition) **3.** Loss of fisheries production (loss of commercially important species, unsustainable mariculture) **4.** Loss of biodiversity	SAP endorsed waiting for funding for full-scale implementation[11]. **Targets:** 1. 25-30% reduction in fishing effort 2. Rebuilding of overexploited marine living resources 3. Improvement of mariculture techniques to reduce environmental stress 4. Meeting international requirements on contaminants 5. Reduction of total loading of nutrients from 2006 levels 6. Reduce standing stock of marine litter from current level 7. Reduce contaminants,…, to nationally acceptable levels 8. Better understanding and prediction of ecosystem changes for adaptive management 9. Maintenance and improvement of current populations/distributions of living organisms… 10. Maintenance of habitats according to standards and regulations of 2007 11. Reduction of the risk of introduced species

LME	Priority Transboundary Issues	Status of SAP and Agreed Targets
East China Sea	1. Unsustainable exploitation of fish and other living resources 2. Pollution 3. Habitat and community modification 4. Freshwater shortage 5. Global change	No SAP developed.
South China Sea	1. The loss and degradation of coastal habitats (coral reefs, seagrass, mangroves, and wetlands); 2. Overexploitation of living aquatic resources; 3. Land-based marine pollution 4. Critical absence of regional agreements	SAP endorsed waiting for funding for full-scale implementation.[12] Targets: 1. **Mangroves:** increase in areas to be transferred to Protected Area Status; non-conversion of mangroves; improved management relating to sustainable use; replanting deforested mangrove land; and enrichment planting to increase mangrove biodiversity. 2. **Coral reefs:** at least 70% of the existing area of coral reefs in the 82 target coral reef sites (153,000 ha) put under an appropriate form of sustainable management and; reduce the regional decadal rate of degradation in live coral cover from the present rate of 16% to 5%. 3. **Seagrass:** twenty-one managed areas totalling 26,576 ha (approximately 33% of seagrass sites) in the SCS, under sustainable management; amendment of the management plans for seven existing Marine Protected Areas (MPAs) to include specific seagrass-related management actions; and adoption of seven new MPAs specifically focusing on seagrass habitats. 4. **Coastal Wetlands:** management plans for at least three lagoons, nine estuaries, five tidal flats, one peat swamp; to increase by at least seven wetland areas, the number of sites with protection; and regional estuary monitoring scheme implemented. 5. **Fisheries:** regional system of a minimum of 20 refugia for the management of priority, transboundary, fish stocks and endangered species; and prepared and implemented fisheries management systems in the identified refugia. **6. Land-based Pollution:** estimate total contaminant loading to the SCS; regional criteria for contaminants in sediment and biota; characterize and prioritize all hotspots surrounding the SCS; amending national/provincial, legislation/regulations in support of all Land-based Pollution targets of the SAP; meet ASEAN seawater quality criteria for 90% of monitoring stations in the 17 hotspots characterized by the RWG-LbP between 2002 – 2004 and 80% of other monitoring in coastal waters.
Sulu-Celebes (Sulawesi) Seas	1. Unsustainable exploitation of fish and other living resources	Regional assessments: • Biodiversity visioning for SSME conducted 1999 to 2001

LME	Priority Transboundary Issues	Status of SAP and Agreed Targets
	2. Habitat and community modification 3. Pollution 4. Freshwater shortage 5. Global change	• GIWA conducted in 2002 • SSME Conservation Plan, with 10 Objectives, including 3 Programs of Work • TDA and SAP under development with GEF funding
Indonesia Seas	In the **Sunda sub-system** (Java Sea): 1. Pollution 2. Freshwater shortage 3. Habitat and community modification 4. Unsustainable exploitation of fish and other living resources 5. Global change In the **Wallacea sub-system** (partly overlaps with the Timor Sea – see ATSEA): 1. Habitat and community modification 2. Unsustainable exploitation of fish and other living resources 3. Freshwater shortage 4. Pollution 5. Global change In the **Sahul sub-system** (covers most of the Arafura Sea – *see ATSEA*): 1. Unsustainable exploitation of fish and other living resources 2. Habitat and community modification 3. Pollution 4. Freshwater shortage 5. Global change	Regional assessments: • Regional assessment – GIWA • Linkages to ATSEA TDA/SAP under development with GEF funding
Arafura-Timor Seas	See Wallacea and Sahul sub-systems above	• TDA and SAP under development with GEF funding
Mekong River Basin	1. Habitat and community modification 2. Unsustainable exploitation of fish and other living resources 3. Freshwater shortage 4. Pollution 5. Global change	

In addition, the **Sustainable Development Strategy for the Seas of East Asia (SDS-SEA)**[13] that provides an overarching framework for all the LMEs in the EAS has the following foci:

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

The SDS-SEA identifies ICM as an effective management framework to achieve the sustainable development of coastal and marine areas. Subsequently, the Haikou Partnership Agreement (2006) set a target of 20 percent of the region's coastline to be covered by ICM programs by 2015. In 2010, it is estimated that countries have scaled up ICM programs to cover between 9 to 10 percent of the coastline of the region.[14]

In November 2009, PEMSEA organized the East Asian Seas Congress[15] that brought together more than 1,400 participants with participation from 14 countries in the EAS region. The Congress took stock of progress in addressing six thematic areas in the EAS region and remaining challenges that are summarized in Table 2 below.

Table 2: Thematic issues in the EAS region and remaining challenges.

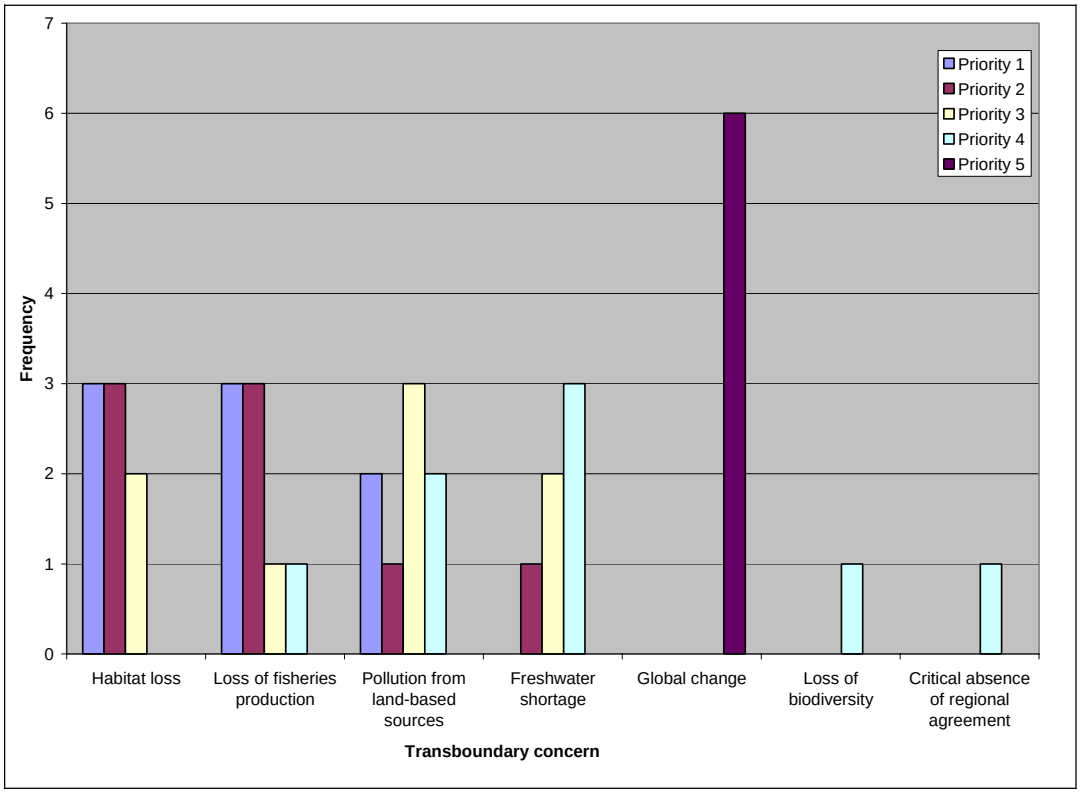
Thematic area	Remaining challenges
Coastal and ocean governance	• Climate change cannot be decoupled from development • ICM must be integrated into national ocean and coastal policy
Natural and man-made hazard prevention and management	• Local capacity development required in order to assess risks, develop and implement effective responses, and strengthen resiliency through education, alternative livelihoods
Habitat protection, restoration and management	• Further efforts are required to enhance the capability of local communities to manage and maintain habitats
Water use and supply management	• Water is a serious emerging challenge to the region and climate change is adding to the problem
Food security and livelihood management	• Better aquaculture practices are required • Highly sectoral approaches to fisheries cannot effectively solve the complex problems
Pollution reduction and waste management	• Still huge demand for environmental facilities and services in the region

Climate change emerges as a cross-cutting issue, which will affect governance, the frequency of natural hazards, such as storms and floods, water use and supply.

The frequency by which the transboundary issues are ranked as priority one to five in Table 1 is summarized in Figure 2 below. It could be argued that priorities identified through a rigorous TDA process in the YSLME and SCS should not be compared with GIWA assessments that are older and based on more generic criteria. However, the GIWA results are used to give the big picture of the major threats to the EAS region, and the analysis can be updated once the Sulu-Celebes and ATSEA TDAs have been finalized.

It can be seen that the two most important threats to the environment and sustainable development of the EAS region is habitat loss/ecosystem degradation and loss of fisheries production, followed by pollution from land-based sources. Freshwater shortage is also a significant threat, while global change was ranked as number five by all the GIWA assessments. Climate change as a driver of global change was not analyzed separately at the time, but is included in new TDAs under development, such as the one for ATSEA. Loss of biodiversity was included as a separate issue only in the YSLME TDA, and critical absence of regional agreement in the SCS TDA.

Figure 2. Summary of priority transboundary concerns across LMEs in the EAS region (including the three sub-systems of the Indonesian Seas).

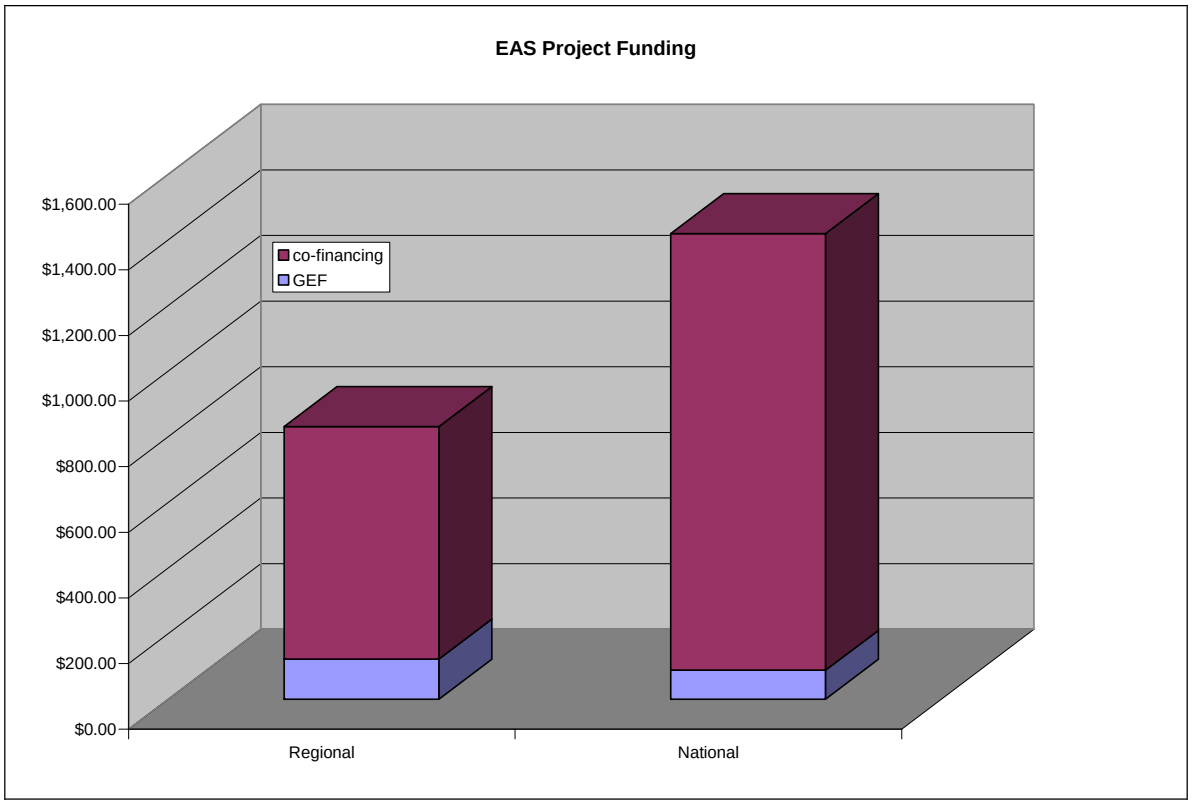


4.2 GEF Investments in the EAS region

GEF funding to International Waters projects in the EAS region is summarized in Table 3 below using UNEP's Regional Seas Programme guidelines for financing of the implementation of regional seas conventions and action plans[16] to categorize the different types of environmental financing. Total GEF funding committed to the EAS region since its inception amounts to US$ 210.69 million, spread over almost 30 projects, which is equivalent to almost 20 percent of total GEF IW funding.[a] This has in turn leveraged around US$ 2 billion in co-financing.

Most of the GEF funding has been invested in regional initiatives followed by national initiatives. National projects have been most successful in leveraging co-financing (Figure 3) and the overall GEF to co-financing ratio is 1:15. Most of this co-financing comes from international financial institutions and national governments. Regional projects, on the other hand, have co-financing ratios of around 1:6 with NGOs and Research Institutions playing an important role in complementing government, multilateral and bilateral funding. The overall co-financing to the International Waters portfolio in the EAS region is approximately 1:10.

Figure 3: Funding to different types of projects in the EAS region.



[a] Note that some projects also received funding from other focal areas and the total IW funding therefore probably comes to around 18% of GEF total to the focal area.

Table 3: Funding to International Waters Projects and Programmes in the EAS region.

Transboundary Initiatives	National Govern-ment	Local Govern-ment	GEF	IFIs	Multi-lateral Agency	Bilat-erals	NGOs/ Research Inst.	Economic instru-ments	Private sector, PPPs	Total funding (US$ Million)
1. Regional Projects										
1a. Regional Initiatives										
PEMSEA Phase 1-3, including PPP (1993-2011)	x	x	36.1		x	x	x	x	x	462.1
Partnership Investment Fund for Pollution Reduction, Tranche 1 (2006-2010)	x		35.0*	x						910.3*
CTI/IWLearn	x	x	2.7	x	x	x			x	5.97
1b. LME/Sub-regional Seas projects										
South China Sea and Gulf of Thailand (2002-2008)	x	x	16.41		x		x			32
Yellow Sea LME (2004-2010)	x	x	14.7		x		x			30
Sulu-Celebes LME (2009-2013)	x		3.0		x		x			6.8
Arafura-Timor Seas (2009-2013)	x		2.7		x		x			8.4
1c. Regional Fisheries Projects										
Southeast Asia CTI (2009-2013) (MFA)	x		10.3	x		x	x		x	76.5
Western Pacific East Asia Oceanic Fisheries Management Project (WPEA) (2009-2011)	x		1.0		x	x	x			4.6
Bycatch Management (2009-2014)	x		3.0		x				x	6.7
1d. Regional River Basin Projects										
Mekong River Basin Water Utilization Project (2000-2008)	x		11.1	x						17.95
Mekong River Basin Wetland Biodiversity Conservation and Sustainable Use Program (2004-2009) (BD)	x		4.53		x		x			13.9
National Performance Assessment and Sub-Regional Strategic Environment Framework in the Greater Mekong Subregion (2002-2007) (MFA)	x		0.8	x						2.4
1e. Other relevant regional projects										
Livestock-Waste Management in East Asia (2006-)	x		7.7		x					24.71
Marine Electronic Highway Demonstration (2006-)	x		8.3		x					16.27

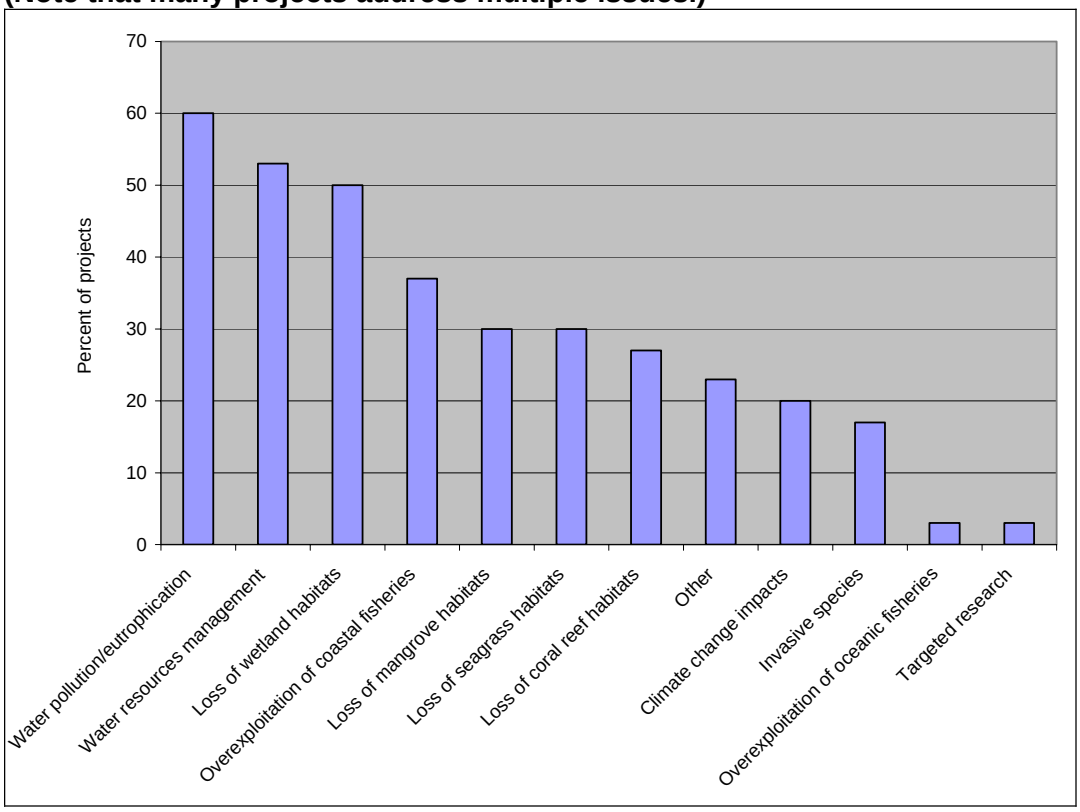
Transboundary Initiatives	National Govern-ment	Local Govern-ment	GEF	IFIs	Multi-lateral Agency	Bilat-erals	NGOs/ Research Inst.	Economic instru-ments	Private sector, PPPs	Total funding (US$ Million)
Sub-total			**122.34**							**708.3**
2. National Projects										
Hai River Basin Integrated Water Resources Management	x	x	17.0	x						130.34
Pearl River Delta Development (2004-)	x	x	10.0	x						432.38
Ningbo Water and Environment Project - Investment Fund (2006-)	x	x	5.0	x						145.5
Coastal Cities Environment and Sanitation Project - under Investment Fund (2006 -)	x	x	5.0	x						27.03
Manila Third Sewerage Project (MTSP) – under Investment Fund (2007-)	x	x	5.35	x						93.16
Liaoning Medium Cities Infrastructure – under Investment Fund (2007 -)	x	x	5.0	x						193.05
Second Shandong Environment - under Investment Fund (2007 -)	x	x	5.0	x						206.85
Shanghai Agricultural and Non-Point Pollution Reduction project (SANPR) - under Investment Fund (2010 -)	x	x	4.79	x						34.89
Demonstration of Sustainable Management of Coral Reef Resources in the Coastal Waters of Ninh Hai District, Ninh Thuan Province, Viet Nam (2008 -)	x	x	0.41				x			0.94
Demonstration of Community-based Mgt of Seagrass Habitats in Trikora Beach East Bintan, Riau Archipelago Province, Indonesia (2007 -)	x	x	0.40				x			0.79
Participatory Planning and Implementation in the Management of Shantou Intertidal Wetland (2007	x	x	0.40				x			0.92
Ship Waste Disposal (1992-1997)	x		30.0	x						64.8
Sub-total			**88.35**							**1,330.65**
Total			***210.69***							***2,038,95***

*Not included in total – individual projects under the Investment Fund counted instead.
BD – funding from the Biodiversity focal area; MFA – funding from multiple focal areas.

4.3 Extent to which GEF Projects have addressed Transboundary Issues in the EAS Region

Annex 1 provides an analysis of the transboundary issues addressed and the approach taken by GEF projects in the EAS region. Figure 4 below summarizes the findings from the analysis of transboundary issues. The most common issues addressed by 50% or more of GEF projects are water pollution/eutrophication, water resources management and loss of wetland habitats. This is followed by overexploitation of coastal fisheries and other types of coastal habitats that are addressed by between 37 and 27 percent of projects. Climate change impacts and invasive species have received less attention and are only addressed by 20 and 17 percent of projects, respectively. Overexploitation of oceanic fisheries and targeted research are the issues with the lowest number of projects.

Figure 4: Transboundary issues addressed by GEF projects in the EAS region. (Note that many projects address multiple issues.)



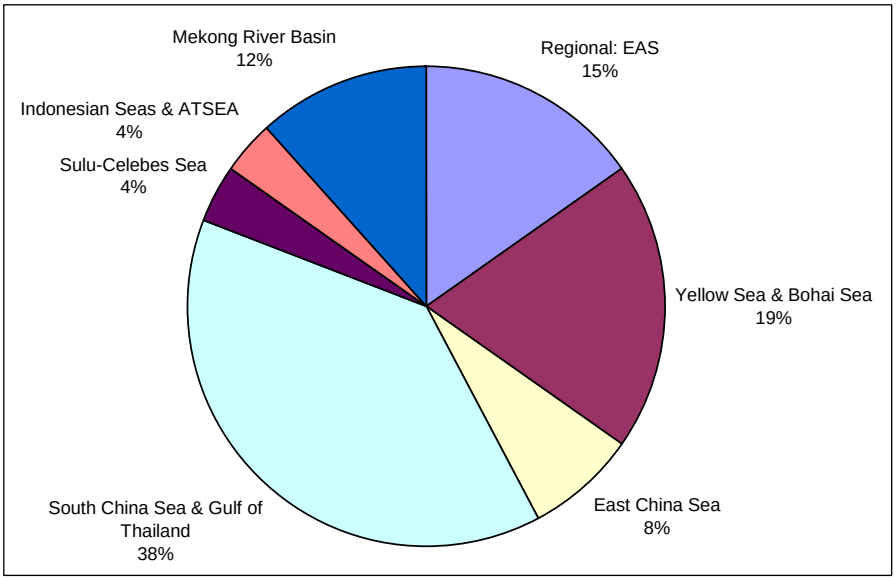
Many of the projects addressing water **pollution and/or eutrophication** are funded under the World Bank/GEF Pollution Reduction Investment Fund and are concentrated in the Yellow Sea and the South China Sea. Projects that are addressing **water resources management** issues are found in the Mekong basin in addition to coastal areas, while projects addressing **threats to habitats** are concentrated in the South China Sea with new projects emerging in the Sulu-Celebes Sea and the Arafura-Timor Seas. **Overexploitation of fisheries** is mainly addressing coastal fisheries and only one project deals with oceanic fish stocks**. Climate change impacts** are a relatively new issue in the EAS region and are most prominently integrated into projects that are dealing with coral reef management**. Invasive species** are mainly addressed by projects

dealing with shipping, such as the GloBallast Partnership. Comparing Figure 2 on the ranking of the transboundary issues across the LMEs in the EAS region by order of importance, and the priority given by GEF projects, fisheries stands out as the issue not given adequate attention by GEF in relation to its importance and in comparison to other transboundary concerns, such as pollution and habitat loss. This becomes even more evident looking at the amount of funding that has been allocated to fisheries management projects compared to pollution reduction, water resources management and habitat management, as several fisheries projects are only medium-sized projects.

One global **targeted research** project with relevance for the EAS region was also included in the analysis, namely the Coral Reef Targeted Research and Capacity Building for Management. Research carried out by the project indicates that coral reefs, as we have known them, will not likely survive the rapid increases in global temperatures and atmospheric CO_2 that are forecast this century. Of the 109 countries with significant coral reef communities, at least 93 are experiencing damage. Many designated protected areas on coral reefs have reached such a state of decline that they can no longer be considered as coral reefs. Coral reef research targeted at management actions and policy change is therefore highly relevant. In addition, the project created models and tools to predict the impact of coastal developments and climate change on coral reefs, including developing a regional model for the Philippines that could be used in other projects with coral reef components.[17]

Annex 2 assigns each GEF project to one or several LMEs in which it is being implemented. This analysis indicates that the South China Sea has the largest number of GEF projects followed by the Yellow Sea. The only international river basin in the EAS region that has received GEF support — the Mekong — discharges into the South China Sea, and these projects can thus also be seen as benefitting this LME. The Indonesian Seas, the Sulu-Celebes Sea and the East China Sea have very few GEF LME projects, but countries bordering those LMEs are benefitting from EAS regional GEF projects under PEMSEA, COREMAP II (being implemented in the Indonesian Sea with GEF Biodiversity funding), as well as fisheries-related projects (Figure 5).

Figure 5. Percentage of GEF projects in the EAS region (excluding global projects) covering the different LMEs. All projects covering more than two LMEs are classified as Regional EAS.



4.4 Contribution of GEF Projects to Ecosystem Approach and Tools

The analysis of the approach taken/methodology applied by the GEF projects covers broad approaches such as:

Ecosystem-based Management (EBM) approach to LMEs – EBM has many definitions in scientific literature, but general criteria normally include sustainability, ecological health and inclusions of humans in the ecosystem. Ecological criteria focus on one or more aspects of ecosystem complexity and recognize that ecological processes occur on a variety of temporal and spatial scales. Human dimension criteria integrate economic factors and stakeholders into the ecosystem planning processes. Management criteria include diverse approaches to administration, such as co-management and the precautionary approach, as well as the use of science and technology.[18]

Integrated Coastal Management (ICM) – ICM is based on three principles: adaptive management; integration and interrelationships; and ecosystem-based management. ICM evolved from the practical need to plan and manage the various economic activities that occur in coastal areas, regulate human behaviour, coordinate policy and management interventions, and integrate the use of coastal waters into land use planning. The ultimate purpose of ICM is, therefore, to increase the efficiency and effectiveness of coastal governance in terms of its ability to achieve the sustainable use of coastal resources and of the services generated by coastal ecosystems.[19] As can be seen in Annex 1, several programmes and projects in the EAS region have adopted ICM as an approach to coastal management. These initiatives often have a bottom-up character, as the entry point for action is at the local level with, for example, PEMSEA working with local governments across the region on ICM.

Integrated Water Resources Management (IWRM) – IWRM is defined by the Global Water Partnership as: coordination of development and management of water, land and other resources for maximizing of economic results and social welfare with no compromise on the environment.[20] The central principals of IWRM are participation, integration of the resources, institutions and stakeholders for sustainable water resources management. Recent analysis of IWRM worldwide has shown that IWRM plans consist of four components: policy; water management along hydraulic boundaries; participation; and management instruments. ICM and IWRM are often implemented jointly in coastal areas and PEMSEA's demonstration projects in the Mekong River Basin provide a good example of this.

GEF support also includes planning tools such as the Transboundary Diagnostic Analysis (TDA) and Strategic Action Programs (SAPs) used in LME projects, as well as place-based management tools, such as fisheries *refugia* and marine protected areas (MPAs) that can be useful EBM tools. **TDAs** are science-based analyses of transboundary water-related concerns and opportunities that exist in multi-country surfacewater, groundwater, and coastal/marine water systems. They are used to identify priorities for joint action, root causes and scope for the concerns or opportunities, and serve as the basis for reforms and investments included in the action programmes. A **SAP** is an agreement among participating countries on actions needed to resolve priority threats to international waters, including actions for the national benefit of each country, actions addressing transboundary issues and institutional mechanisms at regional and national levels for implementation of those actions. To implement SAPs at the national

level, support has also been given to the development of National Action Plans and establishment of National Inter-Ministry Committees (NICs). For example, the South China Sea project was very successful in establishing sustainable NICs. The Third Overall Performance Study (OPS3) of the GEF observed that the TDA/SAP tool is a good mechanism for harmonizing the International Waters scientific approach with a policy approach, and a positive by-product is capacity building.[21]

Both the ICM and TDA/SAP approaches promote integrated approaches to coastal and marine planning and management and enhanced exchange of information and experiences. They also promote ecosystem-based management at different scales. ICM initiatives often start at the local level and gradually build up to achieve regional impacts, while TDA/SAP driven initiatives tend to start at the regional level before initiating action at the local level through demonstration projects. Some new initiatives, such as the Sulu-Celebes project are combining the two approaches.

Fisheries *refugia* is defined by SEAFDEC as "spatially and geographically defined, marine or coastal areas in which specific management measures are applied to sustain important species [fisheries resources] during critical stages of their lifecycle, for their sustainable use." In other words, the approach aims to reduce the loss of habitats and biodiversity as a result of open access fishing. It is a rights-based approach to fisheries where 'group user rights' are promoted under co-management systems.[22] This concept has been spearheaded in the South China Sea and Gulf of Thailand project and further up-scaling is anticipated in the SAP implementation phase.

Marine Protected Areas (MPAs) are defined as "any areas of intertidal or subtidal terrain, together with its overlying water and associated flora, fauna, historical and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment."[23] MPAs are considered essential to conserve the biodiversity of the oceans and to maintain productivity, especially of fish stocks. The Sulu-Celebes and the Southeast Asia CTI projects are expected to strengthen the MPA systems in the CTI that is part of the EAS.

Figure 6. Number of GEF projects applying different IW approaches and methodologies. Note that several projects are using multiple approaches (Annex 1).

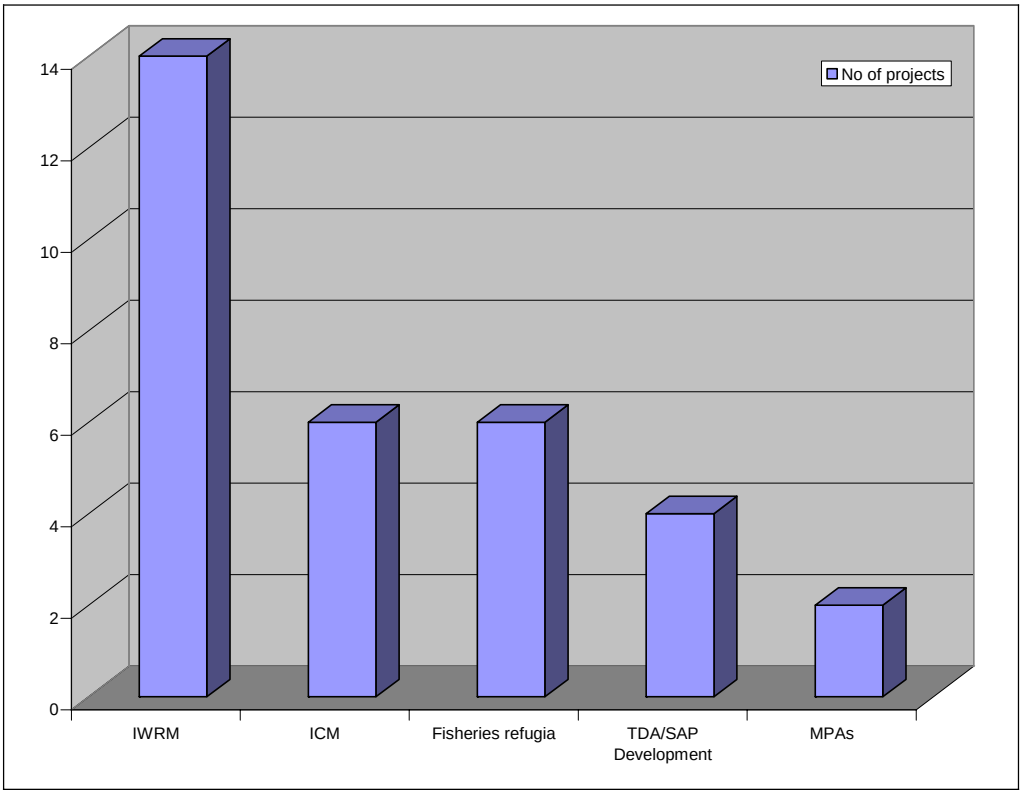


Figure 6 is providing an overview of how frequently the different tools for EBM are applied in GEF projects. IWRM is the most common approach and is often linked to one or several of the other approaches. However, it is difficult to analyze the extent to which individual GEF projects are applying EBM. Rather, GEF support needs to be looked at in its totality, as all projects form part of planning frameworks for LMEs that are based on EBM principles, such as the SDS-SEA, the SAPs for SCS and YSLME, Action Plans for CTI, etc. The question should instead be asked as to what extent these different planning frameworks are linked spatially and operationally and what the governance mechanism is for coordinated implementation of EBM across the EAS region. In order to provide an answer to this question, the next chapter will first review the existing governance mechanisms for the EAS region, before any conclusions can be drawn with regard to EBM at the LME and EAS regional scales.

5. REVIEW OF REGIONAL COORDINATION AND GOVERNANCE MECHANISMS FOR LME MANAGEMENT

This section is reviewing GEF and non-GEF funded mechanisms and programmes that have played a coordinating role in the EAS region based on political and/or technical mandate and geographical coverage.

EAS regional mechanisms for coastal and marine management

Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) started out as a regional pilot programme on Prevention and Management of Marine Pollution in the East Asian Seas from 1994-1999 funded by the GEF, implemented by the United Nations Development Programme (UNDP) and executed by the International Maritime Organization (IMO), which was followed by a second phase on Building Partnerships in Environmental Management for the Seas of East Asia (PEMSEA). PEMSEA focused on integrating local, national and international initiatives to address coastal and marine issues and resulted in the adoption of the non-legally binding Sustainable Development Strategy for the Seas of East-Asia (SDS-SEA), which provides a framework of actions for achieving the goals of key international agreements and action plans related to coasts, islands and oceans. Starting in 2008, PEMSEA's third phase, which focuses on the implementation of the SDS-SEA, runs for three years and is funded by the GEF, PEMSEA member countries and other donors. A series of indicators have been developed to assess progress across the region regarding implementation of the SDS-SEA. PEMSEA has also contributed to the establishment of the **World Bank/GEF Partnership Investment Fund (IF) for Pollution Reduction in the LMEs of East Asia**. The objective of the fund is to reduce land-based pollution discharges that are degrading the seas of East Asia by leveraging investments in pollution reduction through the removal of technical, institutional, and financial barriers to them. The Fund is thereby contributing to the implementation of the SDS-SEA and is closely coordinating its activities with PEMSEA. According to the latest progress report of the IF, it has made good progress in launching projects with high demonstration value and these projects have high co-financing with an average ratio of 1:20, exceeding by far the average of 1:10 for the entire EAS portfolio in International Waters.[24]

The terminal evaluation of the second phase of PEMSEA[25] concluded that PEMSEA is an innovative effort to integrate local, national and international initiatives to address coastal and marine issues on habitat degradation, unsustainable rates of resource use and resource use conflicts, hazards and the conditions of poverty. It has been highly successful, evidenced by the success at its six demonstration sites in implementation of integrated coastal management (ICM) with replication at a dozen more sites with 100 percent funding from national and/or local governments and, in some cases, the private sector. Environmental stress reduction in terms of reduction in pollutant discharges have been achieved at the demonstration sites at Xiamen (China) and Batangas (Philippines) coupled with an overall improvement in environmental quality. PEMSEA has also been instrumental in the integration of ICM principles and strategies in the national policy frameworks of member countries. PEMSEA's efforts to foster Public-Private Partnerships (PPP) to create investment opportunities in support of ICM in, for example, solid waste management facilities and water treatment and sewerage systems, have more mixed results.[26] PEMSEA has a number of collaborative and partnership activities established from local to national and regional levels. A key example is PEMSEA's continuous support to the annual planning and organization of the Xiamen World Ocean

Week (XWOW) in China together with the State Oceanic Administration of China, the UNDP, and the Xiamen Government. The XWOW is an important initiative that is already gaining regional and international recognition.

The regional governance arrangements of PEMSEA comprises the East Asian Seas (EAS) Partnership Council and its Intergovernmental Session, which is composed of PEMSEA member countries; its Technical Session, which also include Non-Country partners; and the PEMSEA Resource Facility (PRF), based in Manila, Philippines. The PRF provides secretariat and technical services related to SDS-SEA implementation to the EAS Partnership Council. PEMSEA's governance mechanism also includes a triennial East Asian Seas Congress and Ministerial Forum, which ensures wide stakeholder participation and knowledge exchange. Further, a PEMSEA Network of Local Governments for Sustainable Coastal Development (PNLG) was set up, which in 2006 adopted its own Charter and established a secretariat, hosted by the Xiamen Municipal Government. The Third Ministerial Forum (Manila, 26 November 2009) recognized the international legal personality of PEMSEA and established PEMSEA as an independent regional mechanism mandated for the implementation of the SDS-SEA.

The Regional Seas Programme (RSP) was launched by the United Nations Environment Programme (UNEP) in 1974 in the wake of the 1972 United Nations Conference on the Human Environment. It aims to address the accelerating degradation of the world's oceans and coastal areas through the sustainable management and use of the marine and coastal environment, by engaging neighbouring countries in comprehensive and specific actions to protect their shared marine environment. Currently, there are 18 Regional Seas programmes of which 6 are operating under UNEP. Two cover the EAS region: the Coordinating Body on the Seas of East Asia (COBSEA) and the Northwest Pacific Action Plan (NOWPAP). Another neighbouring Regional Seas Programme is SACEP/SAS (South Asian Seas). Unlike most other Regional Seas, the two EAS regional programmes do not have regional conventions and they operate under their respective Action Plans.

The Coordinating Body on the Seas of East Asia (COBSEA) that operates the "Action Plan for the Protection and Development of the Marine and Coastal Areas of the East Asian Region"[27] was approved in 1981 and was initially subregional, involving only five countries of ASEAN, with five more welcomed in 1994. Today, COBSEA has ten member countries. COBSEA activities are implemented and coordinated by the COBSEA Secretariat which is located in the UNEP Regional Office for Asia and the Pacific in Bangkok and overseen by its biennial Intergovernmental Meetings. There is no regional convention but instead the programme promotes compliance with existing environmental treaties and is based on member country goodwill.[28] The State of the Marine Environment Report for the East Asian Seas that was published in 2009 serves as a periodical assessment review of the marine environment in the region.[29] In 2008, the 19th Intergovernmental Meeting (IGM) adopted the *COBSEA New Strategic Direction 2008–2012*. The strategy has four components: information management; national capacity building; strategic and emerging issues; and regional cooperation; and it identifies three priority areas: marine and land-based pollution; coastal and marine habitat conservation; management and response to coastal disasters.[30]

COBSEA is modestly funded by nominal voluntary contributions from its member countries and is also often supported by UNEP and external donors. COBSEA has provided an institutional platform for the GEF-funded project for the South China Sea

that was completed in 2009. The Terminal Evaluation rated the project as overall satisfactory with its main achievement being the development and endorsement of a Strategic Action Programme (SAP) for the SCS. The project also led to improved management of coastal and marine habitats at demonstration sites and fostered excellent stakeholder participation. However, the Terminal Evaluation also points to the lack of coordination with PEMSEA with regard to selection and management of demonstration sites, and with COBSEA with regard to the coordination mechanism for the implementation of the SCS SAP, which has implications for the sustainability of the institutional structures established by the project.[31] At present, COBSEA's activities focus on a limited number of emerging issues identified by its member countries namely: spatial planning in the coastal zone (supported by SIDA); a regional programme on marine litter; a regional strategy on marine invasive species; and a regional programme on coastal erosion..

The Northwest Pacific Action Plan (NOWPAP) and three supporting resolutions including five priority projects were adopted in 1994.[32] In addition, NOWPAP member countries established four Regional Activity Centres (RAC) in 2000-2002 and a Regional Coordinating Unit (RCU) was established in 2005, co-hosted by Japan and the Republic of Korea. The NOWPAP Regional Oil Spill Contingency Plan was adopted in 2003 and the Regional Action Plan on Marine Litter was adopted in 2007. So far, NOWPAP has not been directly responsible for any GEF-funded project, but plays an active role in both PEMSEA and the YSLME project.

The Regional Seas Programme also provides an important platform for coordinated regional implementation of the **Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA)** that was adopted in 1995. UNEP provides the Secretariat for the GPA and the status of the implementation of the GPA is reviewed in Intergovernmental Review Meetings.[33] The GPA is designed to be a source of conceptual and practical guidance to be drawn upon by national and/or regional authorities for devising and implementing sustained action to prevent, reduce, control and/or eliminate marine degradation from land-based activities. It involves:

i. Applying integrated coastal area management approaches, including provisions to involve stakeholders;
ii. Recognizing the basic linkages between the freshwater and marine environment through, application of watershed management;
iii. Recognizing the basic linkages between sustainable development of coastal and marine resources, poverty alleviation and protection of the marine environment;
iv. Applying environmental impact assessment procedures in assessing options; and
v. Integrating national action with any relevant regional and global priorities, programmes and strategies.

The Investment Fund for Pollution Reduction in the LMEs in the EAS, mentioned above, is contributing to the implementation of the GPA in the region.

ASEAN Senior Ministers on the Environment (ASOEN) and Vision 2020 – The ASEAN established the Ministerial Meeting on the Environment in 1981 and created Vision 2020 for sustainable natural resources and development. The vision is realized through strategic action plans. The ASEAN has adopted the Hanoi Action Plan (1999-2004) which called "for the development of a framework to improve regional coordination for the integrated protection and management of coastal zones, development of a

regional action plan for the protection of the marine environment from land-based and sea-based activities, and promotion of regional coordination to protect Marine Heritage Parks and Reserves." The Vientiane Action Program (2004-2010) followed the Hanoi Action Plan and "describes the goals and strategies towards realizing the ASEAN Community, which comprises of three pillars, the ASEAN Security Community (ASC), the ASEAN Economic Community (AEC) and the ASEAN Socio-Cultural Community (ASCC). The ASEAN Working Group on Coastal and Marine Environment (AWGCME) is implementing the Vientiane Action Program, where the continued work in implementing the ASEAN Marine Water Quality Criteria and the ASEAN Criteria for Regional and National Marine Protected Areas have been identified as its priorities. The ASEAN has realized the transboundary nature and impacts of threats to its coastal and marine environment and is now developing the ASEAN Charter to discuss environmental issues.[34] This will be a rules-based approach that provides legal backing for solutions without interfering in the internal affairs of each country.

ASEAN Center for Biodiversity (ACB): The ACB was created by the ASEAN Member States (AMS) in 2005 with the mandate to facilitate cooperation and coordination among 10 member countries of the Association of Southeast Asian Nations, other governments, and regional and international organizations on: the conservation and sustainable use of biological diversity; and the fair and equitable sharing of benefits from sustainable use of natural resources. The creation of ACB was ratified by 6 of the 10 member states and it is hosted by the Philippines. The AMS has also approved the establishment of the ASEAN Biodiversity Fund, with support from KfW, Germany. The ACB has a regional *Strategic Organizational Plan 2010-2020* and its annual workplans are approved by the AMS. ACB implements activities in 12 thematic areas, including climate change and biodiversity conservation; ecosystem and biodiversity conservation; valuation of ecosystem services and payment schemes; support for the Program of Work on Protected Areas; managing biodiversity information and knowledge; and business and biodiversity in the 10 countries. ACB has flagship programs on:

- ASEAN Heritage Parks
- Biodiversity Information Sharing Service
- Joint Research/Initiatives on Biodiversity
- Capacity-building
- Public awareness
- Partnerships

Coral Triangle Initiative (CTI): The Coral Triangle region is located along the equator at the confluence of the Western Pacific and Indian Oceans. Covering only 1.6 percent of the planet's oceanic area, the Coral Triangle represents the global epicentre of marine life abundance and diversity. CTI officially launched a Regional Plan of Action for the CTI at the World Ocean Conference in Manado, Indonesia, in May 2009. The action plan has five overall goals covering priority seascapes, ecosystem approach to management of fisheries and other marine resources, marine protected areas, climate change adaptation and threatened species.[35] In addition, each of the six participating countries has drawn up a National Plan of Action. The GEF is providing funding to the CTI in collaboration with the Asian Development Bank (ADB) and other GEF agencies, such as UNDP, and it is under this program that some of the LME/subregional projects receive

their funding. Several bilateral donors are also supporting the CTI, such as the U.S.A. and Australia.

Regional governance arrangements for CTI include a CTI Secretariat that is based in Manado and national coordinating committees. The final framework and architecture of the regional secretariat is expected to evolve from being based in a government agency, while institutional options are being identified and analyzed, into a semi-autonomous organization that will still be linked to government agencies to ensure political support and high-level engagement. A monitoring and evaluation system for the CTI is under development.

Mangroves for the Future (MFF) was launched by former US President Bill Clinton in Phuket, Thailand, in December 2006, and focuses on the countries worst affected by the tsunami, including Indonesia and Thailand in the EAS region. MFF has also initiated dialogue with other EAS countries, and Vietnam has recently joined the program. The initiative uses mangroves as a flagship ecosystem, but MFF also includes other coastal ecosystems, such as coral reefs, estuaries, lagoons, sandy beaches, seagrasses and wetlands. MFF objectives are to: (a) strengthen the environmental sustainability of coastal development; and (b) promote the investment of funds and efforts in coastal ecosystem management, which will be promoted across four components: regional cooperation; national program support; private sector engagement; and community action).[36]

MFF was initiated by the International Union for Conservation of Nature (IUCN) and UNDP, but has grown to include other UN agencies such as the Food and Agriculture Organization (FAO) and UNEP, as well as international development organizations such as CARE and Wetlands International that are implementing the MFF Programmes of Work (PoW) in partnership with national governments. At the regional level, implementation of the PoWs is monitored by the MFF Regional Steering Committee co-chaired by IUCN and UNDP, with national government representatives and institutional partners as its members. The PoW includes a component on Management Assessment and Monitoring that applies ecological and socioeconomic assessment and monitoring mechanisms for key MFF actions.The MFF Secretariat is hosted by IUCN's Regional Office in Bangkok.

Subregional mechanisms for coastal and marine management

Yellow Sea Commission (proposed) – The adopted SAP for the YSLME suggests that a YSLME Commission be established to enhance the environmental governance of the YSLME. The SAP states that the YSLME Commission would be a soft, non-legally binding and cooperation-based institution. It would be comprised of a Steering Committee, a Secretariat that implements the decisions of the Steering Committee, and Sub-Commissions of experts responsible for technical issues.[37] A monitoring and evaluation framework for implementation of the SAP that includes process, stress reduction and environmental status indicators has also been developed.

Sulu-Sulawesi Marine Ecoregion (SSME) Tri-national Committee – The SSME TriCom was established in 2006 by Indonesia, Malaysia and the Philippines following the ratification of the Ecoregion Conservation Plan for SSME and with the support from the World Wide Fund for Nature (WWF) and with subsequent capacity development support from Conservation International (CI). The SSME TriCom has Sub-Committees on: (a)

Threatened, Charismatic and Migratory Species; (b) Marine Protected Areas (MPA) and Networks; and (c) Sustainable Fisheries. The TriCom has approved three regional Action Plans for Threatened and Highly Migratory Species, Marine Protected Areas and Networks, and Sustainable Fisheries for simultaneous implementation by the governmental agencies. A GEF project[38] for the SSME was developed by the Sub-Committee on Sustainable Fisheries[39] under the 2008-2012 Action Plan and is now being implemented and executed by UNDP/UNOPS.

Brunei-Indonesia-Malaysia-Philippines East Asia Growth Area (BIMP-EAGA) – The BIMP-EAGA was formed in 1994 by the governments of Brunei, Indonesia, Malaysia, and the Philippines for the sustainable development of the sub-region. The BIMP-EAGA has three focal areas for cooperation: facilitating free movement of people, goods, and services; making best use of infrastructure and natural resources; and taking fullest advantage of economic complementation. The Sulu-Sulawesi Marine Ecoregion and the Heart of Borneo environmental programs were adopted by the BIMP-EAGA under the natural resources cluster of activities as their flagship programs.

Arafura-Timor Sea Expert Forum (ATSEF) – Stakeholders from Australia, Indonesia and Timor-Leste formed ATSEF during the Preparatory Committee IV for the World Summit on Sustainable Development (WSSD) held in Bali, Indonesia, in June 2002. ATSEF has agreed on the following priority foci in an action plan: (a) deter, prevent, and eliminate illegal and unsustainable fishing; (b) maintain sustainable fish stocks, biodiversity and marine and coastal habitats; (c) identify/develop alternative sustainable livelihoods with indigenous and coastal communities; (d) research and monitor the systems dynamics of marine, coastal and catchment ecosystems, oceanography and climate change; and (e) improve capacity for information management and sharing among ATSEF member nations.

Regional fisheries management mechanisms

The Western and Central Pacific Fisheries Commission (WCPFC) was established by the Convention for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (WCPF Convention) which entered into force on 19 June 2004. The WCPF Convention draws on many of the provisions of the UN Fish Stocks Agreement (UNFSA) while, at the same time, reflecting the special political, socioeconomic, geographical and environmental characteristics of the Western and Central Pacific Ocean (WCPO) region. The WCPFC Convention seeks to address problems in the management of high seas fisheries resulting from unregulated fishing, over-capitalization, excessive fleet capacity, vessel re-flagging to escape controls, insufficiently selective gear, unreliable databases and insufficient multilateral cooperation in respect to conservation and management of highly migratory fish stocks. A framework for the participation of fishing entities in the Commission which legally binds fishing entities to the provisions of the Convention, participation by territories and possessions in the work of the Commission, recognition of special requirements of developing States, and cooperation with other Regional Fisheries Management Organizations (RFMO) whose respective areas of competence overlap with the WCPFC reflect the unique geo-political environment in which the Commission operates. The Commission supports three subsidiary bodies: the Scientific Committee; Technical and Compliance Committee; and the Northern Committee, that each meets once during each year.

Oceanic tuna stocks in the EAS are currently partially managed under the auspices of the WCPFC and the Commission, with assistance from an ongoing GEF project (WPEA)[40]. WCPFC is in the process of strengthening the governance framework for highly migratory fish stocks in the EAS.

The Asia-Pacific Fishery Commission (APFIC) was established under the APFIC agreement as the Indo-Pacific Fisheries Council in 1948 by the Food and Agriculture Organization of the United Nations. The Secretariat is provided and supported by FAO. The Governing Body of APFIC is the Commission, which is advised by its Executive Committee. The Commission may establish Committees and working parties to assist its work. The function of APFIC is described in the APFIC agreement and more recent sessions have elaborated that APFIC will act as a Regional Consultative Forum that works in partnership with other regional organizations and arrangements and members. It provides advice, coordinates activities and acts as an information broker to increase knowledge of fisheries and aquaculture in the Asia-Pacific region to underpin decisionmaking.

The Southeast Asian Fisheries Development Center (SEAFDEC) is an autonomous intergovernmental body established in 1967. SEAFDEC was mandated to develop the fisheries potential of the Southeast Asian region by rational utilization of the resources to provide food security to the people through transfer of new technologies, and to conduct research and information dissemination activities. SEAFDEC is comprised of 11 Member Countries and operates through the Secretariat located in Thailand and has four technical Departments, namely, the Training Department, the Marine Fisheries Research Department, the Aquaculture Department, and the Marine Fishery Resources Development and Management Department. SEAFDEC is currently the executing agency for several GEF-funded fisheries projects in the EAS.

River basin mechanism

The Mekong River Commission (MRC) was formed in 1995 by an agreement between the governments of Cambodia, Lao PDR, Thailand and Viet Nam. The four countries signed *The Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin* and agreed on joint management of their shared water resources and development of the economic potential of the river. In 1996, China and Myanmar became Dialogue Partners of the MRC and the countries now work together within a cooperation framework.

The MRC is an international, country-driven river basin organization that provides the institutional framework to promote regional cooperation in order to implement the 1995 Agreement. The MRC supports the Mekong Programme, a Regional Cooperation Programme for the Sustainable Development of Water and Related Resources in the Mekong Basin owned by its member countries. The four goals for 2006-2010 are to:

i. Promote and support coordinated, sustainable, and pro-poor development;
ii. Enhance effective regional cooperation;
iii. Strengthen basin-wide environmental monitoring and impact assessment; and
iv. Strengthen IWRM capacity and knowledge base of the MRC bodies.

The Mekong River Commission Secretariat, which is based in Vientiane, Lao PDR, provides technical and administrative services to the MRC Council and Joint Committee. GEF has supported several projects with MRC, and PEMSEA has initiated pilot activities on integrated coastal area and river basin management in the Mekong River basin in Lao PDR.

Analysis of strengths and weaknesses of coordination and governance mechanisms in the EAS

1. Regional EAS Mechanisms: PEMSEA, COBSEA, NOWPAP, ASEAN-AWGCME, CTI, MFF

In terms of level of collaboration, almost all regional mechanisms have a monitoring program and action plan in place, while only ASEAN-AWGCME is linked to a legally binding agreement for regional cooperation, and only PEMSEA has attained legal personality as a regional institution. All regional mechanisms except ASEAN-AWGCME have a sustainable financing plan and funding to support a Secretariat, at least in the short to medium term, but some also have longer term financing. However, funding to programs and activities is more insecure and all regional mechanisms are dependent on mobilization of external resources to implement their action plans, as very little core funding from member countries is available. PEMSEA and the ACB/ASEAN-AWGCME are in the process of developing a sustainable financing mechanism to support their mandates.

As can be seen in Table 4, the involvement of riparian countries in the different regional mechanisms is strong. PEMSEA has the largest number of members, although none of the mechanisms include all countries in the EAS region. An analysis was also conducted of the involvement of national stakeholders and a weakness with most of the regional mechanisms is that they only work with one institution and sector in the member countries, although efforts are made to also consult with sectors outside of environment and/or marine affairs and fisheries areas. Several of the mechanisms, in particular PEMSEA and MFF also have strong participation of local governments and civil society in their activities on the ground. During the active phase of the South China Sea and Gulf of Thailand project, this was also the case for COBSEA.

2. Subregional/LME Mechanisms: ATSEF, SSME, YSLME

All the subregional mechanisms in place or under development in the EAS have fostered strong collaboration at the LME level and all have adopted subregional action plans and support monitoring programs and information sharing among the riparian countries. The SSME is the only subregional mechanism that is based on a legally binding agreement, but it does not have sustainable financing for its Secretariat and its programs and activities. ATSEF has sustainable financing for its Secretariat from its member countries, but not for its programs and activities. The YSLME has recently secured funding from China and the Republic of Korea to fund a Commission mandated to implement the SAP for the YSLME. The South China Sea is a special case where a sub-committee of COBSEA has assumed the role of the coordination mechanism for the SCS LME.

Only the SSME and the SCS sub-committee of COBSEA include all the riparian countries of the LME under its remit. All the subregional mechanisms are working with

multiple sectors, but multisectoral coordination at the national level is a challenge encountered in all participating countries. Local governments and civil society are participating in activities at the LME level, most often through demonstration projects.

3. Regional Fisheries Management Mechanisms: WCPFC, APFIC, SEAFDEC

All of the mechanisms related to the management of fisheries are supporting monitoring programs and information sharing activities and have action plans in place. The WCPFC is based on a legally binding agreement and both the WCPFC and SEAFDEC are established institutions for collaboration in fisheries matters.

4. River Basin Management Mechanisms: MRC

The Mekong River Commission is to date the only regional organization mandated from the highest political level to deal with resources management in the basin in a holistic manner. As discussed above, strengthening monitoring and impact assessment in the basin is a top priority and engagement with civil society groups in the basin has been made routine.[41]

As can be seen in the above overview and analysis, there is a complex overlap of mandates and geographical coverage between different initiatives and mechanisms at the regional level in the EAS region, while subregional mechanisms with an LME focus have more clearly defined niches in terms of geographical coverage and institutional mandates. In particular, there has been a lack of synergies between the Regional Seas and South China Sea interventions, on the one hand, and the PEMSEA interventions, on the other. This is also reflected in lack of coordination at the national level in cases where there are different national partner agencies that do not interact.[42] There is also a need to strengthen the coordination between regional fisheries commissions and technical partners in fisheries with mechanisms for coastal and marine management in the EAS. All initiatives are trying to influence national policies and institutions on marine and coastal management, indicating the need for strengthened national coordination between all initiatives that are present in a given country.

The regional architecture for the governance of the EAS has recently become further complicated by the addition of the CTI and MFF initiatives and it therefore seems urgent that EAS countries should agree on common coordination arrangements for marine and coastal initiatives in the region in order to maximize impacts and avoid wasteful duplication of efforts and of financial support from scarce resources. The main findings from the review and analysis of coordination and governance mechanisms for LME management in the EAS can thus be summarized as follows:

- MRC, WCPFC and SEAFDEC emerge as the most mature institutions and mechanisms in their respective fields, but none of them have a broad mandate for coastal and marine issues in the EAS;
- PEMSEA emerges as the strongest regional mechanism with a mandate to promote ICM of coastal and marine ecosystems in the EAS;
- Lack of legally binding agreements for sustainable management of coastal and marine resources in the EAS and sustainable financing appear to be the main challenges facing regional and subregional mechanisms;

- ACB and PEMSEA are two regional mechanisms for biodiversity conservation that are currently developing sustainable mechanisms for their respective mandates and, as such, any delineation of priority areas and coordination of activities particularly on marine protected areas and coastal zone management are necessary;
- PEMSEA, SSME, and YSLME are developing institutions and coordination of actions on non-legally binding agreements, which is an innovative way of strengthening regional collaboration on coastal and marine management in the EAS;
- With the enhanced sharing of information, experiences and lessons learned in the EAS, there is a need to strengthen collaboration and coordination at two levels:
    - Enhanced vertical coordination between different coordination and governance levels is required, i.e., between regional mechanisms with a mandate to work with all countries in the EAS, such as PEMSEA and COBSEA, ASOEN, and subregional mechanisms focused on a particular LME, such as YSLME, SSME and ATSEF;
    - Enhanced intersectoral coordination between mechanisms with different mandates, which could include strengthened collaboration between ICM and LME related mechanisms, and regional fisheries management mechanisms.

Table 4: Transboundary Issues Addressed by Regional Governance Mechanisms.

Transboundary issue addressed by Regional Body	Water pollution/ eutrophication	Loss of habitat	Overexploitation of fisheries		Climate Change impacts	Invasive Species	Targeted Research/ Other (specify)	Member Countries
			Coastal	Oceanic Riparian				
1. Regional EAS Mechanisms								
PEMSEA	**x**	**x**	**x**		**x**	**x**	x/oil spill preparedness and response and compensation for damage	Cambodia, China, DPR Korea, East Timor, Indonesia, Japan, Lao PDR, Philippines, RO Korea, Singapore, Thailand, Viet Nam
Partnership Investment Fund for Pollution Reduction, Tranche 1	**x**	**x**						Regional
COBSEA	**x**	**x**	**x**		**x**	**x**		Australia, Cambodia, China, Indonesia, RO Korea, Malaysia, Philippines, Singapore, Thailand, Viet Nam
NOWPAP	**x**	**x**	**x**		**x**	**x**		China, Japan, RO Korea, Russia
ASEAN (AWGCME)	**x**	**x**						Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Viet Nam
ASEAN - ACB		**x**			**x**		taxonomy, endangered species	Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Viet Nam

Transboundary issue addressed by Regional Body	Water pollution/ eutrophication	Loss of habitat	Overexploitation of fisheries		Climate Change impacts	Invasive Species	Targeted Research/ Other (specify)	Member Countries
			Coastal	Oceanic Riparian				
CTI Regional Secretariat/SOM/ MM		**x**	**x**	**x**	**x**			Indonesia, Malaysia, Papua New Guinea (PNG), Philippines, Solomon Islands, Timor-Leste
MFF		**x**			**X**			India, Indonesia, Maldives, Seychelles, Sri Lanka, and Thailand.
2. Subregional/LME Governance Mechanisms								
ATSEF		x	x		x			Indonesia, Timor-Leste, Australia
BIMP-EAGA			x					Brunei, Indonesia, Malaysia, Philippines
SSME		x	x		x			Indonesia, Malaysia, Philippines
YSLME Interim Commission	x	x	x		x	x		China, RO Korea
3. Regional Fisheries Governance Mechanisms								
WCPFC				x	x		x	Asia-Pacific
APFIC			x	x				Asia-Pacific
SEAFDEC		x	x					Brunei Darussalam, Cambodia, Indonesia, Japan, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand, Viet Nam
SSME Sub-committee on Sustainable Fisheries		x	x					Indonesia, Malaysia, Philippines

Transboundary issue addressed by Regional Body	Water pollution/ eutrophication	Loss of habitat	Overexploitation of fisheries		Climate Change impacts	Invasive Species	Targeted Research/ Other (specify)	Member Countries
			Coastal	Oceanic Riparian				
4. River Basin Governance Mechanisms								
MRC		x	x		x		Water allocation from dams	Cambodia, Lao PDR, Thailand, Viet Nam

6. COMMITMENT OF THE COUNTRIES IN SOLVING TRANSBOUNDARY ISSUES IN THE EAST ASIAN SEAS

6.1 Environmental Legislation and Policies relevant to transboundary issues in the Large Marine Ecoregions in the East Asian Seas

Many of the countries in the East Asian Seas have ratified the Convention on Biological Diversity.[43] As Parties to the Convention, the countries are urged to adopt the Ecosystem Approach for sustainable management. The Integrated Coastal and Marine Area Management[44], Integrated Water Resources Management, Mountains to River, 5 Steps to Implementation of the Ecosystem Approach, and the Ecosystem Approach to Fisheries Management[45] are examples of the interpretation and guidelines in the implementation of the Ecosystem Approach. The Countries in the East Asian Seas have agencies, institutes, or groups that are members of the IUCN that support the governments in the implementation of its commitments to the Convention. The countries vary in meeting their obligation to the CBD. Most of the countries meet their commitments by developing legislative frameworks and preparing their respective national policies and action plans.

Convergence and harmonization of environmental legislations and policies are happening in the ASEAN[46] under the ASEAN Socio-Cultural pillar. The ASEAN Countries have convergent legislations for environmental protection, however, not all have policies and regulations on ICM, or variations thereof, in the management of the coastal zone. Table 5 provides a list of laws and policies in support of ICM in the EAS countries.

The ICM approach for transboundary management of International Waters has begun but will need more efforts to manage. A policy on integrated coastal zone management may be in place in the countries but coordinating mechanisms are yet to be established (e.g., Malaysia, Philippines) or strengthened. Merging agencies for environmental protection and resources management is insufficient[47] to integrate sectoral agencies and mandates. The Philippines has the Integrated Coastal Management as a National Strategy (Executive Order 533, 2006) but it lacks a body to coordinate the bureaus and agencies under the Department of Environment and Natural Resources. Integration of sectoral regulations remains a challenge.

Table 5. Coastal and Ocean Policies, Strategies and Action Plans under Development or in place in the EAS region.

Country	Coastal and Ocean Policies, Strategies and Action Plans
AUSTRALIA	• Intergovernmental Agreement on a National System for the Prevention and Management of Pest Incursions 2005 • National Ocean Policy 1998
BRUNEI	• National
CAMBODIA	• Shoreline Management Strategy (2008) • Law on Tourism (2008) • Law on Protected Areas (2008) • Fisheries Law (2004) • Draft ICM Policy
CHINA	• Law on the Prevention and Control of Water Pollution; Marine Environment Protection Law
INDONESIA	• Draft Indonesian Ocean Policy • National Plan of Action in the Coral Triangle • SSME Action Plans on Sustainable Fisheries, Marine Protected Areas and Networks, and Threatened and Charismatic Species
JAPAN	• Basic Plan on Ocean Policy (2008) • Basic Policy on Conservation and Management of Islands for Ocean Management (2009)
KOREA, REPUBLIC OF	• Coastal Zone Management Act amended to include zoning scheme (2009) • Natural Environment Protection Act 1991 • Environmental Policy Act 1990
LAO PDR	• Draft National Water Resources Strategy and Action Plan for the Years 2011 to 2015
MALAYSIA	• Draft National Ocean Policy • Sabah Shoreline Management Plan (2008) • National Plan of Action in the Coral Triangle • SSME Action Plans on Sustainable Fisheries, Marine Protected Areas and Networks, and Threatened and Charismatic Species
PHILIPPINES	• Executive Order 533 ICM as National Strategy to Sustainable Development of Coastal and Marine Environment (2006) • National Plan of Action in the Coral Triangle • SSME Action Plans on Sustainable Fisheries, Marine Protected Areas and Networks, and Threatened and Charismatic Species
SINGAPORE	• Lively and Livable Singapore: Strategies for Sustainable Growth (including ocean and coastal aspects)
THAILAND	• Draft Marine and Coastal Resources Management Act
VIETNAM	• Government Decree No. 25 of Vietnam on Integrated Resources Management and Environmental Protection of Seas and Islands (2009)

Table 6. Ranked priorities identified by countries in the LMEs within their Exclusive Economic Zones (EEZs). Numbers are the rank by order of priority.

Country	Priorities
AUSTRALIA	not available
BRUNEI	not available
CAMBODIA	1 - Water pollution from land-based sources 2 - Unsustainable exploitation of fisheries – coastal and oceanic 2 - Protection of riverine, coastal, and other marine habitats 2 - Invasive species 2 - Climate change impacts in the coastal zone and marine waters
CHINA	1 - pollution 2 - Protection of riverine, coastal, and other marine habitats 3 - Unsustainable exploitation of fisheries – coastal and oceanic 4 - Invasive species 5 - Climate change impacts in the coastal zone and marine waters
INDONESIA	not available
JAPAN	not available
KOREA, REPUBLIC OF	not available
MALAYSIA	not available
PHILIPPINES	1 - Unsustainable exploitation of fisheries – coastal and oceanic 2 - Protection of riverine, coastal, and other marine habitats 3 - Climate change impact in the coastal zone and marine waters 4 - Water pollution from land-based sources 5 - Invasive species
SINGAPORE	not available
THAILAND	<u>Ministry of Natural Resources and Environment (MoNRE)</u> 1 - Unsustainable exploitation of fisheries – coastal and oceanic 2 - Protection of riverine, coastal, and other marine habitats 3 - Water pollution from land-based sources 4 - Climate change impacts in the coastal zone and marine waters 5 - Invasive species
	<u>Department of Marine and Coastal Resources (DMCR)</u> 1 - Protection of riverine, coastal, and other marine habitats 2 - Climate change impacts in the coastal zone and marine waters 3 - Water pollution from land-based sources 4 - Invasive species 5 - Unsustainable exploitation of fisheries – coastal and oceanic
TIMOR-LESTE	1 - Water pollution from land-based sources 2 - Unsustainable exploitation of fisheries – coastal and oceanic 3 - Protection of riverine, coastal, and other marine habitats
VIETNAM	1 - Water pollution from land-based sources 2 - Unsustainable exploitation of fisheries – coastal and oceanic 3 - Climate change impacts in the coastal zone and marine waters 4 - Protection of riverine, coastal, and other marine habitats 5 - Invasive species

Priority Issues of Countries

PEMSEA conducted in 2009 national interagency workshops in its member countries (i.e., Cambodia, Indonesia, Philippines, Thailand, Timor-Leste, Vietnam) on the implementation of the Sustainable Development Strategy for the Seas of East Asia. The result was based on a multiagency consensus. One of the questions asked was on emerging environmental issues in the region.[48] The Country Partners identified climate change as the number 1 environmental threat and showed strong agreement that the priority concern for the next five years is climate change adaptation, with a particular focus on the impact of extreme events (i.e., intensive tropical storms/typhoons; storm surges; flooding; droughts) in coastal areas. Other highly ranked issues were:

2 - pollution reduction;
3 - biodiversity conservation:
4 - urban development;
5 - sustainable water supply; and
6 - sustainable fisheries.

However, ranking of environmental issues based on the questionnaire for this background paper (5 respondents only, Table 6) is different. Cambodia identified land-based sources of pollution as the main threat while the rest of the issues are secondary and of equal importance. Vietnam likewise identified land-based sources of pollution as the primary threat to their marine environment. Philippines and Thailand (MONRE) identified overexploitation of fisheries as the number 1 issue in managing the marine environment but its Department of Coastal and Marine Ecosystems has identified protection of riverine, coastal, and other marine habitats.

Priority Issues of Non-Country Members

Under the 2009 PEMSEA survey, its Non-Country members have identified a different set of priority issues than that of Member Countries. The priority response was: 1. biodiversity conservation, followed closely by 2. good governance. The good governance priority appears to be a direct reflection of Non-Country Partners' perspective on the key gaps and constraints to SDS-SEA implementation. Other priority issues identified as the focus by Non-Country partners were: 3. climate change adaptation; 4. sustainable fisheries; 5. pollution reduction; 6. population/sustainable livelihood; and 7. overexploitation of natural resources.

The solutions to improving application of integrated coastal zone management were identified by Country and Non-Country Partners as follows:

1. National interagency/intergovernmental coordinating mechanism for coasts and oceans management
2. Scaling up ICM program implementation among local governments
3. Integrated environmental monitoring and reporting system
4. Land- and Sea-use zoning of coastlines; and
5. Vulnerability assessment/risk assessment of coastlines

6.2 Country Priorities and Progress in Implementing National Action Plans (NAPs) linked to SAPs

Countries participating in the Yellow Sea LME and South China Sea LME projects have also developed and adopted National Action Plans (NAPs) that support the implementation of the SAPs for the YSLME and SCSLME. For the **Yellow Sea**, China's NAP (or national SAP) is expected to be included in the next 5 year national development plan, and the ROK NAP will be implemented within the national framework in order to ensure consistency with national plans.

For the **South China Sea**, the majority of the NAPs have been approved within the ministries responsible for the environment and in all instances recommended priority actions from the NAPs have been incorporated into the recurrent budgets of the appropriate operational or line departments of the Central Government or Provincial Governments:

- In the case of Cambodia, all National Action Plans have been approved by the Ministry of Environment in 2007 in the case of land-based pollution, mangroves and wetlands and by the Ministry of Agriculture, Forestry and Fisheries in 2006 in the case of the seagrass and coral reefs components.
- In China, all four national action plans were approved by the Inter Ministry Committee and the Ministry of Environment in 2007. Many actions and efforts related to the SAP, interventions for habitat management in the Pearl River are currently being implemented by different sectors with funding from the Central Government.
- In Indonesia, the NAPs for six components have all been approved at varying levels and incorporated into the operational plans of the appropriate government departments with some currently being under implementation.
- In Malaysia, the contents of the NAPs for seagrass, wetlands, coral reefs and land-based pollution are deemed consistent by the Ministry of Natural Resources and Environment with the national priorities and development plans and will be implemented with national budgets enabling Malaysia to meet the SAP targets.
- In the case of the Philippines, the activities of the NAPs are consistent with ongoing activities of the Department of Environment and Natural Resources (DENR) and the Medium Term Development Plan for the Philippines. In addition, the legal basis for the implementation of the NAPs is Executive Order 533 issued by the President of the Philippines in June 2006, adopting ICM as a national strategy and establishing supporting mechanisms for its implementation. A national ICM program is currently under development, which, when approved, will integrate the various action plans for the priority themes under one management framework.
- In Thailand, the NAPs for the habitat sub-components were combined with the National Biodiversity Strategy and Action Plan approved by Cabinet, while the NAP for land-based pollution had been incorporated into the five-year plan of the Department of Pollution Control.
- The NAPs in Vietnam were all completed in 2007 and an integrated NAP is expected to be issued soon. The priorities identified in these NAPs have been integrated into national policy and programs, for example, the program for vulnerability assessment of coastal resources and environments, national projects on mangrove rehabilitation, and the government program regarding international co-operation on marine issues and also in the Biodiversity Law. One

of the important steps in the implementation of these NAPs is the establishment of the Viet Nam Administration for Marine and Islands Affairs.

7. TRANSBOUNDARY ISSUES THAT NEED TO BE ADDRESSED

Table 7 presents the results of the analysis of which transboundary issues remain to be further addressed in the EAS, based on the following scoring:

- **Urgency** – (based on consensus statement – Pacific synthesis[49]); highest score – indicates greatest urgency
- **Government priority** – the rankings were given the following weights; the highest score was given the highest percentage: 1 – 5 pt; 2 – 4 pt; 3 – 3pt; 4 – 2 pt; 5 – 1 pt
- **Level of investment** – the least investment is considered a gap; thus, the least investment therefore was given the highest percentage score
- **"tipping point" effect**[50]

Table 7: Analysis of Transboundary Issues.

Environmental concern	Urgency (25%)	Government priority (25%)	Level of investment (25%)	"Tipping point" (25%)	Total (%)
Habitat destruction of riverine, coastal, and marine ecosystems	25	15	10	20	70
Pollution – land-based sources	25	25	5	25	80
Unsustainable exploitation of marine resources	25	20	20	15	80
Invasive species	12.5	5	25	5	47.5
Climate change	25	10	20	10	65

It appears that pollution reduction from land-based sources and unsustainable exploitation of marine resources are the two most pressing issues in the EAS, closely followed by habitat destruction. The urgency of addressing climate change issues is also high with growing awareness among governments of the need for action. Problems of invasive species in the EAS are also growing, but this issue has so far been given a low priority by most governments.

8. CONCLUSIONS AND RECOMMENDATIONS

As stated in Chapter 3, the purpose of the stocktaking review is to: (1) assess the accomplishments of projects undertaken under GEF 1-4 in addressing transboundary issues, that were identified in the TDAs of the LMEs in the East Asian Seas; (2) identify geographical and thematic gaps and future investment needs in the East Asian Seas; (3) identify governance mechanisms and their mandates; and (4) identify emerging issues in the EAS and recommendations for future actions. The conclusions and recommendations are hence clustered around these four objectives and summarized in bullet form when possible:

1. The accomplishments of projects undertaken under GEF 1-4 in addressing transboundary coastal and marine issues in the EAS

Assessments and development of strategic planning frameworks:

- Priority transboundary issues have been identified for all LMEs in the EAS by GIWA. In addition, more detailed Transboundary Diagnostic Analyses have been completed for the South China Sea and the Yellow Sea.
- The South China Sea and the Yellow Sea also have completed Strategic Action Programs that have been approved/adopted by the riparian countries.
- TDAs and SAPs are under development for the Sulu-Celebes Sea (SSME), and the Arafura-Timor Seas that cover part of the Indonesian Seas.
- Most EAS countries are signatories to the non-legally binding Sustainable Development Strategy for the Seas of East Asia with a target of covering 20 percent of the region's coastline by ICM programs by 2015. It is estimated that countries have already scaled up ICM programs to cover between 9 to 10 percent of the coastline of the region.

Investments:

- Total GEF funding committed to the EAS since its inception amounts to about US$211 million, spread over almost 30 projects, which is equivalent to approximately 20 percent of total GEF IW funding. This has in turn leveraged around US$2 billion in co-financing.
- Most of the GEF funding has been invested in regional initiatives, followed by national initiatives.
- National projects have been most successful in leveraging co-financing and the overall GEF to co-financing ratio is 1:15 with projects funded under the Pollution Reduction Investment Fund have co-financing ratios of 1:20.
- Regional projects have co-financing ratios of around 1:6.

Thematic and geographical coverage and approach used:

- The most common issues addressed by 50 percent or more of GEF projects are water pollution/eutrophication, water resources management and loss of wetland habitats.
- Overexploitation of coastal fisheries, and other types of coastal habitats, such as mangroves, seagrass beds and coral reefs, are addressed by between 37 to 27 percent of projects.
- The South China Sea has the largest number of GEF projects followed by the Yellow Sea.

- Integrated Water Resources Management is the most common approach used by almost 50 percent of projects, but is often linked to one or several other approaches, such as Integrated Coastal Management and TDA/SAP development.
- The foundation (TDA/SAP process) for LME-wide regional management in the SSME is supported by GEF. The Ecosystem Approach to Fisheries (EAF) management, incorporating ICM, is for the first time supported by GEF in the SSME through demonstration at local scales.

Strengthening of coastal and marine governance mechanisms:

- The establishment of PEMSEA as an independent regional institution with a mandate to oversee the implementation of the SDS-SEA and to scale up ICM in the EAS region is a major GEF-supported accomplishment.
- Agreement on establishment of a Yellow Sea Commission in the YSLME SAP is also the result of a GEF project.
- Most of the countries surrounding the LMEs in East Asia have demonstrated their intention to improve environmental management in accordance with ICM principles through, e.g., adoption of NAPs linked to SAPs or other policy reforms, and there has been substantial progress in development of policy, legislation and implementing capacities in the region as a consequence of GEF intervention. However, there still remains a gap between legislation, policy, and implementation within countries.

2. Geographical and thematic gaps and future investment needs in the EAS

From the above summary, it can be concluded that the region is comprehensively covered by assessments and TDA/SAP processes, including recent initiatives in the Sulu-Celebes Sea and Arafura-Timor Seas, with the exception of the East China Sea, which could benefit from such a process to better identify the key transboundary issues related to rapid coastal development. However, the main focus for the future should be to implement the existing SAPs for the South China Sea and the Yellow Sea and related NAPs, as well as other existing planning frameworks, such as the SDS-SEA, in order to move from planning to implementation and scaling up of investments. Future support will also be required for implementing the SAPs under development for the Sulu-Celebes Sea and the Arafura-Timor Seas

In terms of the transboundary priorities identified by GIWA assessments or TDAs in the LMEs in the EAS, and the priority given by GEF projects, fisheries stands out as the issue not given adequate attention by GEF in relation to its importance and in comparison to other transboundary concerns, such as pollution and habitat loss. This becomes even more evident looking at the amount of funding that has been allocated to fisheries management projects. This is also supported by the analysis that is combining national priorities and investments levels, with scientific consensus statement related to urgency and tipping points (see Table 7). Fisheries issues are crucial in view of growing populations, the need to secure food supply from the sea, and to alleviate poverty. The fishery-related targets to meet Millennium Development Goals will be difficult to meet without GEF support in addressing management of exploitation of fisheries stocks which are likely shared stocks in LMEs. The Ecosystem Approach to Fisheries (EAF) management, under the Code of Conduct for Responsible Fisheries[51] agreed upon by most countries in the EAS region urgently needs promotion by way of demonstration or undertaking the step-wise guidelines prepared by FAO to types of fisheries (e.g., coral reef fisheries, trawl demersal fisheries, small pelagic fisheries, large pelagic fisheries).

ICM could provide the necessary framework and process for addressing conflicts and changing behavior of the concerned stakeholders.

It can also be concluded that in order to scale up investments and to leverage larger amounts of co-financing to future GEF projects, there should be an increased emphasis on funding to single country projects, as they are on average mobilizing many more times as much co-financing as regional projects. The implementation of the SDS-SEA has already been split into a regional project with PEMSEA, and single country projects funded under the World Bank/GEF Pollution Reduction Investment Fund. Similar arrangements could be considered for the implementation of the SAPs for the South China Sea and the Yellow Sea in order to scale up investments to key components of the SAPs. This approach may also speed up policy reform at the national level in support of ICM and other integrated approaches, as closer attention can be paid to national coordination across sectors in projects only dealing with one country. However, the main challenge with such an approach is to ensure effective coordination and collaboration between the national, subregional/LME-wide, and regional levels.

3. How to enhance governance of coastal and marine issues in the EAS

GEF and partners have made substantial investments in the EAS Region and yet there is no regional agency that collates information and conducts harmonized monitoring of results gathered by the riparian countries in all LMEs. A coordinating mechanism and agreed procedures and methodologies are necessary to monitor improvement of the status of the LMEs in the EAS as a result of interventions and to ensure the sharing of experiences and lessons across all LMEs and countries. In this regard the institutionalization of PEMSEA provides an opportunity to provide such a service to the region. PEMSEA is already working closely together with several LME/subregional projects, such as the Yellow Sea and Sulu-Celebes projects, and vertical integration can be further strengthened by forging closer linkages with COBSEA and the South China Sea program and with ATSEF for the Arafura-Timor Seas. Establishment of close linkages between PEMSEA, CTI and MFF should also be a priority to avoid duplication of efforts and to promote sharing of information. In terms of enhancing sectoral integration, collaboration could also be strengthened with regional fisheries management bodies, such as SEAFDEC and the WCPFC.

Better coordination of GEF support to the EAS region would also strengthen the extent to which ecosystem-based management could be applied in the EAS and interventions harmonized from local to national to regional levels. Different planning frameworks, such as the SDS-SEA and the South China Sea SAP, should be linked spatially and operationally to ensure that different EAF and EBM tools, such as ICM, IWRM, and MPAs and fisheries refugia are applied in an integrated and coordinated manner.

With the ratification of the Convention on Biological Diversity (CBD), governments are urged to implement the Ecosystem Approach for biodiversity conservation and sustainable development.[52] All countries have acted on their commitments to the Convention by passing legislation or developing policies in ecosystem-based management and tools such as the Integrated Coastal Management framework (see Table 6). However, there is still a gap in the implementation of these legislation and policies. Coordinating mechanisms are still being developed or unclear.[53]

Strengthened regional coordination of interventions in the EAS also need to be reflected in better governance at national level and inter-sectoral coordination in coastal and marine management to enable countries to better respond to transboundary management challenges, such as monitoring the management interventions on marine pollution, fisheries recovery, or habitat improvement. The lack of resources and the difficulty in changing governmental structures are some reasons why establishing coordinating mechanisms have not progressed significantly. New policies that meet present issues, such as transboundary pollution, poaching, etc., require fiscal allocations; otherwise the policy remains an academic document. Financial resources are inadequate or lacking for implementation. This scenario is common to many riparian countries (see the results of PEMSEA's national intersectoral workshops and this study).

4. Emerging issues in the EAS and recommendations for future actions

A wide range of emerging issues that are affecting the EAS have been identified by different agencies, forums and by the countries themselves. The countries are concerned with land-based sources of pollution, habitat destruction and community modification, fisheries issues, and climate change, while invasive marine species is only considered to be a major issue by Australia. The results from PEMSEA showed that climate change is the number one issue while our survey, albeit with limited response, is contrary to PEMSEA's results. However, climate change and population growth are the main drivers of many of the emerging problems or worsening trends in the EAS environmental status.[54] There is hence a need to address climate change impacts both in terms of adaptation needs and possible mitigation actions, building on the scenarios produced by the Intergovernmental Panel on Climate Change and following the guidelines in National Action Plans for Climate Change. GEF is investing in the Climate Change Strategic Action Plan under the Coral Triangle Initiative but more investments are needed to expand these measures, particularly in science-based soft-engineering in the coastal zone (e.g., rehabilitation of riparian and coastal forests). Mitigation measures that can be implemented range from rehabilitation of 'blue forests' (e.g., mangroves and other coastal wetlands, and seagrass beds) to developing renewable energy from rhythmic tidal movements and currents.

It is estimated that additional annual investments and financial flows needed by 2030 to cover costs of adaptation to climate change in the coastal zone amount to US$11 billion globally[55] and could be up to three times as high if sea-level rise is higher than projected by the IPCC[56]. A recent report by ADB on the economics of climate change in Southeast Asia concludes that the costs to countries in the region could be equivalent to a loss of 6.7 percent of GDP by 2100, which is more than twice the world average[57].

Sustainable use of resources in LMEs should be addressed at both the supply side of and the demand side for natural resources. It takes 15-40 years for a coral reef to be populated by target fishes[58] but per capita demand for fish increases with population growth which is about 2 percent each year (the so-called Malthusian overfishing). On average, the per capita consumption of fish in the region is about 30 kg per year and this could increase to 50 kg per year (e.g., Malaysia). With increasing demand and population growth, there will be greater pressure to expand exploitation of natural fish stocks or increase aquaculture production. Growth of human population should thus be managed in parallel with efforts on environmental and resources management.

Annex 1. Focus of GEF Projects in the East Asian Seas Region.

Transboundary issue addressed by Project	**GEF Agency**	**Water pollution/ eutrophication**	**Loss of habitat* (specify type)**				**Overexploitation of fisheries**		**Climate Change impacts**	**Water resources manage-ment**	**Invasive Species**	**Targeted Research (specify)**	**Other (Specify)**
			M	S	C	W	Coastal	Oceanic					
Global Projects													
Global International Waters Assessment	UNEP												Comprehensive and integrated assessment of international waters
Reduction of Environmental Impact from Tropical Shrimp Trawling	UNEP/ FAO						x						Sandy-muddy substrate of embayments
Coral Reef Targeted Research and Capacity Building for Management	IBRD/ WB	x			x		x		x	x	x	Resilience and vulnerability of coral reefs; differentiating climate change factors versus anthropogenic ones	knowledge management and dissemination
Building Partnerships to Assist Developing Countries to Reduce the Transfer of Harmful Aquatic Organisms in Ships' Ballast Water (GloBallast Partnerships)	UNDP										x		
Removal of Barriers to the Introduction of Cleaner Artisanal Gold Mining and Extraction Technologies	UNDP/ UNIDO	x				x				x			
Sub-total		**2**	**0**	**0**	**1**	**1**	**2**		**1**	**2**	**2**	**1**	**3**

Transboundary issue addressed by Project	**GEF Agency**	**Water pollution/ eutrophication**	**Loss of habitat* (specify type)**				**Overexploitation of fisheries**		**Climate Change impacts**	**Water resources manage-ment**	**Invasive Species**	**Targeted Research (specify)**	**Other (Specify)**
			M	S	C	W	Coastal	Oceanic					
Regional Projects													
PEMSEA (Phase 1-3)	UNDP	x	x	x	x	x	x		x	x	x		Aquaculture; oil spill preparedness and response
South China Sea and Gulf of Thailand	UNEP	x	x	x	x	x	x						
YSLME	UNDP	x		x		x	x		x		x		
Sulu-Celebes	UNDP	x	x	x	x	x	x						
Arafura-Timor	UNDP	x	x	x	x	x	x		x				
Southeast Asia CTI	ADB	x	x	x	x	x	x		x	x			
Western Pacific East Asia Oceanic Fisheries Management Project (WPEA)	UNDP							x					
Bycatch Management	FAO						x						
Mekong River Basin Water Utilization Project	World Bank		x			x				x			
Mekong River Basin Wetland Conservation and Sustainable Use Program	UNDP					x				x			Biodiversity loss
National Performance Assessment and Sub-Regional Strategic Environment Framework in the Greater Mekong	ADB		x			x			x	x			
Livestock-Waste Management in East Asia	World Bank/ FAO	x								x			
CTI-IW Learn	ADB												Coordination and Knowledge Management of CTI
Marine Electronic Highway Demonstration		x	x	x		x					x		Improving efficiency in

Transboundary issue addressed by Project	GEF Agency	Water pollution/ eutrophication	Loss of habitat* (specify type)				Overexploitation of fisheries		Climate Change impacts	Water resources manage-ment	Invasive Species	Targeted Research (specify)	Other (Specify)
			M	S	C	W	Coastal	Oceanic					
	IBRD/ WB												shipping and navigation as preventive measure
Sub-total		**8**	**8**	**7**	**5**	**10**	**7**	**1**	**5**	**6**	**3**		**4**
National Projects													
Hai River Basin Integrated Water Resources Management	IBRD/ WB	x								x			
Pearl River Delta Development	IBRD/ WB	x				x				x			
Partnership Investment Fund for Pollution Reduction, Tranche 1:	IBRD/ WB												
Ningbo Water and Environment Project - Investment Fund	IBRD/ WB	x				x				x			
Coastal Cities Environment and Sanitation Project - under Investment Fund	IBRD/ WB	x	x	x	x	x				x			
Manila Third Sewerage Project (MTSP) - under Investment Fund	IBRD/ WB	x								x			
Liaoning Medium Cities Infrastructure - under Investment Fund	IBRD/ WB	x								x			
Second Shandong Environment - under Investment Fund	IBRD/ WB	x								x			
Shanghai Agricultural and Non-Point Pollution Reduction project (SANPR) - under Investment Fund	IBRD/ WB	x								x			

Transboundary issue addressed by Project	GEF Agency	Water pollution/ eutrophication	Loss of habitat* (specify type)				Overexploitation of fisheries		Climate Change impacts	Water resources manage-ment	Invasive Species	Targeted Research (specify)	Other (Specify)
			M	S	C	W	Coastal	Oceanic					
Demonstration of Sustainable Management of Coral Reef Resources in the Coastal Waters of Ninh Hai District, Ninh Thuan Province, Viet Nam	UNEP				x		x						
Demonstration of Community-based Mgt of Seagrass Habitats in Trikora Beach East Bintan, Riau Archipelago Province, Indonesia	UNEP			x			x						
Participatory Planning and Implementation in the Management of Shantou Intertidal Wetland	UNEP					x	x						
Sub-total		**8**	**1**	**2**	**2**	**4**	**3**	**0**	**0**	**8**	**0**	**0**	**0**
TOTAL		**18**	**9**	**9**	**8**	**15**	**12**	**1**	**6**	**16**	**5**	**1**	**7**

*Habitat type: Mangroves (M), Seagrass beds(S), Coral reefs (C), Wetlands (W)

Annex 2: IW Approach in the East Asian Seas Region.

IW Approach	TDA/SAP (Indicate LME – e.g. YSLME. SCS, covered (x)or affected)	ICM (km of coastline and/ or no. of demonstration sites)		IWRM (river basin/ groundwater management)		Fisheries refugia (km^2 covered/ No. of sites)		MPAs (km^2 covered/ no of sites)		Countries (when global, indicate countries included in the EAS)
		km	*No.*	*RB*	*GW*	*km^2*	*No.*	*km^2*	*No.*	
Global Projects										
Fostering a Global Dialogue on Oceans, Coasts, and SIDS, and on Freshwater-Coastal-Marine Interlinkages		x		x						Global – thematically covers all approaches listed
Global International Waters Assessment (GIWA)										Global – Includes assessments of: Yellow Sea; East China Sea; South China Sea; Sulu-Celebes Sea; Indonesian Seas,
Reduction of Environmental Impact from Tropical Shrimp Trawling										Global (IND, PHI)
Coral Reef Targeted Research and Capacity Building for Management										Global (PHI)
Building Partnerships to Assist Developing Countries to Reduce the Transfer of Harmful Aquatic Organisms in Ships' Ballast Water (GloBallast Partnerships)										Global (CHI)
Removal of Barriers to the Introduction of Cleaner Artisanal Gold Mining and Extraction Technologies	(Indonesian Seas, Mekong River Basin)			x	x					Global (IND, Lao PDR)
Sub-total			**1**	**2**						
Regional Projects										
PEMSEA	(EAS – all 6 LMEs)	Ni22, 658 km (10% of EAS) coast	8 demonstration sites; 20 parallel sites; 15 other sites	7	0					Regional (CHI, IND, CAM, Lao PDR, PHI, THA, TIM Leste, VIE; Lao PDR; Singapore; RO Korea; DPR Korea)

IW Approach	TDA/SAP (Indicate LME – e.g. YSLME. SCS, covered (x)or affected)	ICM (km of coastline and/ or no. of demonstration sites)		IWRM (river basin/ groundwater management)		Fisheries refugia (km^2 covered/ No. of sites)		MPAs (km^2 covered/ no of sites)		Countries (when global, indicate countries included in the EAS)
		km	*No.*	*RB*	*GW*	*km^2*	*No.*	*km^2*	*No.*	
South China Sea and Gulf of Thailand	x SCS & Gulf of Thailand						x			Regional (CHI, IND, CAM, MAL, PHI, THA, VIE)
Reducing Environmental Stress in the Yellow Sea Large Marine Ecosystem	x YSLME		x				x			Regional (CHI, Republic Of KOR)
Sulu-Celebes Sea	x Sulu-Celebes		x						TBD	Regional (IND, MAL, PHI)
Arafura-Timor Seas	x ATSEA (Indonesia Seas, Arafura Sea, Timor Sea)					x	TBD			Regional (IND, Papua New Guinea, TIM Leste)
Southeast Asia CTI	(EAS)		x	x					x	Indonesia, Malaysia, Philippines,…
WPEA	(EAS)									Regional (IND, PHI, VIE)
Bycatch Management	(EAS)									Regional (IND, Papua New Guinea, PHI, THA, VIE)
Mekong River Basin Water Utilization Project	(Mekong River)			x	x					Regional (CAM, Lao PDR, THA, VIE)
Mekong River Basin Wetland Biodiversity Conservation and Sustainable Use Program	(Mekong River)									Regional (CAM, Lao PDR, THA, VIE)
National Performance Assessment and Sub-Regional Strategic Environment Framework in the Greater Mekong	(Mekong River)			x						Regional (CAM, Lao PDR, THA, VIE)
Livestock-Waste Management in East Asia	South China Sea				x					Regional (CHI, THA, VIE)
CTI/IW: Learn										SE Asia
Marine Electronic Highway Demonstration	South China Sea		x							Regional (IND, MAL)
Sub-total	**4**		**5**	**4**			**3**		**2**	

IW Approach	TDA/SAP (Indicate LME – e.g. YSLME. SCS, covered (x)or affected)	ICM (km of coastline and/ or no. of demonstration sites)		IWRM (river basin/ groundwater management)		Fisheries refugia (km^2 covered/ No. of sites)		MPAs (km^2 covered/ no of sites)		Countries (when global, indicate countries included in the EAS)
		km	*No.*	*RB*	*GW*	*km^2*	*No.*	*km^2*	*No.*	
National Projects										
Hai River Basin Integrated Water Resources Management (2004 -)	(Bohai Sea – YSLME)			x	x					China
Pearl River Delta Development	(South China Sea)			x						China
Partnership Investment Fund for Pollution Reduction, Tranche 1	(See individual projects)									Regional
Ningbo Water and Environment Project - Investment Fund	(East Asian Seas, South China Sea, Yellow Sea)			x						China
Coastal Cities Environment and Sanitation Project - under Investment Fund	(South China Sea)			x						Vietnam
Manila Third Sewerage Project (MTSP) - under Investment Fund	(South China Sea)			x						Philippines
Liaoning Medium Cities Infrastructure - under Investment Fund	(Bohai Sea-YSLME)			x						China
Second Shandong Environment - under Investment Fund	YSLME			x						China
Shanghai Agricultural and Non-Point Pollution Reduction project (SANPR) - under Investment Fund	(East China Sea)			x						China
Demonstration of Sustainable Management of Coral Reef Resources in the Coastal Waters of Ninh Hai District, Ninh Thuan Province, Viet Nam	(South China Sea)					x				Vietnam

IW Approach	TDA/SAP (Indicate LME – e.g. YSLME. SCS, covered (x)or affected)	ICM (km of coastline and/ or no. of demonstration sites)		IWRM (river basin/ groundwater management)		Fisheries refugia (km^2 covered/ No. of sites)		MPAs (km^2 covered/ no of sites)		Countries (when global, indicate countries included in the EAS)
		km	*No.*	*RB*	*GW*	*km^2*	*No.*	*km^2*	*No.*	
Demonstration of Community-based Mgt of Seagrass Habitats in Trikora Beach East Bintan, Riau Archipelago Province, Indonesia	(South China Sea) _					x				Indonesia
Participatory Planning and Implementation in the Management of Shantou Intertidal Wetland	(South China Sea)					x				China
Sub-total	**0**	**0**		**8**		**3**		**0**		
Total	**4**	**6**		**14**		**6**		**2**		
	Total no of projects									
Regional EAS	4									
Yellow Sea and Bohai Sea	5									
East China Sea	2									
South China Sea & Gulf of Thailand	10									
Sulu-Celebes Sea	1									
Indonesian Seas, Arafura Sea, Timor Sea	1									
Mekong River Basin (links to South China Sea)	3									

Annex 3 – Questionnaire on Environmental Management and Emerging Issues in the East Asian Seas region

Country:

_____

Large Marine Ecosystem/s within Exclusive Economic Zone:

_____

_____

Agency (responding to this questionnaire):

_____

Questions:

1. What national policy or legislation supports the execution of your agency's mandate?

2. Does your agency have any collaboration/s with other countries in the East Asian Seas to address common environmental issues? What is/are this/these?

3. Has your agency participated in a project funded by the Global Environment Facility? If so, what is the project (title or name)? In what way has the project influenced your agency's mandate or operations?

4. Does your agency conduct monitoring of:

    a. The productivity of coastal and offshore waters;
    b. Fish diversity, stocks, and fisheries landings;
    c. Pollution and water quality of coastal and offshore waters;
    d. Socioeconomic conditions of coastal communities?
    e. Climate change impacts, e.g., storms, flooding, temperature, salinity, acidity of coastal waters?

5. Since when did your agency begin monitoring?/ When will your agency plan to begin monitoring?

6. Does your agency provide reports on the status of the coastal and marine waters, coastal habitats, or marine fishery resources to any regional or international body? Please provide briefly information on the topic, regional/body, and Memorandum of Understanding, agreement, treaty, or convention?

7. Is your agency monitoring and regulating water pollution from land-based sources, e.g., agriculture, aquaculture, industries, coastal households and settlements, etc?

What management approach is your agency adapting to regulate water pollution of rivers and coastal and marine waters?

8. What agency/ies is/are responsible for water resources uses and management in coastal zones and small islands, including groundwater? Is there a management plan, policy, legislation, or regulations in place for the use of these water resources ? What is the management concept or principle in use (e.g., ecosystem-based management, ecosystem approach, integrated coastal management, integrated coastal zone management, integrated water resources management, and others?

9. Is your agency involved in any way in the conservation of coastal and marine ecosystems, mangrove forest, seagrass beds, coral reefs, coastal waters in any way? How and for what objective?

10. Is your agency involved in controlling invasive species from ballast waters, from aquaculture (importation of broodstock, fingerlings, aquarium trade, etc)?

11. Of the following environmental issues, which are the top priorities of your agency/government? Please rank 1 as highest priority and 5 as the lowest priority.

- Water pollution from land-based sources
- Unsustainable exploitation of fisheries – coastal and oceanic
- Protection of fisheries habitats
- Invasive species
- Climate change impacts in the coastal zone and marine waters

12a. What LME/s within your jurisdiction is/are needing urgent attention?

12b. Based on your agency's assessment, what is/are the urgent environmental issue/s within your EEZ that requires immediate action ? How can this/these be addressed?
Please provide, if possible, articles, reports, publications that your agency has published in the last 15 years.

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Annex 5
Country Statements

COUNTRY STATEMENT OF CAMBODIA

We would like to express our sincerest gratitude to the Global Environment Facility and PEMSEA for all the support they have extended to the Government of Cambodia all these years.

Significant progress has been made in the implementation of the SDS-SEA at the regional, national and local levels as shown by various partners yesterday. A developing country such as Cambodia stands to gain much from the SDS-SEA implementation as it provides us with a framework to pursue practical projects that address immediate needs of our local governments and our coastal communities. Having a guiding framework that can also be implemented is a must in overcoming challenges to sustainable development.

What we have achieved in Cambodia –from our efforts to develop our draft ICM policy, strengthen the operations of our ports, prepare for oil spills and implement on-the-ground projects in Sihanoukville — is a result of collective efforts from our national, local and regional partners. And I believe that this is where PEMSEA should take on a much stronger role in the region — to coordinate support and activities among partners using SDS-SEA as a platform for sustainable coastal and marine management. PEMSEA is the best position to coordinate partner initiatives and ensure that these are complementary, and whatever resources that we have are maximized and utilized in getting us towards one direction — that of sustainable development. PEMSEA is a must in the region. More so with new challenges.

Based on initial consultations conducted with various agencies on identifying priorities for SDS-SEA implementation, climate change is priority issue. In 2001, an initial vulnerability assessment conducted in Koh Kong indicates that 4,444 hectares — most of which are mangrove areas — will be submerged with one meter sea level rise or an economic loss of 20 million US dollars — a significant amount for a developing country like Cambodia. We therefore need further capacity development to fully understand the situation and mitigate the impacts of climate change, particularly on vulnerable local coastal communities.

Similarly, urban and economic expansion is both a blessing and a curse in Cambodia. As the most preferred areas of development, infrastructures are being built anywhere within a small strip of land. This results to severe pressure to coastal and marine resources — the increasing demand for food, pollution, water and energy, among others. Coastal use zoning then becomes a valuable tool to ensure an “orderly” development in the coastal areas and preventing costly damage to properties and lives in cases where there are natural and man-made hazards. Zoning is the physical expression of ICM and must be pursued to ensure proper allocation of space and resources.

Our draft national National ICM Policy includes zoning but immediate support is needed to get the zoning plans implemented at the local level before more problems are created. Political support plus technical competence must be in place to make these happen. Regional and national venues for dialogue among local and national officials have been

part of PEMSEA supported activities and this should be continued to strengthen political commitment. Similarly, technical backstopping for zoning implementation should be made available in the region. This is still not yet in place and we hope that PEMSEA can consider this in its activities.

Building institutional capacity, motivating stakeholders and engaging them in the process of pursuing sustainable coastal and marine management is a long and challenging process. Sixteen years of PEMSEA existence in the region seems like a long time but it is not. It is only now that we are seeing some of the gains in our earlier efforts and we must continue to build on these gains and move forward in SDS-SEA.

PEMSEA is the glue that binds us all in our common vision and mission. On behalf of the Government of Cambodia, we call on our colleagues, particularly the GEF and our country and non-country partners to strengthen SDS-SEA implementation by doing our parts in pursuing our international, national and local commitments. The GEF support to PEMSEA is a valuable investment made to the countries in the region.

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COUNTRY STATEMENT OF CHINA

Good morning to everyone. I would like to thank the GEF and PEMSEA for inviting us to attend this stocktaking meeting and I would just like to share with you what China has done and the progress that has been made for the last 15 years. Therefore, I have the following points:

The People's Republic of China was amongst the 12 countries from the East Asian Seas Region to endorse the Sustainable Development Strategy for the Seas of East Asia in 2003, and since then it has actively been involved and participated in activities to implement the strategies and objectives of this very important marine strategy. In particular, China has undertaken the following activities:

1) China has taken an active role in promoting integrated management of the river basins and coastal seas using its own national budget as well as in collaboration with bilateral and multilateral agencies to reduce the level of marine pollution from domestic, industrial and shipping wastes, protect biodiversity through setting up of MPAs and strengthen the preparedness and response of local governments in addressing natural and man-made hazards. In addition, China also host the secretariat for PEMSEA Network of Local Governments;
2) China has improved its national legislation to provide policy and legislative support to enhance sustainable development of the coasts, island and its coastal seas through the Sea Use Management Law of 2002, Island Management Act of 2009 in addition to several other environmental and marine related national legislations over the last 15 years, such as the "Outline of China Marine Cause Development Plan" which emphasizes the implementation of ecosystem-based ICM;
3) China has increased its investment in coastal and ocean management through implementation of the marine zoning schemes at national, provincial and local levels thus enabling local governments to develop local coastal action plans based on the functional characteristics of the region. As such, a large part of Chinese coastline is already under some form of integrated coastal management; and
4) Integrated management approach of the coastal areas will be further strengthened through the consistent implementation of the Xiamen ICM demonstration and other 10 parallel sites throughout the coastline. As such, China is confident that it will be able to achieve the target of the SDS-SEA to have 20% of its coastline or more under ICM practices.

As a member of the GEF/UNDP/PEMSEA project, China has joined other countries in the region in developing PEMSEA as the regional implementing mechanism for the implementation of the SDS-SEA through the Haikou Agreement in 2006. Moreover, in 2009 along with other 7 countries of the region China further accorded PEMSEA, the international legal personality which makes PEMSEA an international organization. China has provided financial support (1 million RMB) to PEMSEA since 2006 and will continue to support PEMSEA in the future.

In strengthening regional cooperation under the umbrella of PEMSEA, China and the Republic of the Philippines have entered into a bilateral agreement to continue their

cooperation in various fields and to collectively support PEMSEA in achieving the goal of the SDS-SEA. In the meantime, China also entered into bilateral agreements with Indonesia and Malaysia and other possible countries of the region in strengthening mutual collaboration in marine research and marine affairs.

Over the past 15 years, the individual and collaborative efforts of countries and partners in the region have helped in the evolution of PEMSEA program into a comprehensive strategy and action program covering six large marine ecosystems. At the same time, as part of the PEMSEA initiative, awareness has been raised at the local, national and regional level on the need for action, and various tools and instruments have been developed, demonstrated and adopted as part of national policies and programs, including integrated coastal management, marine spatial planning/land-sea use zoning, and marine protected areas.

While these accomplishments are notable, we are not finished yet. There is much more to do, and we need the collective effort of all parties to complete the shared vision for a healthy and sustainable seas of East Asia.

In identifying actions to be taken, it is important to note that transboundary issues are of paramount importance in this region, especially with the six LMEs in one region involving governments with varying policies and capacities. There are also many large rivers in East Asia and river basin management is a key transboundary issue.

Pollution reduction is another major challenge of the region. For example, approximately one-third of China's coastal waters are classified as "polluted", and indications are that the number and areal extent of so-called marine "dead zones' are growing. The governments of the region need to address this emerging problem urgently as an individual and collective constraint to sustainable development.

Finally, we all recognize that the incidence and impacts of climate variability and other natural and manmade disasters, including typhoons, red tides and oil spills are having a devastating affect on the lives and well being of our coastal populations. Disaster management and adaptation to climate change are thus a clear need across the region.

China wishes to express its thanks to GEF/ UNDP for the continued support not only to PEMSEA but also to China in various areas of coastal and ocean management, biodiversity, climate change, etc. China hopes GEF will continue to support the regional efforts in coastal and ocean governance particularly in strengthening local and national capacity as well as to strengthen stronger regional and sub-regional cooperation through networking of institutions and local governments.

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COUNTRY STATEMENT OF DPR KOREA

On behalf of DPR of Korea delegation, I would like first of all to extend my gratitude to the Department of Environment and Natural Resources, Republic of the Philippines, Global Environment Facility and the PEMSEA Resource Facility for their kind invitation to the GEF East Asian Seas Stocktaking Meeting.

Guided by the Juche idea, which regards man as the most precious being in the world and clarifies that everything should serve man, the DPRK has followed the policy of protecting and managing its land and resources and developing and utilizing them effectively for the prosperity of the country and improvement of the people's standard of living.

The DPR of Korea, which has participated from the first stage of PEMSEA started in 1994, is one of the first countries which signed the "Agreement on PEMSEA's Legal Personality" and "Manila Declaration" in the 2009 EAS Congress held in Manila, Philippines.

Even under the particular circumstances in which the DPRK could not participate in the PEMSEA's cooperational programme "the implementation of the Sustainable Development Strategy for the Seas of East Asia" due to the suspension of UNDP's DPR of Korea cooperation in 2007, the DPRK showed the invariable responsibility for performing its duty as a signatory of "Putrajaya Declaration" and "Haikou Partnership Agreement" through the successful implementation of the project "Development of Strategies for the Implementation of the SDS-SEA in the DPR Korea" in 2009 with PEMSEA's active support.

I take this opportunity to highly appreciate PEMSEA's understanding of the DPRK which could not participate in PEMSEA's GEF support programme and, in particular, PEMSEA's efforts for implementing cooperation projects in DPRK by mobilizing new financial support.

The resumption of UNDP's cooperation in the DPRK last November provides favorable conditions to put on the right track the cooperational relationship between the DPRK and PEMSEA and GEF. I look forward to this GEF East Asian Seas Stocktaking Meeting to consider providing the GEF funded project to DPR Korea for the implementation of the SDS-SEA through ICM scaling-up in the DPRK, in keeping with the pace of the countries which receive PEMSEA's regular cooperation through GEF support programme.

Please allow me to conclude my speech with the best hope that all the issues on the table will be successfully discussed by the active efforts of all participants in the GEF East Asian Seas meeting.

Thank you

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COUNTRY STATEMENT OF INDONESIA

Key points:

Indonesia is already involved and cooperating on coastal and marine management in the region through some initiatives, namely: PEMSEA and COBSEA (included on SCS Project), CTI, SSME, ATSEA, MFF, BOB LME, WGs in APEC, ASEAN and also others initiative.

East ASEAN Seas is an important Large Marine Ecosystem that provides services for the development in East Asian Countries.

Comprehensive approach in the spirit of harmonization/synergys among stakeholder is needed both in the region and in the countries.

One of the framework in the region that can be used as an umbrella to harmonize and promote comprehensive approach is the Sustainable Development Strategy for the Seas of the East Asia (SDS-SEA). Of course, other strategies developed by relevant regional initiatives should be placed together to meet the target of the SDS-SEA.

Since the SDS-SEA was agreed during the Putrajaya Declaration, PEMSEA continuously facilitated capacity building at the National and Local level using the ICM approach. Moreover, we use integrated river basin, coastal and marine management. Integrated Management is a key.

The PEMSEA approach encouraged both national and local governments to step by step to integrate any regional strategy /program to the national, sub national (transboundary at the national) and also at the local level coastal and marine management in Indonesia.

Internal cooperation between relevant ministries (Ministry of Environment and Ministry of Marine Affairs and Fisheries also National Planning Agency) has been developed to establish and promote the implementation of integrated coastal management, and to secure the achievement of 20 % of coastline in the region managed in sustainable manner. Both of ministries have their own concern in managing the coastal and marine area base on their mandate.

As a national focal point of PEMSEA we encourage local government to manage the coastal and marine area in integrated approaches, and participate actively in PEMSEA Network of Local Governments for Sustainable Coastal Development (PNLG) forum so they can exchange the experiences among the local government in managing coastal and marine area.

Indonesia allocated national and local budget to capacity building in some area regarding the implementation of the SDS SEA in the country. Moreover, since we deemed any program (COBSEA, PEMSEA, CTI, SSME, BOBLME etc.) will have long term outcome, and generate benefits for the coastal and marine area, we allocate budget from the national to finance the activities.

National Portfolio Exersise/NPFEs (country priorities for GEF), include:

a. ICM Learning Center
b. Adaptation to CC Center (under CTI)
c. Scaling up demosite ecoregion approach

Indonesia is implementing a programmatic approach that is contingent on the substance and process in order to assure achievement of program objectives.

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COUNTRY STATEMENT OF JAPAN

Japan believes that various kinds of activities regarding environment management for East Asia seas should be implemented more efficiently and effectively. Japan also believes that those activities relevant to SDS-SEA (Sustainable Development Strategy for the Seas of East Asia) should be expedited. In line with this, Ministries concerned have made every efforts to implement the relevant projects in accordance with the Basic Ocean Plan promulgated in 2008, some items of which are aiming at achieving the goal of the SDS-SEA. Japan will continue these efforts.

In addition, Japan will continue to make substantial contributions to technical assistance and capacity building for the PEMSEA partners. As you have already noticed, Japan has many experiences and know-how to overcome the problems of the sea environment deterioration and contamination, and ready to share these variable knowledge with partners. Japan will also continue to provide funding to expedite technical assistance and capacity building, which includes annual financial contribution of $120,000 to the PEMSEA Resource Facility.

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COUNTRY STATEMENT OF LAO PDR

On behalf of the Department of Water Resources, Lao PDR, we are thankful to the support of the GEF and PEMSEA Resource Facility for their consideration to support a non-coastal country like Laos. While we don't have coasts, 80% of the Mekong River flows through our country, providing us with the highest per capita water allocation in the region. Water is the one of the primary economic drivers in Lao, and hopefully, with the help of various partners in the region, specifically PEMSEA, we will be driven towards sustainable development and contribution to the implementation of the National Policy and Strategy on Integrated Water Resources Management in the Lao PDR. In terms of Laos' significance to the coasts, our site in Sedone is close to Vietnam's ICM sites Quang Nam, Hue and Danang.

We are pleased to inform the Meeting that progress has been made in the development of a National Water Policy, Strategy and 5-year Action Plan in our country. This is currently under review by the Government and is up for approval anytime within the year or early next year. Similarly, on 15 June 2010, the Prime Minister signed a Decree No: 293 on the Establishment and Activities of the River Basin Committee, a decree that puts into place an intergovernmental and multisectoral body to sustainably manage the priority river basins and sub-basins of the country. We are now in the process of preparing, at least five priorities River Basin Committees and its Secretariat, to be functioned from 2011-2015. These are all national efforts contributing to the implementation of the SDS-SEA in Lao PDR.

The current challenges lies in overcoming barriers in resources – both human and financial to ensure that policies take effect on the ground. First there is a need to build the capacity of various institutions, especially within the Department of Water Resources and its departments, the River Basin Secretariats, and the local provincial and districts to lead implementation of the policy. Capacity development must be done in nine areas:

1) Institutional strengthening and coordination
2) Legislation, particularly, the review and revision, if necessary, of the Water Law
3) Riverbasin and sub-basin Water Resource Planning ;
4) Data Collection and Analysis ;
5) Water Allocation;
6) Protection of Water Quality and their Ecosystems;
7) Management of Floods, Drought and Climate Change;
8) Financial Aspects of Water Resource Management ; and
9) Awareness, Participation and Capacity Building

Capacity development should also include strengthening of leadership competencies to motivate and engage various agencies and institutions in the process of implementation, particularly in 5 major riverbasins initially identified. Doing is still the most effective way of learning to build knowledge experiences for working.

As part of the implementation of the policy, strategy and action plan, the existing project in Sedone should be further strengthened to demonstrate on-the-ground actions that can be shared among the other riverbasins. As a partnership of 11 country and 19 non-country partners, we would like to see PEMSEA providing not only technical advice but "matching" the needs of countries such as Laos to those who have experiences in integrated river management, and subsequently facilitating partnerships at the regional, national and local levels to overcome barriers in implementation.

We would also like to share our experiences with the GEF on our river basin or water management can be strengthened as an integral part of the GEF initiatives with PEMSEA. The Department of Water Resources, we fully support the SDS-SEA implementation in the region, and reiterate our commitment to implement this at the national and local levels in Lao PDR through on-the-ground implementation of the National Policy Strategy and Action Plan.

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COUNTRY STATEMENT OF VIETNAM

With a large sea area that is rich in natural resources and over 3260 km of coastline (except the small island's coastline), Viet Nam has expanded the development activities in the coastal and marine areas. The development of industrial activities, tourism, aquaculture, agriculture, port and shipping, urban expansion in Viet Nam have basically been concentrated in the coastal and island areas. And these development activities will likely increase in the future if population growth remain unchecked including the development needs of the country.

In the past years, coastal and marine economic activities that have contributed to the national economy were mainly from oil & gas, fisheries, navigation and tourism activities. Other service activities are still weak and limited. Up to now, about 20 million Vietnamese people have their livelihoods depend on the coastal and marine resources. Eighteen (18%) of them are still poor and are living in coastal communes in the Central Region. In particular, the functional values of the seas and islands are still not yet well understood to support for rational exploitation and utilization. Some coastal and marine resources and habitats have been overexploited and degraded. This creates obstacles for sustainable development in coastal areas and seas due to overfishing, loss of coastal and marine biodiversity, destroyed and degraded habitats and ecosystems; increased coastal and marine pollution, mainly from land-based sources; natural hazards and oil spills are happened yearly and according to the IPCC (2007), Viet Nam is one of the countries in the world that will be seriously impacted by climate change and sea level rise. For example, with SLR scenario of 1m, about 16% of the coastal land area of the country will be flooded and about 35% of the population and 35% of total GDP will be threatened.

Achieving sustainable development of the coastal areas and sea is a daunting task as Viet Nam still lacks the necessary policy and institutional mechanism and framework. In addition, the capacity for coastal and marine governance and management is weak and awareness of coastal and island communities on sustainable development is still limited. Although in recent years, the country has received international support, the coastal areas and seas are being managed sectorally under 15 different ministries. Taken together, the lack of coordinated planning, sectoral management as well as unsustainable utilization and exploitation have resulted to conflicts among the users, influencing economic growths in the coastal and marine areas. New approaches are required for the management of the coastal and marine areas , especially the development of policies at the national level and their implementation at local level. Understanding the situation, the Government of Vietnam has paid attention to the application of coastal and marine management in an integrated manner through the national efforts and international assistance. Therefore, the inter-sectoral institutional framework and policies for sea, coast and island management in Viet Nam have been approved and enacted by the Government, focusing more on national policies for coastal and marine development.

To overcome the above challenges, the Government has emphasized the integrated manner in managing coastal areas, seas and islands. The institutional framework of ICM in the country has been formulated in the last three years through the establishment of Vietnam Administration of Seas and Islands (VASI) under the Ministry of Natural Resources and Environment (MONRE). VASI been appointed by the Government to

conduct the function of integrated and unified state management for the coasts, seas and islands in Viet Nam. The Governmental Decree No. 25/2009/ND-CP on Integrated Marine Resources Management and Environmental Protection dated 6 March 2009 (in force in May 2009) is the first integrated governance policy in the field of coast, sea and island management in Viet Nam.

Some Laws relating to the coastal and marine sustainable and management have been enacted and in force, such as the Law of Fisheries (2003), Law on Biodiversity (2009), the Law on Marine Resources and Environment is currently under preparation (third draft) and the Law on ICM will be formulated in the near future. The implementation of the national program on ICM for 14 coastal provinces in Central Vietnam is in progress. For 2010, ICM programs are initiated in 6 other coastal provinces under PEMSEA's assistance. This would mean that by the year 2015, about 20 per 28 coastal provinces in Viet Nam will be implementing ICM and 10 of these sites will be effectively implemented.

The national system of 16 MPAs has been approved by the Government in May 2010 and 6 of these protected areas are managed effectively. Through the financial support and technical assistance of GEF, UNEP GPA, COBSEA, MFF, IOC-UNESCO, UNDP and other countries like the USA, Denmark, ROK and Russia, the coastal and marine priorities for coastal development and management of Viet Nam are in the process of implementation such as: MPA and biodiversity management, marine invasive species management, ICM, coastal and marine spatial use zoning and planning, marine pollution management from land-based sources, oil spill response, coastal natural hazards response, sustainable coastal ecosystems, coastal green corridors, adaptation measures to climate change impacts in coastal and marine areas, etc. It particularly emphasizes on the institutional and policy responses of Viet Nam, as well as the lessons learned from other countries relating to the national policy development and implementation for coastal and marine areas, including coastal and marine spatial use management in the next years towards sustainable development of coastal and marine areas. In this case, cross-sectoral management and collaboration, as well as local participation are essential, and it is very necessary for Viet Nam to continue promotion and improvement of international cooperation through technical assistances and capacity building in the field of sustainable development and management of coastal and marine areas, especially from GEF funds and PEMSEA's technical effectively assistance at national and regional levels.

From our side, Viet Nam will continuously incorporate the international and regional programs, initiatives and projects into the national projects/programs on coastal and marine development and management towards sustainable development in the new climatic regime.

Taking this opportunity, on behalf of Viet Nam, I would like to express many sincere thanks to the international, regional organizations and other donors for the above effective assistances and supports. Especially to the GEF and PEMSEA for their effective supports in the last years and facilitating me to participate in the important meeting. Finally, Viet Nam hopes to continuously receiving your assistance and support in the future in coastal and marine sustainable development and management, as well as in addressing the transboundary environmental issues in SEA region.

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