

SDS-SEA

**Sustainable Development Strategy
for the Seas of East Asia**

2015





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This document was initiated and prepared by PEMSEA in consultation with 12 participating Governments, including Cambodia, China, DPR Korea, Indonesia, Japan, Lao PDR, Philippines, RO Korea, Singapore, Thailand, Timor-Leste and Vietnam.

In addition, the following organizations provided input to the preparation of the document:

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Coastal Management Center (CMC)
International Center for the Environmental Management of Enclosed Coastal Seas (EMECS)
International Ocean Institute (IOI)
IOC Sub-Commission for the Western Pacific (IOC/WESTPAC)
International Union for Conservation of Nature - Asia Regional Office (IUCN ARO)
Korea Environment Institute (KEI)
Korea Institute of Ocean Science and Technology (KIOST)
Korea Maritime Institute (KMI)
Korea Marine Environment Management Corporation (KOEM)
Northwest Pacific Action Plan (NOWPAP)
Ocean Policy Research Institute (OPRI)
Oil Spill Response Limited (OSR)
Plymouth Marine Laboratory (PML)
PEMSEA Network of Local Governments for Sustainable Coastal Development (PNLG)
The World Bank
United Nations Development Programme (UNDP)
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LIST OF ACRONYMS

ADB	Asian Development Bank
APEC	Asia-Pacific Economic Cooperation
APFIC	Asia-Pacific Fisheries Commission
ASEAN	Association of Southeast Asian Nations
BOD	Biochemical oxygen demand
CCA	climate change adaptation
CBD	Convention on Biological Diversity, 1992
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora, 1973
CLC	International Convention on Civil Liability for Oil Pollution Damage, 1969 and its 1992 Protocol
CRED	Center for Research on the Epidemiology of Disasters
DPRK	Democratic People's Republic of Korea
DRR	disaster risk reduction
EAAF	East Asian-Australasian Flyway
EAS/RCU	East Asian Seas Regional Coordinating Unit
EEZ	exclusive economic zone
EIA	environmental impact assessment
ESCAP	Economic and Social Commission for Asia and the Pacific
FAO	Food and Agriculture Organization of the United Nations
FUND	International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971 and its 1992 Protocol
GEF	Global Environment Facility
GESAMP	IMO/FAO/UNESCO/WMO/WHO/IAEA/UN/UNEP Joint Group of Experts on the Scientific Aspects of Marine Pollution
GDP	gross domestic product
GMA	Global Marine Environment Monitoring and Assessment
GPA	Global Programme of Action for the Protection of the Marine Environment from Land-based Activities
HABs	harmful algal blooms
HNS	International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea, 1996
ICM	integrated coastal management
IEIA	integrated environmental impact assessment
IMF	International Monetary Fund
IMO	International Maritime Organization

IOC/WESTPAC	International Oceanographic Commission Sub-commission for the Western Pacific
ISO	International Organization for Standardization
IT	information technology
IUCN	International Union for the Conservation of Nature
JTWC	Joint Typhoon Warning Center
LME	large marine ecosystem
MARPOL	International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto
NGO	nongovernmental organization
ODA	Official Development Assistance
OPRC	International Convention on Oil Pollution Preparedness, Response and Co-operation 1990
PEMSEA	Partnerships in Environmental Management for the Seas of East Asia
PPP	public – private sector partnership
PPP	purchase power parity
RCF	Regional Cooperation Framework
ROK	Republic of Korea
RRC-EA	Ramsar Regional Center - East Asia
SDR	Special Drawing Rights
SDS-SEA	Sustainable Development Strategy for the Seas of East Asia
SEAFDEC	Southeast Asian Fisheries Development Centre
SEMP	strategic environmental management plan
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea, 1982
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change, 1992
WRI	World Resources Institute
WSSD	World Summit on Sustainable Development
WWF	World Wide Fund for Nature

GLOSSARY

Bioprospecting – “the exploration of biodiversity for commercially valuable genetic and biochemical resources” (UNEP/CBD/COP/5/INF/7)

Blue carbon – sometimes referred to as such and other times as marine and coastal carbon, was first specifically discussed in the UNFCCC in June 2011 at the 34th session of the Subsidiary Body for Scientific and Technological Advice (SBSTA) (UNFCCC, 2011a); “the carbon stored, sequestered or released from coastal ecosystems of tidal marshes, mangroves and seagrass meadows” (Herr, et al., 2012).

Blue economy – “sustainable ocean-based economic model that is largely dependent on coastal and marine ecosystems, but one that employs green infrastructure, technologies and practices, and innovative and proactive institutional and financing arrangements for meeting the goals of protecting our coasts and ocean while enhancing their contribution to sustainable development” (PEMSEA, 2012a)

Civil society – Collectively refers to groups of society, who, not motivated by profit, are organized nationally or locally for the advancement of particular purposes that relate, directly or indirectly, to the coastal and marine area. This includes NGOs, conservation and advocacy organizations, civic organizations, people’s organizations, mass media, religious groups, and less organized groups such as subsistence resource users, landowners, and indigenous communities.

Coastal and marine area – The area and resources starting from the point on land where it interacts with the sea and the sea interacts with the land, up to the point at sea where human activities affect it.

Community – The people or entities in a particular area, not formally organized but with common interests particularly in relation to specific issues.

Corporate responsibility – The duty and accountability of corporations, or any group of people organized for the purpose of conducting business, to the community and all that they affect.

Economic instruments – Mechanisms in the form of market-based incentives that work through price signals, thereby affecting costs and benefits of alternative actions, hence influencing decisions and behaviors of individuals, firms and governments, so that environmentally superior options are chosen. They are designed to serve as alternative to, or to complement, legal or regulatory mechanisms.

Ecosystem management – Management of ecosystem values and uses recognizing the interactions with the environment and responding to signals from the ecosystem to control anthropogenic activities and uses.

Eco-efficiency – Efficient use of resources and energy in any operation.

Ecotourism – Tourism focusing on environmental and cultural resources and usually based on a conservation theme.

Environmental risk assessment – The process to estimate the likelihood of harm being done to human health and/or ecosystems through factors emanating from human activities that reach their target via the natural environment.

Environmental risk management – The application of identified management interventions to address environmental concerns identified through the environmental risk assessment process.

Green economy – “one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. It is low carbon, resource efficient and socially inclusive” (UNEP, 2011).

Integrated coastal management (ICM) – A natural resource and environmental management system which employs an integrative, holistic approach and an interactive, multisectoral planning process in addressing the complex management issues in the coastal area.

ICM programme – The administrative structure, implementing arrangements, plan of action or schedule of activities and procedures, budget and accountability measures that are to be followed in order to set up and accomplish the objectives of ICM

Land-based activities – Activities occurring primarily on land.

Large marine ecosystem – Regions of ocean space encompassing coastal areas from river basins and estuaries out to the seaward boundary of continental shelves and the seaward margins of coastal current systems. They include upwellings, semi-enclosed seas, shallow shelf ecosystems on western ocean boundaries, coral reefs, and ocean shelf-deltaic-riverine interactive systems.

Local government – The political institution exercising legislative and executive authority over persons and property within a certain geographical area that is part of a larger political entity, i.e., the country or state.

Microplastics - The term ‘microplastics’ was introduced in the mid-2000s. Today, it is used extensively to describe plastic particles with an upper size limit of 5 mm. (http://www.unep.org/yearbook/2013/pdf/Microplastic_english.pdf)

National government – The political institution exercising legislative, executive, and judicial authority over a country, whether unitary or federal.

Nongovernment organization – A nonprofit group or association organized outside of institutionalized political structures to realize particular social objectives or serve particular constituencies.

Other wetlands - Wetlands as defined by the Ramsar Convention (areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide do not exceed 6 m), which are in the coastal area and are not coral reefs, mangroves or seagrass beds.

Pollution hotspots - Areas where the pollution load is high and poses serious impacts on marine and coastal ecosystems and threat to public health.

Pollution of the marine environment - The introduction by man, directly or indirectly, of substances or energy into the marine environment (including estuaries), which results in such deleterious effects as harm to living resources, hazards to human health, hindrance to marine activities including fishing, impairment of quality for use of sea water and reduction of amenities.

Private sector - Collectively, people or entities conducting business for profit.

Reception facilities - Facilities for the reception of wastes from ships at port for appropriate disposal.

Regional mechanism - A structured arrangement among countries within the region that may or may not be based on a legal instrument, entered into for the purpose of undertaking common, integrated, collaborative, and coordinated approaches to address the issues and problems relating to the coastal and marine environment.

Resource use - Any utilization of natural resources in the Seas of East Asia, including the sustainable use and conservation of coastal and marine living resources and conservation and management of nonliving resources.

Sea-based activities - Activities or phenomena occurring primarily at sea.

Semi-enclosed sea - A gulf, basin, or sea surrounded by two or more States and connected to another sea or the ocean by a narrow outlet or consisting entirely or primarily of the territorial seas and exclusive economic zones of two or more coastal States.

South-South cooperation- A broad framework for collaboration among countries of the South in the political, economic, social, cultural, environmental and technical domains. Involving two or more developing countries, it can take place on a bilateral, regional, subregional or interregional basis. (http://ssc.undp.org/content/ssc/about/what_is_ssc.html)

Special Drawing Rights - An artificial “basket” currency serving as the International Monetary Fund’s unit of account and as a basis for the unit of account for a number of other international organizations.

Stakeholders - Persons or entities who, directly or indirectly, positively or negatively affect or are affected by the policies relating to, or activities or phenomena in, the coastal and marine area.

Strategic environmental assessment - Environmental assessment at national, regional, subregional, or sectoral level.

Subregional growth area - A region, usually contiguous, comprised of areas under two or more countries or jurisdictions, which is governed by agreements between such countries or jurisdiction on deregulated economic activity and investments.

Subregional sea - A relatively large area of the marine environment that geographically forms a single management area but is politically under two or more jurisdictions.

Sustainable development - Development that ensures the continuance of natural resource productivity and a high level of environmental quality, thereby providing for economic growth to meet the needs of the present without compromising the needs of future generations.

Sustainable financing - Mechanism of raising or allocating financial resources to provide sustained funding of a programme, project, activity, or sets of environmental management interventions.

Transboundary - Moving beyond the territorial jurisdiction of a country, state, or other political entity.

OVERVIEW OF THE STRATEGY

The Strategy is arranged in the following manner:

The FOREWORD provides background information on the preparation of the Strategy, its purpose, philosophy, and approach.

THE SEAS OF EAST ASIA section provides the basic information about the region's coastal and marine areas and the problems and issues associated with them, and shows why there is a need for the countries of the region to cooperate. Topical information is provided in text boxes throughout the document.

The RESPONSE section addresses how the countries of the region can pursue common issues individually and collectively. It expresses a shared vision and mission, as well as an integrated management approach and framework for action.

THE STRATEGY is the main body of the document. Specific strategies and action programmes are spelled out in this section, providing a holistic and integrated perspective on sustainable development and management of coastal and marine areas regionally, nationally, and locally.

The final section, MONITORING THE STRATEGY, identifies a number of indicators for monitoring the status of the Strategy's implementation.

The Endnotes and Bibliography cite the sources of information contained in the Sustainable Development Strategy for the Seas of East Asia.

The Annexes list the relevant international and regional conventions, agreements, and programmes of action on which the SDS-SEA is based. The relevance of international agreements is also discussed.

FOREWORD

The decision to prepare a Sustainable Development Strategy for the Seas of East Asia arose from an intergovernmental meeting of 11 countries of East Asia held in Dalian in July 2000. The countries were Brunei Darussalam, Cambodia, China, Democratic People's Republic of Korea, Indonesia, Malaysia, Philippines, Republic of Korea, Singapore, Thailand and Vietnam. The March 2002 Intergovernmental Meeting of PEMSEA, now joined by Japan, endorsed the Strategy in principle and agreed to pursue intersectoral consultations at national, regional, and international levels. The SDS-SEA was adopted at the First Ministerial Forum in Putrajaya, Malaysia, in December 2003.

More than ten years after its adoption, the 6th EAS Partnership Council (June 2014) decided to update the regional strategy, recognizing that numerous ocean-related international instruments and obligations had been accepted by countries of the region since 2003, or were in the process of being adopted, which were critical to the sustainable development of coastal and marine areas in the EAS region. Moreover, changing conditions, knowledge and capacities across the seas of East Asia necessitated a revisit of the SDS-SEA in order to keep the strategy in tune with country priorities and objectives.

What is the Sustainable Development Strategy?

The Sustainable Development Strategy is a package of applicable principles, relevant existing regional and international action programmes, agreements, and instruments, as well as implementation approaches, for achieving sustainable development of the Seas of East Asia. It offers a regional framework for the interested countries and other stakeholders to implement, in an integrated or holistic manner, the commitments they have already made, without assuming new legal obligations. The SDS-SEA addresses linkages among social, cultural, economic and environmental issues. It embodies the shared vision of the countries and other stakeholders for the Seas of East Asia, and the ways by which they will achieve that shared vision. The Strategy does not reflect any individual country, international organization, or sectoral interest but presents a regional perspective, principles, and guidelines, and a platform for each to play and strengthen its respective role and to cooperate with one another in addressing common issues and concerns. The Sustainable Development Strategy is based on a programmatic approach and the consensus reached among the countries and other stakeholders particularly with regard to needs, nature and purpose, basic role and functions, scope of application and essential elements.

Why Do We Need a Sustainable Development Strategy?

The Sustainable Development Strategy represents implementation approaches for the integrated management and sustainable use of the environment and resources therein, with a view to bringing about the following benefits:

- promoting regional partnership arrangements among government agencies, NGOs, private sector, and other stakeholders;
- enabling the concerned organizations and programmes, operating in the region at all levels, to promote synergistic and cumulative impacts of their efforts and expertise for the benefits of the countries and other stakeholders;
- providing the countries and other stakeholders with a set of guidelines, references, and examples for assisting in their development of strategies, policies, and implementation plans in order to address specific national, local, and sectoral needs;
- offering a set of operational approaches and measures for sustainable coastal and marine development that have been proven suitable and effective through a decade of demonstration and extension activities in the region;
- facilitating the sharing and transfer of experiences, knowledge, technology and techniques, as well as mutual assistance among the countries currently at different stages of socioeconomic development; and
- facilitating the flow of support and assistance from the interested financing institutions and donor agencies, and the creation of self-sustained financing mechanisms and investment opportunities for sustainable coastal and marine development.

What is its Scope?

The Strategy is not intended to focus on development issues of individual sectors, e.g., agriculture, industries, and services, as these types of issues fall under sectoral policies and programmes. It does not limit itself to environmental protection and management. Rather, the Strategy represents an integrated management approach that focuses on the interactions between environment and development; and addresses issues and impacts across sectoral,

administrative, and legal boundaries that are constraints and bottlenecks for sustainable development in the East Asian Seas Region. Thus the Strategy deals with:

- the relationship among economic development, social development, and environmental protection as related to the Seas of East Asia;
- linkages among programmes concerning disaster risk reduction and management, climate change adaptation, poverty alleviation, sustainable livelihood, reduction of vulnerability to natural hazards, long-term security, economic growth, and the health of human beings, ecosystems and the natural resource base; and
- intersectoral, interagency, intergovernmental and interproject partnerships for the sustainable development of the region.

Related issues such as deforestation and air pollution are not addressed directly, but the awareness, regional cooperation, and confidence-building brought about by the implementation of the Strategy will contribute to the solution of such problems within an integrated management framework for sustainable development.

The scope of the Sustainable Development Strategy is broader than any individual international instrument or regional programme. Its implementation entails and facilitates partnerships, involving national and local governments, civil society, the business sector and regional governance mechanisms, such as ACB, ASEAN, ATS, CTI, COBSEA, ESCAP, FAO/APFIC, IOC-WESTPAC, NOWPAP, SSME, UNDP/RCF, UNEP GPA, The World Bank, WCPFC, YSLME and others. The Strategy also provides the framework and platform for collaborative and joint initiatives with UN agencies, international programmes and projects, ODA programmes and international and national NGOs, such as WWF and IUCN.

The Strategy recognizes the socioeconomic and political conditions among the countries of the region. Its implementation will enable strategic partners to pool their resources and to work together with a common goal.

The Strategy adopts a strategic, programmatic and problem-oriented approach to ensure effective response from policy and management interventions. It takes a long-term view in programme implementation, which depends on national capacity and resources.

How was the SDS-SEA 2015 adopted?

Following the decision by the EAS Partnership Council in 2014 to update the SDS-SEA to ensure that it remains relevant to the needs and circumstances of the EAS region, a comprehensive assessment was undertaken of global and regional instruments or platforms most relevant to the region's sustainable development — and their corresponding programmes, targets and approaches — adopted or ratified since 2003 or under discussion at the time of updating. An intergovernmental and multisectoral Technical Working Group (TWG) was formed and tasked with preparing and building consensus on the updated SDS-SEA. Its work was validated by the Executive Committee of the EAS Partnership Council. Finally, the draft 2015 Strategy was reviewed and refined through in-country consultations led by PEMSEA National Focal Agencies. The final document was submitted for consideration by the 5th Ministerial Forum in November 2015. The ministers adopted the “SDS-SEA 2015” collectively as a region and individually as countries, and commit to the development and implementation of national strategies and action programmes at regional, subregional, national, and local levels, taking into account national development objectives, capacities, and specific conditions of the countries and stakeholders involved.

Regional Governance for the Sustainable Development of the Seas of East Asia

The Sustainable Development Strategy will strengthen governance of the region's marine and coastal resources through:

1. PEMSEA, as a functional framework for regional cooperation and collaboration addressing environmental and resource use relationships across national boundaries and the region, for the purposes of:
 - promoting intergovernmental collaboration on global environmental concerns;
 - strengthening synergies and linkages among UN agencies, regional governance mechanisms and regional programmes of action, regional and international NGOs, and international development organizations and funding institutions;
 - encouraging active participation from the private sector, NGOs, academe, communities, and other members of civil society; and
 - identifying and developing opportunities for environmental investments and facilitating sustainable financing mechanisms.

2. Integrated coastal management, as a systematic approach to achieving the objectives and targets of international instruments concerning coasts and oceans and the protection, restoration and management of coastal and marine ecosystems at the regional, national and local levels by:
 - enhancing the synergistic relationships among multilateral environmental agreements;
 - facilitating better understanding of the interrelationships and various impacts and benefits of coastal and marine ecosystems by multiple users of the resources;
 - integrating ecological, social and economic information that ensures that management strategies and action plans are responsive to the multiple users and uses of the resources, while protecting, restoring and maintaining healthy, resilient and productive ecosystems; and
 - promoting effective use of human and financial resources through multisectoral and interdisciplinary approaches among users and beneficiaries, to address complex development issues.

3. The State of Coasts and Oceans Reporting System, as a means of measuring and documenting changes arising from implementation of the Sustainable Development Strategy and continually refine and adapt the Strategy through:
 - integrated environmental monitoring and reporting;
 - scientific research that advances knowledge of ecosystem management and provides input to sustainable economic development; and
 - south-south cooperation, applying knowledge, innovations, practices, and technologies at the national and local levels.

THE SEAS OF EAST ASIA

THE SEAS OF EAST ASIA

The Seas of East Asia are home to more than 2.1 billion people.¹ Bordered by Brunei Darussalam, Cambodia, PR China, DPR Korea, Indonesia, Japan, Malaysia, the Philippines, RO Korea, Singapore, Thailand, Timor-Leste and Vietnam, it is estimated that more than 1.5 billion inhabitants are living within 100 km of the region's coasts.²

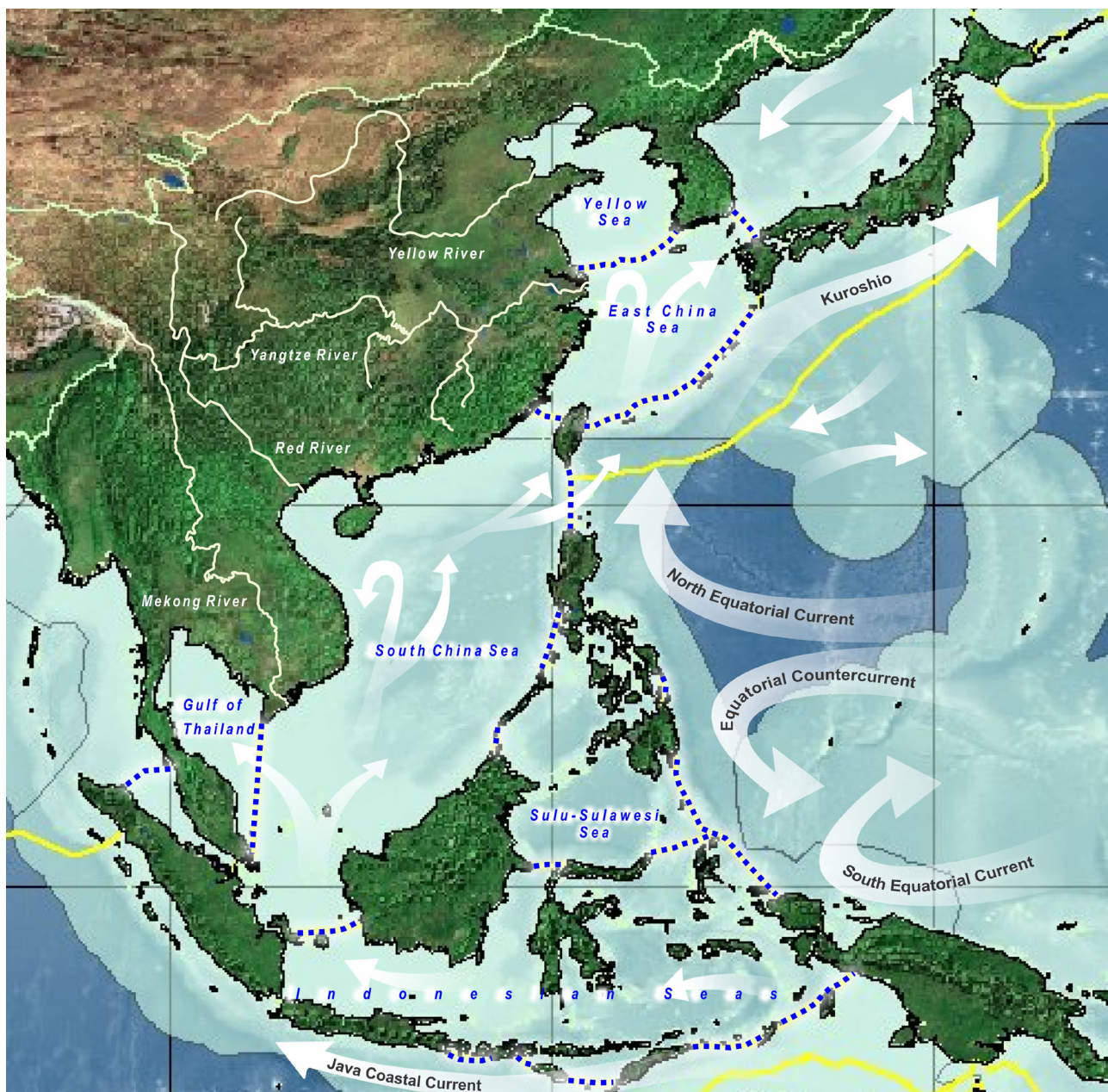
The region is one of the world's most diverse areas in terms of culture, topography, religion, economic status and environment. The region encompasses a series of large marine ecosystems (LMEs), subregional seas, coastal areas and associated river basins that are linked by large-scale atmospheric, oceanic and biological processes/phenomena, such as typhoons, the Kuroshio Current and highly migratory species.

The East China Sea, the Yellow Sea, the South China Sea, the Sulu-Sulawesi Seas, the Indonesian Seas and the Gulf of Thailand are six LMEs of great ecological and economic importance to the region.

These six LMEs are semi-enclosed and interconnected. They are strategic, globally significant, and geologically unique international water systems.

- The **Yellow Sea** is bordered by DPR Korea, China and RO Korea. It has a geographically unique floor and complex biotic communities because of the complicated oceanographic conditions of the area. The Yellow Sea is connected to the Bohai Sea to the north and the East China Sea in the south, forming a continuous ocean circulation system. The Yellow Sea is said to be one of the world's most productive waters. In 2009, an intergovernmental Strategic Action Programme for the Yellow Sea Large Marine Ecosystem was prepared, which included regional management targets for environmental quality of the Yellow Sea, and the required management actions to achieve those targets by 2020.
- The **East China Sea's** shallow coastal waters provide spawning and nursery grounds for many pelagic fish species. Countries with borders on the East China Sea include China, Japan and RO Korea. Some of the marine harvests from the East China Sea include varieties of tuna, mackerel, shrimp, sardines, milkfish, shellfish and seaweed.
- The **South China Sea** has long been recognized as the global center of marine shallow-water tropical biodiversity. It lies within the Indo-West Pacific marine biogeographic province and is bordered by China to the north; the Philippines to the east; Malaysia, Singapore, Indonesia and Brunei to the south; and Thailand, Cambodia, and Vietnam to the west. An intergovernmental Strategic Action Programme for the South China Sea was prepared in 2008.

The Seas of East Asia and Major River Basins Including the Major Ocean Currents.



- The **Indonesian Seas** are located among islands in Indonesia and are therefore entirely within the country's jurisdiction. This tropical LME runs for 400,000 km² and has areas of strong wind-driven and tidal currents.³ Their importance stems partially from the fact that they support an extremely high biological diversity, including both demersal and pelagic fisheries, sharing highly migratory fish resources (e.g., tuna, mackerel, round scad) with adjacent countries (Australia, the Philippines and Malaysia). The Indonesian Seas are included in the Coral Triangle Initiative (CTI) Action Plan, which was adopted by Indonesia, Philippines, Timor-Leste, Papua New Guinea and Malaysia in 2009.
- The **Sulu-Sulawesi Seas** are one of the world's most biologically diverse marine environments. Indonesia, Malaysia and the Philippines border the Sulu-Sulawesi Seas, with a total sea area of about 900,000 km².⁴ The Sulu–Sulawesi Seas are a highly biodiverse, globally significant biogeographic unit in the heart of the Coral Triangle — the center of the world's highest concentration of marine biodiversity. The three bordering countries entered into a memorandum of understanding (MOU) in 2004, agreeing to implement the Sulu-Sulawesi Marine Ecoregion (SSME) Conservation Plan. The SSME is also covered by the CTI Action Plan, which was adopted in 2009.
- The **Gulf of Thailand** is bordered by Malaysia, Thailand, Cambodia and southwest Vietnam.⁵ The gulf is 560 km wide and extends approximately 725 km long. Its shallow coastal waters (average depth 58 m) provide shelter to many varieties of fish and other marine life. Many rivers flow into the Gulf of Thailand, including the famed Chao Phraya. Three bordering countries, Thailand, Cambodia and Vietnam, established a Framework Programme for Joint Oil Spill Preparedness and Response in the Gulf of Thailand in 2006.

Many ocean currents which originate from North and South Pacific travel to the eastern side of the Asian continent. They help generate upwelling zones which contribute to high productivity. These currents also bring about long-distance dispersal of larval recruits of coastal and marine organisms. These major currents may have also effected the luxuriant growth of corals in the Seas of East Asia owing to the warm water coming from the equator.

Riverine systems within the region of the Seas of East Asia that are of considerable ecological significance are:

- The **Mekong River**, which has a globally unique lake-river system (the Mekong-Tonle Sap River-Great Lake System) and some of the most important wetlands and flooded forests in the world, supports one of the most productive and diverse freshwater ecosystems on the planet.

East Asian Seas' Major River Basins.

Major River Basins	Area (km ²)	Population
Yellow River Basin ⁶	945,065	189 million
Yangtze River Basin ⁷	1.8 million	420 million
Pearl River Basin ⁸	453,700	89 million
Red River Basin ⁹	80,000	30 million
Mekong River Basin ¹⁰	795,000	60 million

- The **Yangtze River** in China, Asia's longest river, serves as a major trade and transportation route. It traverses the densely populated and economically productive regions of China before emptying out into the East China Sea.
- The **Yellow River**, China's second longest river, passes through the densely populated North China Plain before reaching the Bohai Sea. The plain, one of China's most important agricultural regions, suffers periodically from devastating floods when the Yellow River swells.
- The **Pearl River** is an extensive river system in southern China. Measured from its farthest reaches, the Pearl River system is China's third longest river, 2,400 km, and second largest by volume, after the Yangtze. The 409,480 km² Pearl River Basin drains the majority of South Central (Guangdong and Guangxi provinces), as well as parts of Southwest (Yunnan, Guizhou, Hunan and Jiangxi provinces) in China, and Northeast of Vietnam (Cao Bằng and Lạng Sơn).
- The **Red River Basin**, one of the largest watersheds in Southeast Asia, originates in China's Yunnan province and flows through Vietnam to the South China Sea, where it forms an extensive delta. The problems of frequent and severe flooding in both upper and lower areas of the river, and salinity intrusion during the dry season have considerable impact on the national economies of both China and Vietnam. The Lower Red River Delta is the most densely populated area in Vietnam.

The river basins associated with the Seas of East Asia cover a total watershed area of about 8.6 million km².¹¹ The Seas of East Asia receive large flows of water, sediment, nutrients and pollutants from these rivers, which have a major influence on the adjacent estuaries, surrounding coastal areas and the overall health of the Seas of East Asia.

THE PEOPLE OF THE SEAS OF EAST ASIA

The East Asian region has a total population of 2.1 billion, expected to reach 2.29 billion by 2025.¹² About 77% of the population (ranging from 24% in Cambodia and China to 100% in RO Korea, Philippines, and Singapore) lives within 100 km from the coast.

The region is highly urbanized, with rapid population growth. The populations of East Asia as a whole are fast transforming from rural to urban. In 2014, 54% of the populace (Asia) was in urban areas; it is estimated that by 2050, this will have grown to 1.8 billion people or 64%.

Coastal settlements have developed into major cities now counted among the most populated in the world. In 2010, 11 out of 30 megacities (with 10 million or more people) were in the East and Southeast Asia, 8 of which are located on the coast.

Because of the region's geography, a large proportion of the East Asian people are dependent on marine food production. Ninety percent of the world's marine fish production is contributed by the Asia-Pacific region. More than 120 million people in the region are dependent on fisheries for a major portion of their livelihood. Twenty percent of the animal protein intake of Asian people comes from fish.¹³

Population and the Coastal Area.

Country	Coastline (km)	Population ¹⁴	Coastal Population (%) [*]	Average Annual Population Growth (%) ¹⁵
Brunei Darussalam	161	423,000	100	1.3
Cambodia	435	15.41 million	approx. 30	1.8
China	32,000	1.370 billion	40	0.5
DPR Korea	2,880	25.03 million		0.5
Indonesia	95,161	252.8 million	96	1.2
Japan	about 35,000	126.1 million	96.3	-0.2
Lao PDR	*landlocked	6.894 million	50**	1.8
Malaysia	9,323	30.19 million	92	1.6
Philippines	36,289	100.1 million	100	1.7
RO Korea	14,962	50.34 million	27.10	0.4
Singapore	195	5.47 million	100	1.6
Thailand	3,148 [†]	67.22 million	27.10	0.3
Timor-Leste	735	1.140 million	100	2.5
Vietnam	3,269 ^{††}	90.18 million	50	1
Total	233,560	2.121 billion		

* % of population within 100 km of the coast

** 50% of population living within the Mekong Catchment in Lao PDR

† inclusive of islands; †† excluding islands

THE ENVIRONMENT OF THE SEAS OF EAST ASIA

The Seas of East Asia are semi-enclosed with a total sea area of 7 million km², a coastline of about 233,560 km and a total watershed area of about 8.6 million km². They include a large portion of the world's coral reefs and mangroves. With their rich marine flora and fauna, the seas of the region are one of the world's centers for tropical marine biodiversity.

Corals and Mangroves

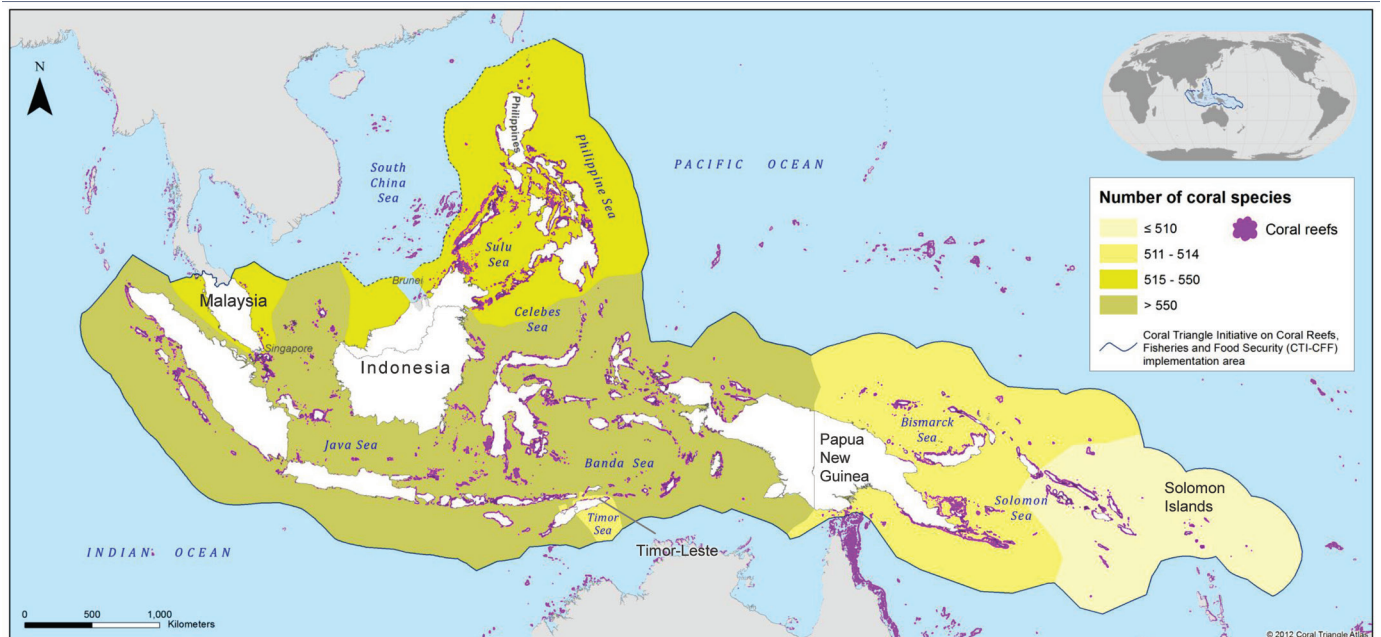
Corals and mangroves are abundant across the region, including the Coral Triangle which is known as the “Amazon of the Seas.” It houses 76% of all known coral species; 37% of all known coral reef fish species; 53% of the world's coral reefs; the most extensive of mangrove forests in the world; the habitat and breeding ground for about 3,000 species of reef fish; and serves as the spawning and growth area for the world's biggest and most important tuna fishery.¹⁶ Coastal environments in the Coral Triangle region have the highest biodiversity in the world: some 590 species of corals and 2,057 species of fish.

This extensive habitat and its ecosystems are major sources of food and livelihood for an estimated 120 million people. Fish remains a valuable food source, contributing 20% of dietary protein.

Percentage of Species in East Asia.

Species	Percentage
Coral Reefs	76% in the Coral Triangle
Mangroves	67% in Indonesia, Malaysia and the Philippines
Seagrasses	33% in Southeast Asia

Number of Coral Species (Source: CTI).



Sources: Number of coral species – Indonesia, Philippines, Papua New Guinea, Solomon Islands and Timor-Leste from Veron (2009) Coral Geographic: a spatial database; Malaysia from the State of the Coral Triangle Report (SCTR) for CT countries; Coral reefs – UNEP-WCMC (2010) Global Distribution of Coral Reefs.

Wetlands and Habitats for Migratory Species

The Seas of East Asia host globally important wetlands, including those within the East Asian-Australasian Flyway, which provides nursery and feeding grounds for fisheries resources and migratory waterbirds. Wetlands are both inland (lakes, rivers, marshes, peat swamps, fishponds, flooded caves), as well as coastal, elements up to 6 meters deep at low tide, which include mangroves, coral reefs, seagrass beds, tidal flats and estuaries.

The Ramsar Convention recognizes the need to conserve and protect the wetlands for their ecological, cultural, scientific and economic contribution to the earth's survival. In East Asia alone, there are a total of 154 Ramsar sites within 10 countries. The Ramsar Regional Center – East Asia (RRC-EA) was established in 2009 to oversee the implementation of the agreement in the region.

East Asian Countries and their RAMSAR Sites.

Country	RAMSAR Sites
Cambodia	3
China	46
Indonesia	7
South Korea	19
Japan	46
Lao PDR	2
Malaysia	6
Philippines	6
Thailand	13
Vietnam	6

Data: RAMSAR (2014)

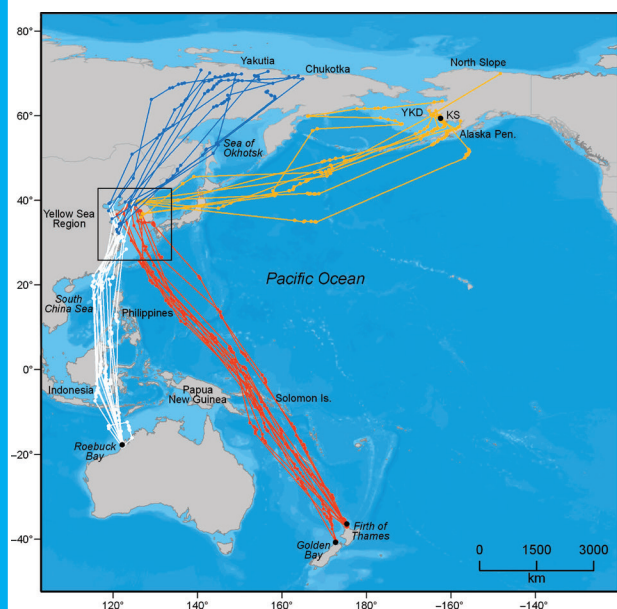
East Asian countries strive to conserve their wetlands for purposes of: habitats and species conservation; the provision of ecosystem services; support on livelihood and human health; maintenance of traditional wetland wise use practices; and recreation, tourism, education and public awareness.

The region is home to many migratory mammals including dugongs, seals, dolphins, whales, sea turtles and finfish such as tuna species and numerous endangered waterbirds as one of world's nine migratory flyways.¹⁷ These migratory species provide priceless economic and cultural values to the people of the region. During migration, these migratory species rely on a system of highly productive habitats and wetlands to rest, feed and breed, building up sufficient energy to fuel their next journey.

The migrations of many waterbirds converge in the Yellow Sea (including Bohai Sea) region (see figure).

Unfortunately, the population of many of these migratory species is dwindling drastically due to habitat loss, degradation of environment, and catch or overexploitation for commercial purposes. Some of them are even highly endangered. Unless serious interventions are applied, some of them may disappear from the wild. Since these species are migrating, few countries' efforts will not be enough. Cooperation across their entire migratory range is therefore essential to conserve and protect migratory species and the habitats on which they depend.

Waterbird Flyways.



Tracks in the figure are the routes of satellite-tagged Bar-tailed Godwits *Limosa lapponica* on northward migration. White/blue tracks represent the *menzbieri* population (white: north-west Australia to the Yellow Sea region; blue: Yellow and Bohai Sea to the breeding grounds in Siberia); red/gold tracks represent the *baueri* population (red: New Zealand to the Yellow and Bohai Sea; gold: Yellow Sea region to Alaska). Small circles along track lines represent positions calculated from Argos data. YKD: Yukon-Kuskokwim Delta, KS: Kuskokwim Shoals. Source: Battley, et al., 2012.

ECONOMIC DEVELOPMENT IN THE SEAS OF EAST ASIA

The region has seen a continuous and significant decline in poverty rates in the last ten years, which will likely be sustained with favourable economic prospects. Between 2002 and 2014, according to a World Bank report,¹⁸ “the regional extreme poverty rate (defined as the share of the population living on less than US\$1.25/day purchase power parity or PPP fell from 27% to 5.1%. If a higher poverty line (US\$2.00/day PPP) is used, the poverty rate fell from 51% to 18%. Excluding China, the rate was halved, to 25%. Nevertheless, there are still 360 million poor in the region. Further, large shares of the population remain vulnerable to being pushed into poverty by shocks, including economic downturns, natural calamities, or increases in the cost of living.”

Countries of the Seas of East Asia are in different stages of growth, with at least seven countries still having a large portion of the population living in poverty. Natural disasters, climate change, and dwindling resources due to migration to urban areas and changing consumption patterns are expected to have an impact on the region’s poverty levels in the years to come.

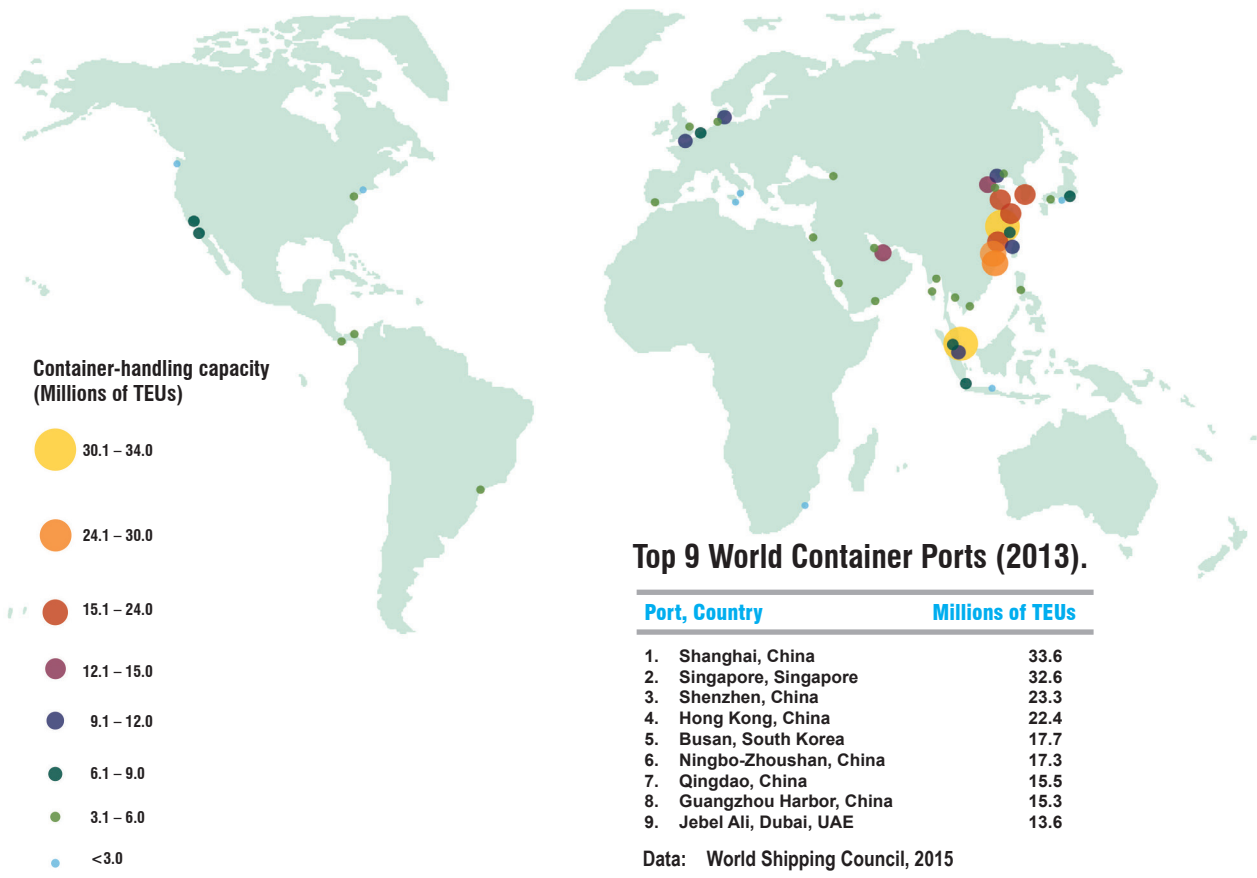
Economic Status of Seas of East Asia Countries.

Country	GDP per capita PPP (US\$) (World Bank 2015)	Average annual GDP growth rate (%) (World Bank 2015)	GDP by sector (US\$) (ADB 2014)			Employment by sector (%) (ADB 2014)			Unemployment (%) (ADB 2014)	Poverty Rate, 2010 (%) (ADB 2014)	Infant mortality rate (%) (UN 2015)	Child malnutrition rate 2005-2012 (%) (WHO 2013)
			Agriculture	Industry	Services	Agriculture	Industry	Services				
Cambodia	1,007.0	7.4	33.8	25.7	40.5	64.3	8.1	27.6	1.3	25.4	32.5	29.0
China	6,807.0	7.7	10.0	43.9	46.1	31.4	30.1	38.5	4.1	16.5	10.9	3.4
DPR Korea	--	--	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	21.7	18.8
Indonesia	3,475.0	5.8	14.4	45.7	39.9	35.0	14.3	50.6	5.9	28.0	24.5	18.6
Japan	38,634.0	1.6	1.2 (2010)	27.5 (2010)	71.3 (2010)	3.7	16.5	79.8	4.0	n.a	2.1	n.a
Malaysia	10,538.0	4.7	9.4	41.0	49.6	13.0	53.5	69.4	3.1	0.4	7.2	12.9
Lao PDR	1,661.0	8.5	...	...	...	...	...	...	...	38.1	53.8	31.6
Philippines	2,765.0	7.2	11.2	31.1	57.7	31.0	8.9	60.0	7.1	26.9	23.5	20.7
RO Korea	25,977.0	3.0	2.3	38.6	59.1	6.1	16.8	77.2	3.1	n.a	3.2	n.a
Singapore	55,182.0	3.9	0.0	25.1	74.9	0.1	13.8	86.0	2.6	n.a	2.2	n.a
Thailand	5,779.0	1.8	10.6 (2010)	40.1 (2010)	49.3 (2010)	41.7	15.0	43.2	0.7	1.1	11.3	7.0
Timor Leste	1,105 (2012)	7.8 (2012)	...	...	...	50.8 (2010)	8.7 (2010)	39.7 (2010)	3.6 (2010)	49.8	46.2	45.3
Vietnam	1,911.0	5.4	18.4	38.3	43.3	46.8	14.5	38.7	1.9	22.4	19.0	20.2

World's Busiest Container Ports are in the Seas of East Asia Region.

Container handling capacity of seaports is a good indicator for the global trade of goods. As UNIDO revealed, the busiest container ports are concentrated in the region of Seas of East Asia. Adding to this figure, the region has global leaders in shipbuilding industries, oil refineries, and rice producers. These figures are strong demonstration of the regions' growing population and the leading role as the world's manufacturing market.

Source: UNIDO



Economic growth in developing countries in East Asia including Pacific Islands slightly declined from 7.2% in 2013 to 6.9% in 2014, mainly because of economic slowdowns in particular countries. Still, the region accounted for more than one-third of global growth, double the contribution of all other developing regions combined.

The gradual upbeat performance of high-income economies, combined with the continued decline in fuel price, will help developing East Asia sustain growth. In fact, the top five exporters of containerized cargo in 2013 are from East Asia.¹⁹ Trade activity in the region has increased exponentially since 2000, with much of the world's goods being manufactured in many East Asian countries.

Blue Economy

Blue economy was defined during the East Asian Seas Congress 2012 as a “sustainable ocean-based economic model that is largely dependent on coastal and marine ecosystems, but one that employs green infrastructure, technologies and practices and innovative and proactive institutional and financing arrangements for meeting the goals of protecting our coasts and ocean while enhancing their contribution to sustainable development.” The EAS region is highly dependent on the sustainability of its coastal and ocean sectors and, therefore, it is imperative for the EAS countries to include the vital role of these sectors within the overall context of sustainable development if the region is to benefit from its resources in a sustainable manner.

One example of harnessing the power of the natural environment for economic gains is the use of ocean energy, one of the largest potential sources of energy in the EAS region. It can be utilized by various methods: wave power, wind power, hydrokinetic energy from tides and ocean currents, and ocean thermal energy conversion, among others. Tidal energy and offshore wind power are already commercially available while wave- and current-energy are still in the research phase.

Components of the Ocean Economy.²⁰

Type of Activity	Ocean Service	Established Industries	Emerging Industries	New Industries	Drivers of Future Growth
Harvesting of living resources	Seafood	Fisheries	Sustainable fisheries		Food security
			Aquaculture	Multi-species aquaculture	Demand for protein
	Marine bio-technology		Pharmaceuticals, chemicals		R&D in health care industry
Extraction of non-living resources, generation of new resources	Minerals	Seabed mining			Demand for minerals
			Deep seabed mining		
		Oil and gas			Demand for alternative energy source
			Renewables		
	Fresh Water		Desalination		Freshwater shortages
Commerce and trade in and around the ocean	Transport and Trade	Shipping			Growth in seaborne trade
		Port infrastructure and services			International regulations
		Tourism			Growth of global tourism
		Coastal development			Coastal urbanization
			Eco-tourism		Domestic regulations
Response to ocean health challenges	Global monitoring and surveillance		Technology and R&D		R&D in ocean technologies
			Blue carbon (i.e. coastal vegetated habitats)		Growth in coastal and ocean protection and conservation activities
	Coastal protection		Habitat protection, restoration		
	Waste disposal			Assimilation of nutrients, solid waste	

Activities that can contribute to restoring Ocean health

Source: Economist Intelligence Unit, 2015

ISSUES AND CHALLENGES IN THE SEAS OF EAST ASIA

With a growing economy and population, the coasts and oceans of the Seas of East Asia face increasing pressure from overfishing, loss of natural coastlines, pollution from land- and ocean-based sources, habitat destruction, sea level rise, and many other challenges. It is also known to be one of the most vulnerable to the adverse impact of climate change and extreme weather events. In addition, the 2.1 billion people living in the region exert tremendous human pressure on marine and coastal resources, making their nations' economies — most of which are highly dependent on income from the oceans — prone to instability and downturn.

Adverse Impacts of Climate Change

The risks associated with climate change are steadily increasing. As the Intergovernmental Panel on Climate Change (IPCC) predicted, climate change will produce more frequent and more intense typhoons and other extreme weather events. With rising sea levels, more flooding and water scarcity in key regions, as well as the migration or extinction of plant and animal species and the acidification of oceans, will be a reality.²¹

The IPCC report in 2014 presented that coastal and marine systems in Asia are under increasing stress from both climatic and non-climatic drivers.²² It was suggested that mean sea level rise will contribute to upward trends in extreme coastal high water levels. In recent years, frequent and extreme weather events are wreaking havoc on ecosystems, agriculture and human health in Asia.²³ As seen in the recent climate related disasters in the EAS region, the adverse impacts of climate change are already affecting the daily lives of people living in the region.

PEMSEA Efforts on Adapting to Climate Change.

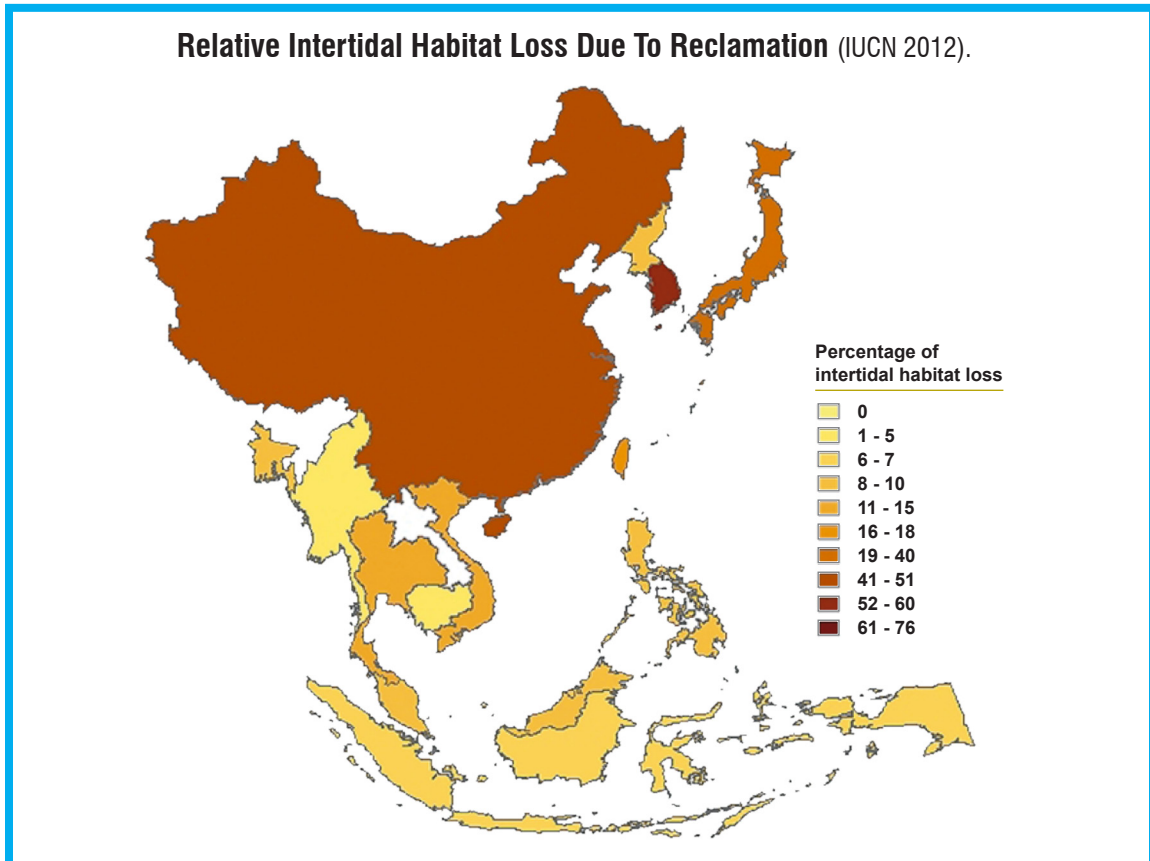
The Manila Declaration in 2009 acknowledged the EAS region's specific vulnerability to climate change, the impacts of which cut across various areas and issues including "water resources, food security and livelihood, pollution, hazards and disaster, as well as biological diversity." The Manila Declaration also recognized integrated coastal management (ICM) as a mechanism to achieve sustainable development and climate change adaptation, and the sustainable development goals of other global instruments.²⁴

The Changwon Declaration in 2012 elaborated the work of the Manila Declaration in terms of promoting the blue economy within the region. The declaration stressed that "advancement towards the vision and objectives of the SDS-SEA has been modest considering such challenges as ... the impacts of climate change and severe weather events on people."²⁵ It included specific actions for climate change adaptation and disaster risk reduction in advancing ICM as a management framework.

Loss of Habitats

The findings of the Millennium Ecosystem Assessment in 2005 revealed that the intertidal flats provide ecosystem services such as food, shoreline stabilization, protection from storm events, and maintenance of biodiversity.²⁶ Studies showed, however, that approximately 35% of global mangroves were cut between 1980 and 2000²⁷ and some 30% of seagrasses have been lost in the last 100 years.²⁸ It was estimated that the rate of intertidal habitat loss in Asia at present is equal to or greater than the recorded losses of mangroves, tropical forest and seagrasses.

Several different drivers advance habitat loss in the region. Most are financial in nature and tend to dominate the weaker drivers for biodiversity conservation and protection of coastlines for their ecosystem services. More developed countries in the region reclaim land for urban and infrastructure development. Less developed countries face local drivers to undertake smaller reclamations for agricultural or aquacultural conversion when costs are low. This often involves pressures to extend clearing of intertidal mangroves, which also causes damage and siltation of adjacent coral reefs and seagrasses. As shown in the figure below, the countries of the Seas of East Asia are experiencing varying degrees of habitat loss in coastal areas owing to the high demand of new land for development as well as the advancement of engineering techniques for reclamation (IUCN 2012).²⁹

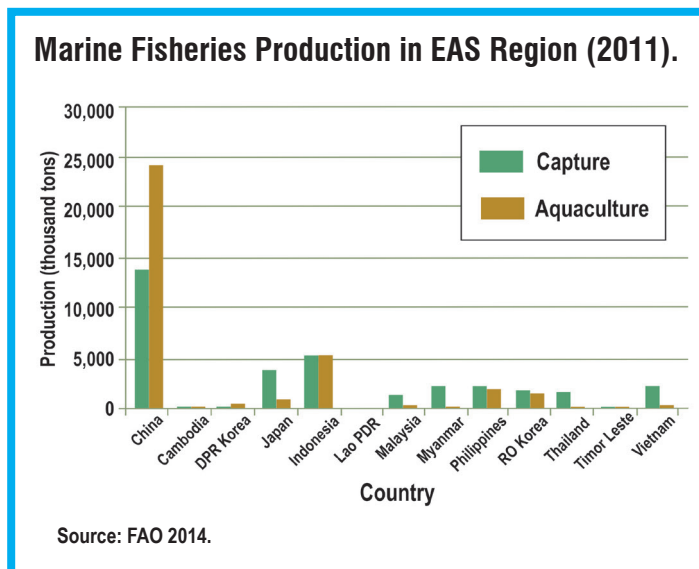


As options for coastal conservation are narrowed by growing land developments in the region, there is a growing urgency to prioritize and zone areas for conservation protection and action. Conservation plans need to be integrated or mainstreamed into wider planning processes and protected areas planned from a broader landscape viewpoint. Such approaches are being increasingly used in the development and implementation of national ICM programs as well as National Biodiversity Strategies and Action Plans. With an increasing awareness of the important economic-social-environmental connections in the coastal and marine sector, the need for a “bluer” type of development is being recognized by governments of the region.

Unsustainable Fisheries Practices

According to the UN, 99% of global commercial ocean fish catch comes from coastal waters, within 200 nautical miles of the coastline. Within these waters, however, there are various issues concerning global capture fisheries including overfishing and overcapacity, illegal, unreported and unregulated (IUU) fishing practices, marine environment degradation, poverty of fisherfolks, etc.³⁰ Among them, IUU fishing is the global problem that threatens ocean ecosystems and sustainable fisheries the most. It is widely known that IUU fishing most often violates conservation and management measures, such as quotas or bycatch limits, established under international agreements. By adversely impacting fisheries, marine ecosystems, food security and coastal communities around the world, IUU fishing undermines domestic and international conservation and management efforts.

Although the region of the East Asian Seas is considered to be the global leader in fisheries production, the pressure from overfishing, IUU fishing and other human activities pose serious



threats to the fisheries industry.³¹ According to FAO (2014), three of the world's five top fishing nations (as of 2010) were located in East Asia – China, Indonesia and Japan. China's production makes Asia the top fisheries producer globally, and the region of the Seas of East Asia covers over 80% of Asia's total.

Emerging Aquaculture

Globally, aquaculture is the fastest-growing animal-based food production sector, fuelled by the rapid growth of Asian aquaculture, which grew at 7% per year in the early 2010s,³² in contrast to the growth rate of 1.7% of capture fisheries' production. Asia is the only region in the world that produces more farmed fish than wild fish – 76 million tonnes versus 52 million tonnes in 2011³³ owing to China's farmed fish production of 50 million tonnes.

While significant progress has been made over past decades towards making marine aquaculture more sustainable, environmental concerns remain. Fish farms can release nutrients, undigested feed, and veterinary drugs and other biocides into the environment. There could also be an increased risk for diseases and the proliferation of parasites and harmful algal blooms (HABs). In many countries, the development of shrimp farms has destroyed large areas of mangrove forests, a significant coastal habitat. Use of fish-based feeds in aquaculture can put additional pressure on poorly managed wild fish stocks and the marine environment.³⁴

Natural and Man-made Hazards

According to the Center for Research on the Epidemiology of Disasters (CRED), Asia is by far the region most prone to natural disasters. In 2012, Asia accounted for 40.6% of all disasters in the world, compared to 22% in the Americas and 18% in Europe.

In the 2000s, four of the top five countries most frequently hit by natural disasters lie in Asia – China, the Philippines, India and Indonesia. China had the highest share of human casualties in 2012, accounting for 36% of global disaster victims. The Philippines has also been hit very hard, with Typhoon Bhopa claiming 1,901 lives in 2011 and Typhoon Haiyan taking almost 6,000 lives in 2013.

Hard-hit Disasters in East Asian Seas Region.

Deadly natural disasters occur in the East Asian region at frequent intervals.

2004 Indian Ocean Earthquake and Tsunami

On 26 December 2004, the Sumatra-Andaman Earthquake and its resulting tsunami devastated 14 countries across the Indian Ocean and killed more than 260,000 people. The earthquake with a magnitude of 9.1 created a tsunami as high as 30 meters. It was considered as one of the deadliest disasters in recorded history with Indonesia being the hardest hit, followed by Sri Lanka, India and Thailand.

As there were no tsunami warning systems along the affected coastlines, the casualties and damages were severe. The 2004 Indian Ocean Tsunami elucidated the importance of early warning system and disaster preparedness in the costliest way.

2011 Tohoku Earthquake and Tsunami

Triggered by a magnitude 9.0 earthquake in the afternoon of March 11, 2011, the tsunami swept through the entire coastline of Northeast Japan. It was the most powerful earthquake ever recorded to have hit Japan. Towering waves reached heights of up to 40 m in Miyako, Iwate Prefecture. In the Sendai area, they travelled up to 10 km inland. In 2015, the Japanese National Police Agency confirmed that there were 15,891 deaths, 6,152 injured and 2,584 people missing across 20 prefectures in Japan. The World Bank estimated that the economic toll was at US\$235 billion, making it the costliest natural disaster in world history.

Aside from human and economic losses, the disaster had enormous environmental impacts in Japan. The meltdown of the Fukushima Daiichi Nuclear Power Plant's reactors caused by a cooling system failure resulted in the permanent evacuation of hundreds of thousands of residents around the nuclear power plant.

2013 Typhoon Haiyan

Typhoon Haiyan, locally named Yolanda in the Philippines, was one of the strongest tropical cyclones ever recorded, devastating many parts of Southeast Asia, particularly the Philippines and Vietnam, in November 2013. It was the deadliest typhoon recorded in modern history, killing at least 6,300 people and leaving millions homeless in the Philippines. On 7 November 2013, when Haiyan made landfall in the Visayas region, the speed of one-minute sustained winds reached 315 km/h (195 mph), making Haiyan the strongest tropical cyclone ever observed, according to the Joint Typhoon Warning Center (JTWC). As a result, storm surges as high as 5 m flattened the coastal areas of Tacloban City in Leyte, leaving only a few buildings standing.

RECENT DEVELOPMENTS IN ICM AND SUSTAINABLE DEVELOPMENT

Sustainable Development Goals

By the turn of this millennium, the global community embarked on a bold commitment to uphold the principles of human dignity, equality and equity, and free the world from extreme poverty. Known as the Millennium Development Goals (MDGs), the commitments comprised of eight goals along with a set of measurable time-bound targets. These established a blueprint for tackling the most pressing development challenges. Set to be achieved by 2015, the MDGs have made a profound difference in people's lives, as revealed in the UN assessment report in 2014. The report suggested that global poverty has been halved five years ahead of the 2015 timeframe; 90% of children in developing regions now enjoy primary education, and disparities between boys and girls in enrolment have narrowed; remarkable gains have also been made in the fight against malaria and tuberculosis, along with improvements in all health indicators. The EAS region shares these achievements. More needs to be done, however, to accelerate progress where significant gaps and disparities exist. In order to address this, the United Nations prepared the post-2015 development agenda, the Sustainable Development Goals (SDGs).

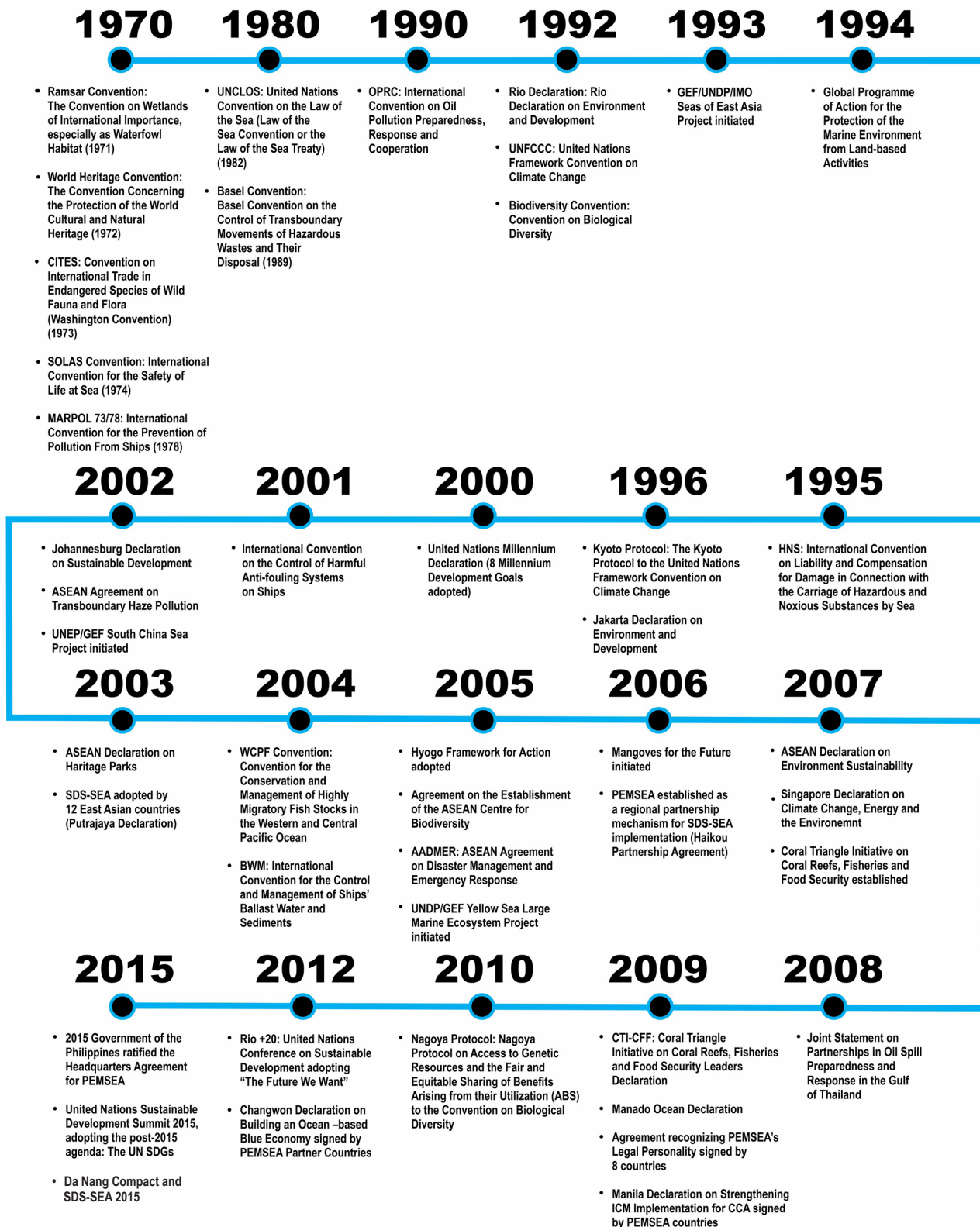
Regional Progress in Sustainable Development

The sustainable development agenda has been significantly enhanced regionally in 2006 through the inauguration of PEMSEA as a regional coordinating mechanism for coastal and ocean management through the Haikou Partnership Agreement. PEMSEA has been subsequently recognized as an international organization in 2009 through the signing of the Agreement on the International Legal Personality of PEMSEA by eight countries of the region.

As an effective tool for fuelling the sustainable development action programmes, integrated coastal management (ICM) has been recognized by numerous international instruments such as the Convention on Biological Diversity (CBD), United Nations Framework Convention on Climate Change (UNFCCC), Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA), and many others. Conceptualized in the early 1970s, ICM is a mechanism that involves a systematic process for managing competing issues in marine and coastal areas, including diverse and multiple uses of natural resources. PEMSEA has demonstrated the effectiveness and applicability of ICM in the region with numerous success stories from its ICM sites that are now being replicated throughout the region.

The region of the seas of East Asia is now entering a new post-2015 era where SDGs and the blue economy will be challenged by an ever-growing global economy and pressure from unsustainable practices. The countries sharing the seas of East Asia are determined to overcome those challenges and strive to achieve the targets set forth by the SDGs — in collaboration with all stakeholders, including the public and private sectors, the academe, and research groups.

Chronological Timeline of Global and Regional Commitments on Sustainable Development.



R E S P O N S E

RESPONSE

A New Paradigm for the Seas of East Asia

The countries of the region shall:

1. Strive for their shared vision of the Seas of East Asia;
2. Pursue a common integrated strategy to achieve the vision, which can be undertaken at all levels of government in the region with the participation of multisectoral stakeholders to ensure public support;
3. Take concrete steps to prevent and mitigate threats to the marine environment through their own national and local efforts; and
4. Share responsibility to address complex transboundary environmental threats, which are beyond the capacity of any single government, agency, donor, or other group to deal with.

The countries of the region will develop innovative new partnerships to:

1. Bring local and central governments together to resolve coastal issues;
2. Promote the participation of civil society and all stakeholders;
3. Mobilize the strength of the private sector to provide efficient and sustainable environmental solutions;
4. Address environmental issues of the Seas of East Asia collectively by working intra-regionally, and with the donor community and other international organizations, to implement international conventions; and
5. Contribute to the global partnership for sustainable development based on the principle of common but differentiated responsibilities, participatory, democratic and transparent decisionmaking, and increased genuine participation of major stakeholders.

A Shared Vision

Healthy Oceans, People and Economies

Explanatory Note on the Vision

The shared vision represents common understanding, views, and wishes of the people of the region regarding the Seas of East Asia. It is how the stakeholders see the Seas in the long term. Achieving the vision will take time, strategies, and resources to implement a set of action programmes. More importantly, it needs the collective political will and cooperation among the concerned governments and other stakeholders, within and outside the region, to implement them.

Mission

To foster and sustain healthy and resilient oceans, coasts, communities and economies across the Seas of East Asia through integrated management solutions and partnerships.

Explanatory Note on the Mission

The mission is an expression of the immediate aim of the Strategy arising from the conviction or sense of calling that is the shared vision. It is a statement of how the Strategy will be implemented and the vision achieved. Simply, the mission refers to what the region undertakes through the Sustainable Development Strategy. The mission statement affirms the purpose and function of the stakeholders for one common goal and the means to achieve it. It is focused on the job at hand and oriented towards future goals. The mission is simple. By working in partnership across boundaries, sectors, and organizations using integrated management solutions, the Strategy can be implemented to achieve the shared vision.

Framework for the Strategy

Chapter 17 of Agenda 21, the WSSD Plan of Implementation, the Rio+20 “The Future We Want” and other international instruments concerning oceans, seas, islands, and coastal areas can only be implemented effectively through an integrated approach, and effective coordination and cooperation at all levels, for coastal and ocean management.

Explanatory Note on the Framework

The framework is the basic system within which the Strategy shall operate. The framework offers essential elements and approaches for application of all components of the Strategy. The Strategy is divided into seven specific strategies; and each strategy is further delineated by a series of action programmes. The Strategy can be concretized in two dimensions: (1) cross-sectorally, by developing and implementing integrated management strategies and approaches across concerned sectors; and (2) sectorally, by incorporating sustainable development approaches into related sectoral policies. The two dimensions are interdependent and mutually reinforcing and will work in combination towards harmonization between the environment and development - that is, achieving the sustainable development goal.

Desired Changes

The ultimate goal of the shared vision and mission is to improve the quality of life of the people of East Asia.

Institutional

- national coastal and marine policy and supporting legislation adopted;
- local governments and communities given responsibility to manage their coastal and marine environment;
- area-specific institutional arrangements for environmental management and sustainable development of large gulfs, bays, inland seas, international straits, and LMEs in place;
- local interagency, multisectoral coordinating mechanisms to implement sustainable coastal development and disaster risk reduction and response programmes set up;
- environmental action programmes and safeguards built into regional, national, and local development plans;
- a functional and self-sustaining regional mechanism with a suite of products, services, and financing mechanisms for advancing SDS-SEA implementation;
- all major international environmental instruments ratified and implemented by each country; and
- environmental management incorporated into economic development plans at national and local levels.

Operational

- national coastal and marine policy/strategy adopted, incorporated into national development and investment plans, and implemented;
- resource and environmental valuation, assessment and management systems in place as tools for sustainable development;
- integrated environmental and natural resource management programmes implemented by local governments in coastal and marine areas;
- cooperation between jurisdictions for addressing transboundary issues across boundaries at subregional seas, gulfs, bays, inland seas, international straits, and LMEs;
- joint research and sharing of information for the management of coastal and marine resources in place;
- integrated implementation of international environmental instruments at national and local levels undertaken;
- a sustainable financing mechanism for the regional implementation of international conventions operational; and
- capacity enhancement for climate change adaptation and disaster risk assessment undertaken.

Outcomes

Social

- attitude change among policymakers and decisionmakers, private sector, and civil society in support of moving coastal and ocean economies toward blue economy;
- an educated and environmentally conscious people collaborating to conserve the environment of East Asia;
- civil society and private sector highly involved and participating in coastal and marine environmental and natural resource management programmes;
- scientific advice available at national and local levels of government;
- public health levels improved;
- natural and cultural heritage areas protected; and
- national and local CCA and DRR strategies increased and loss and damage from disasters reduced.

Economic

- private sector engaged in sustainable and socially responsible investments;
- sustainable livelihoods pursued and particularly those of the poor improved;
- coastal communities prepared and able to cope with natural disasters and climatic events; and
- sustainable marine industries established.

Environment and resources

- more coastal areas able to achieve economic growth while protecting the environment and natural resources;
- environmental management integrated into subregional growth area development;
- rivers and coastal waters safe for public recreation;
- pollution from point and nonpoint sources managed;
- systems of responsibility for pollution damages and restoration established;
- recovery of water quality of polluted areas;
- sewage treatment facilities installed and operational in major urban cities;
- systematic and safe management and disposal of toxic and hazardous wastes;
- ports and harbors equipped with shore reception facilities;
- ports and harbors implementing port safety and environmental audits;
- effective response systems for oil and chemical spills implemented;
- major degradation of habitats arrested and restoration undertaken;
- marine endangered species and biodiversity effectively protected;
- protected areas and their networks established and managed as needed and appropriate;
- depleted fish stocks restored to sustainable levels;
- fish stocks equitably and sustainably utilized;
- aquatic food production safe for human consumption;
- ecotourism promoted;
- availability of a wide range of environmental services; and
- increased environmental resilience to the consequences of climate change.

T H E S T R A T E G Y

Foundation of the Strategy

The strategy is built on the following pillars:

International conventions and international and regional programmes of action

The action programmes of the Strategy are based on the prescriptions of global and regional instruments relevant to sustainable development, such as the WSSD Plan of Implementation, the UN Millennium Declaration, and Agenda 21, including poverty alleviation and other priority targets. The regional programmes of action have been developed over the years through ASEAN, the UNEP Regional Seas Programme, ESCAP, APEC, and others.

Partnerships

The Strategy is meant to be implemented by different stakeholders — men and women, public and private, local and national, NGOs, governments, and international communities — working in concert with each other.

Self-reliance and sustainability

The Strategy is geared towards building capacity of the countries in order to promote regional self-reliance to manage the coastal and marine environment to achieve the shared vision.

Synergy

The implementation of the Strategy according to sectors, interests, and issues will have a synergistic, multiplier, and cumulative effect towards the achievement of the shared vision.

Executing the Strategy

Each person in the region is a stakeholder with a role and responsibility to implement the Sustainable Development Strategy for the Seas of East Asia. Central and local governments, private sector, civil society, academe, and the communities play key and active roles in Strategy implementation. UN and donor agencies play a facilitating role through technical assistance, information exchange, and capacity-building activities. Bilateral and multilateral lending institutions are essential in financing the implementation of the Strategy and action programmes. Action programmes are necessarily broad in scope to allow flexibility and adaptability of objectives based on perspectives and capacities of the stakeholders.

National and local governments can effectively execute the Strategy by formulating and adopting corresponding coastal and marine strategies. Alternatively, governments are not precluded from implementing the Strategy through existing mechanisms and programmes.

The roles of the various stakeholders are as follows:

National government

- formulating and implementing a national coastal and marine strategy or policy, utilizing the SDS-SEA as a guiding framework;
- establishing an interagency, multisectoral coordinating mechanism, or strengthening and existing mechanism, to coordinate the planning and implementation of the strategy;
- developing and implementing a national ICM programme;
- identifying and prioritizing relevant strategies and action programmes that will be implemented at the national and local levels within the framework of ICM;
- identifying the relevant stakeholders for the national ICM programme;
- preparing and adopting legislation and incentive programmes to facilitate and support the scaling up of ICM across the country;
- designating a lead national agency to coordinate the implementation of the national ICM programme; where possible, a neutral line agency is preferred;
- formulating and executing an implementation plan for the national ICM programme including measurable targets, work schedules and allocation of adequate human and financial resources;
- developing appropriate norms, standards, procedures, guidelines, criteria and manuals as may be needed by local governments and other stakeholders for the effective implementation of relevant objectives, strategies and action programmes;
- preparing and implementing a national capacity development programme and support system for local governments to effectively manage and implement ICM; and
- monitoring and evaluating changes according to the identified indicators and reporting systems, such as the State of Oceans and Coasts reporting system.

Local governments

The governments of states, provinces, municipalities, cities, and/or counties ensure ground level actions by:

- developing a local plan of action to develop and implement an ICM programme;
- establishing an interagency, multisectoral coordinating mechanism, or strengthening and existing mechanism, to coordinate the planning and implementation of the strategy
- designating a competent local agency to coordinate the local implementation of the relevant ICM programme, including priorities, objectives, and action programmes;
- identifying current activities that are already undertaken by the local governments and incorporating these activities within the strategic framework and action programmes of ICM;
- formulating and executing a coastal strategy and implementation plan for the ICM programme including measurable targets, work schedules and allocation of adequate human and financial resources;
- securing adoption/approval of the concerned local government authority and budget;
- developing cooperation and partnerships with concerned communities, sectors and other concerned stakeholders in the implementation of the ICM programme; and
- monitoring and assessing changes according to identified indicators and reporting systems such as the State of Coasts reporting system.

Private sector

- exercising corporate responsibility to the environment;
- identifying areas where private sector's inputs and investments can be most relevant and effective; and
- interacting with concerned government agencies, local governments and other stakeholders in implementing some of the Strategy and action programmes.

Civil society

- informing, educating, and counselling the people, and mobilizing their support and proactive participation in implementing ICM programmes;
- coordinating networks and associations to facilitate implementation of ICM programmes through public awareness using their own networks and associations; and
- participating in relevant activities of the ICM programme.

Academe and research and development institutions

- providing expertise, advice, and relevant information for implementation of ICM at the national and local levels;
- providing expertise and information to support policymaking and decisionmaking;
- developing and undertaking research and development programmes to generate the needed information, methodologies, and advice;
- sharing scientific information through networks; and
- building capacity through training programmes and formal education.

Communities

- supporting and actively participating in the local implementation of the ICM programme, e.g., those related to protected areas, habitat management and restoration, CCA/DRR, sustainable fisheries and livelihoods, water supply conservation and use, pollution reduction and waste management.

UN and international agencies

- harmonizing their policies at regional and national levels with regard to the implementation of the Strategy;
- strengthening the capacity at national and local levels to plan and implement the Strategy;
- catalyzing national and local efforts towards implementing ICM programmes;
- developing working models and demonstration of approaches and methodologies to address knowledge and skills gaps;
- promoting regional cooperation and collaboration in implementing activities relevant to transboundary environmental issues;
- facilitating the establishment, strengthening and collaboration among regional mechanisms for carrying out the Strategy; and
- working in a complementary manner and using their comparative advantages to support implementation of the Strategy.

Financial institutions

- incorporating issues related to coastal and marine management in macroeconomic policy dialogue and helping countries to establish appropriate incentive frameworks that promote sustainable coastal and ocean economy development;
- supporting reforms in coastal and ocean governance proactively;
- promoting policies that support the establishment of public-private partnerships;

- providing appropriate financial support and technical assistance upon request from countries in the region to implement the Strategy and action programmes;
- supporting the advancement of financial arrangements adapted to the regional, national, and local circumstances, e.g., microfinance, loan guarantees, local government/private sector access to international funds and cost recovery mechanisms;
- focusing interventions on improving local environmental quality and management that also provide regional and global benefits; and
- using incremental resources, e.g., GEF donor support, strategically to better blend with and catalyze other funding.

Donors

- supporting action programmes that are relevant to their interest and objectives at national, local, or regional level;
- facilitating capacity-building, the transfer of new information and appropriate technologies, and providing financial assistance and in-kind contributions in the execution of the Strategy; and
- promoting/supporting the venture of the private sector into environmental investment for implementing the Strategy.

How to Implement the Strategy

- Any initiative to implement the Strategy, whether individual, a coordinated effort between two parties, or multilateral, contributes to the eventual realization of the shared vision for the Seas of East Asia.
- National and local counterpart strategies focusing on priority issues and areas that are of social, economic, and/or environmental significance provide a platform for action.
- A well-coordinated implementation of the Strategy at regional, national and local levels is desirable to achieve the objectives of the Strategy systematically and within a given timeframe.
- Concerned stakeholders and partners determine their respective roles and interest based on the relevant action programmes designed for specific objectives and specific strategies at national, local, and regional levels.
- Priority projects identified by governments and concerned stakeholders are included in action programmes, with agreed timeframe and budget.

Strategic Action Statement

The East Asian Countries shall:

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.

Undertake steps to improve the capability to ADAPT to the adverse impacts of climate change and other man-made and natural hazards.

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.

COMMUNICATE with stakeholders to raise public awareness, strengthen multisectoral participation and obtain scientific support for the sustainable development of the coastal and marine environment.

Explanatory Note on the Strategic Action Statement

The specific strategies each cover the following:

- SUSTAIN refers to the conservation and rational use of resources for the present and future generations. This requires continuous effort in maintaining ecological balance.
- PRESERVE refers to elements of coastal and marine areas that should be maintained because of their intrinsic environmental, economic, and social value.
- PROTECT refers to taking preventive steps to manage and avert risks or threats to ecosystems and human well-being.
- ADAPT refers to taking steps to enhance climate adaptation capacity and to reduce the impacts of disasters and related hazards.
- DEVELOP relates to the pursuit of economic development activities in a sustainable manner, as guided by the Sustainable Development Goals.
- IMPLEMENT refers to capacities and institutional frameworks at local, national, and regional levels necessary for the implementation of relevant international conventions and agreements. The substantive provisions of these instruments are taken up in the other strategies.
- COMMUNICATE refers to the enhancement and exchange of ideas, information and knowledge among the stakeholders that is necessary for effective coastal and ocean management.

General Principles

1. The sustainable development of the Seas of East Asia shall be pursued through the application of the integrated coastal management approach as the overarching framework, whereby strategic projects and programmes are implemented for the purpose of ensuring environmental protection and conservation of resources as well as the well-being and dignity of the people of the region.
2. The right to development must be fulfilled so as to equitably meet development and environmental needs of present and future generations.
3. Management of coastal and marine resources and the activities affecting them shall be science-based and respect natural processes and systems.
4. Beneficial uses of the resources shall be encouraged and adverse uses avoided or minimized.
5. Basic linkages between sustainable management of coastal and marine resources, poverty alleviation, and protection of the marine environment should be recognized.
6. Multisectoral partnerships involving NGOs, the private sector, the academe and independent research institutions, communities, and mass media, as well as government, intergovernmental bodies, international agencies and bilateral and multilateral financial institutions, are recognized as essential mechanisms to meeting the goal of sustainable development.
7. States should recognize and duly support the identity, culture and interests of indigenous peoples and their communities and enable their effective participation in the achievement of sustainable development.
8. States shall support inclusive and community-based participation in environmental and sustainable development issues at the relevant level.
9. The rights of all sectors of society shall be respected and protected.
10. The precautionary principle shall be widely applied. Where there are threats of serious irreversible damage, lack of full scientific certainty should not be used as a reason for postponing cost-effective measures to prevent environmental degradation.
11. Activities within one State should not cause damage by pollution to other States and their environment.
12. The interrelationship between conservation and socioeconomic development implies both that conservation is necessary to ensure sustainability of development, and that socioeconomic development is necessary for the achievement of conservation on a lasting basis.
13. Ecosystem-based management approaches shall be applied to ensure sustainable development of coastal and marine areas.
14. Climate change adaptation and disaster risk reduction and management shall be integrated into sustainable development to ensure that coastal and marine areas are able to adequately adapt to the impacts of climate change and respond to natural and man-made hazards.

SUSTAIN

The East Asian countries shall ensure sustainable use of coastal and marine resources

Principles

The needs of the present generation must be met without compromising the quality of life of future generations.

To achieve sustainable development and a higher quality of life for all people, States should reduce and eliminate unsustainable patterns of production and consumption and promote appropriate demographic policies.

Biological diversity and its components must be conserved for their intrinsic value as well as their ecological, genetic, social, scientific, educational, cultural, recreation, and aesthetic values.

Subregional, regional, and global cooperation is needed to conserve and manage living resources of the sea.

Managing the natural resource base in a sustained and integrated manner is essential for sustainable development.

Objective 1:

Conservation and redress of biological diversity

Action Programmes

1. Implement policy and a strategic framework for the conservation and management of biological diversity by:
 - a. Developing national policy to integrate management of natural/biological resources and economic development, business ventures and investments in accordance with international agreements such as the Convention on Biological Diversity and its protocols and decisions, such as the Jakarta Mandate, the Nagoya Protocol, the Strategic Plan for Biodiversity 2011-2020, the Aichi Biodiversity and the Pyeongchang Roadmap; as well as the Manado Ocean Declaration and the Ramsar Convention;
 - b. Crafting an agreed approach to determining coastal and marine areas of significant biological diversity and natural value and identifying the allowable limits of their use;
 - c. Expanding regional cooperation to conserve and manage environmental resources, including overexploited and endangered migratory species and coastal areas of transboundary importance; and

- d. Formulating cooperative agreements on biotechnology research, intellectual property rights (e.g., traditional medicines), and bioprospecting activities by third parties.
2. Restore and enhance coastal habitats and related resources in support of maintaining the integrity of their ecosystem services and value by:
 - a. Identifying major threatening activities and processes to coastal and marine areas of significant environmental value;
 - b. Incorporating new planning schemes into national and municipal development plans which will restrict development of, misuse or conflicting use of significant sites, habitats, and resources;
 - c. Developing capacities at the local government level to plan, develop, and implement sustainable environmental management programmes, including rehabilitation of altered critical habitats;
 - d. Setting in place appropriate legal and economic instruments covering restoration and compensation for damage to habitats and biological diversity; and
 - e. Exploring innovative investment opportunities, such as “blue carbon,” payment for ecosystem services, trust funds, and private-public partnerships.

Objective 2:

Maintenance and enhancement of the quality of coastal waters

Action Programmes

1. Strengthen the compatibility and balance of freshwater and marine water uses by:
 - a. Modifying or formulating economic development policies which take into account:
 - the value of water as a catalyst for sustainable social progress and economic growth;
 - mechanisms to address intersectoral conflicts; and
 - ecological impacts of infrastructure projects;
 - b. Establishing national policies on water resource development and management, addressing consumptive and nonconsumptive use, food security, public health, and protection/ conservation of natural resources.
2. Integrate subregional arrangements for environmental management of international water systems with coastal and marine ecosystems by:
 - a. Extending the implementation of integrated watershed development and management programmes to all major river basins, lakes, and international water systems in the region;

- b. Incorporating appropriate water quality elements into watershed, lake, coastal and marine management programmes, with a view to both ecosystem integrity and public health protection;
- c. Integrating water resource development into land and sea use plans; and
- d. Preparing and implementing regulations, well-defined property rights, economic instruments and management programmes at the local, national, and subregional level which promote sustainable and rational use of coastal waters.

Objective 3:

Equitable and sustainable fisheries and conservation of fish stocks

Action Programmes

1. Enhance transboundary cooperation in subregional sea areas for fisheries management by:
 - a. Engaging coastal States to adopt and implement the FAO Code of Conduct for Responsible Fisheries;
 - b. Increasing recognition of coastal and marine habitats that are vital to the fisheries resource of the subregional sea area;
 - c. Strengthening capacity to manage living resources in the EEZ; and
 - d. Putting in place subregional institutional measures to monitor the effectiveness of resource management measures.

2. Utilize living resources in a responsible manner by:
 - a. Reducing excessive fishing capacity through such measures as buy-back schemes and territorial use rights;
 - b. Maintaining or restoring fish stocks to levels that can sustainably support present and future generations;
 - c. Applying an ecosystem management approach, inclusive of fisheries management, to planning and development of coastal and marine areas;
 - d. Producing shared ownership of fisheries management through cooperative and partnership arrangements, including joint assessment of shared stocks;
 - e. Enforcing fisheries regulations at national and local levels; and
 - f. Developing and implementing national, and where appropriate, regional, arrangements to put into effect the FAO international plans of action, in particular, those measures to prevent, deter, and eliminate illegal, unreported, and unregulated fishing.

3. Integrate fisheries management into coastal management programmes at the local level by:
 - a. Taking appropriate measures to protect the rights and livelihoods of small-scale fishers and fish workers, including community-based management;
 - b. Implementing measures against destructive fishing methods and practices that result in excessive by-catch, waste of fish catch, and loss of habitat;
 - c. Building capacities in appropriate aquaculture technologies to bring about fish stock conservation and diversification of income and diet;
 - d. Increasing community benefits through diverse and innovative approaches to fisheries management, involving commercial, municipal, and recreational fishing, as well as cultural, conservation, trade, and tourism purposes;
 - e. Preserving appropriate indigenous/traditional knowledge and practices in fisheries management, including territorial use rights in fisheries; and
 - f. Developing sustainable alternative livelihoods for displaced fishers.

PRESERVE

The East Asian countries shall preserve species and areas of coastal and marine environment that are pristine or of ecological, social and cultural significances

Principles

Pristine habitats and areas of ecological, social, and/or cultural significance are irreplaceable assets, the benefits of which may not yet be fully understood and they must therefore be preserved.

Wild flora and fauna in their many beautiful and varied forms are an irreplaceable part of the natural systems of the earth which must be protected for this and the generations to come.

Wetlands perform fundamental ecological functions as regulators of water regimes and as habitats supporting characteristic flora and fauna, especially waterfowl.

States shall take all measures necessary to prevent, reduce, or regulate the intentional or accidental introduction of species, alien or new, to a particular part of the marine environment, which may cause significant and harmful changes thereto.

Conservation and sustainable use of biodiversity and the fair and equitable sharing of benefits arising from use of genetic resources are essential to our planet, human well-being, and the livelihood and cultural integrity of people.

Objective 1:

A common management system for marine protected areas of transboundary importance

Action Programmes

1. Select and prioritize coastal and marine protected areas^a of transboundary importance by:
 - a. Agreeing on selection criteria^b for identifying coastal and marine areas which:
 - contain rare, vulnerable, endangered or critically endangered species or threatened ecological communities within the region;

^a The term “protected areas” is used in this document as a generic term to include all forms of preservation, conservation and protection.

^b Such criteria are the Ecologically or Biologically Significant Marine Areas (EBSAs) criteria of the Convention on Biological Diversity, Areas for Zero Extinction, Important Bird and Biodiversity Areas of BirdLife International, and Key Biodiversity Areas of the International Union for Conservation of Nature.

- maintain populations of plant and/or animal species important to the biological diversity of the region;
 - support regionally important fish stocks; and
 - provide refuge, a source of food, nursery, and/or migration path for migratory species of regional and/or international importance;
- b. Classifying protected areas on the basis of types and uses, taking into account guidelines, criteria and standards for protected areas and particularly sensitive sea areas under international instruments^c; and
 - c. Prioritizing marine protected areas that are of particular importance for biodiversity and ecosystem services serving critical transboundary ecological and/or economic functions.
2. Establish appropriate management regimes for marine protected areas and particularly sensitive sea areas of transboundary significance by:
 - a. Adopting a management framework that encompasses the various classifications of protected areas, and provides an integrated approach to the planning, management, and assessment of impacts and benefits derived from the use of the areas, and regularly reviewing the effectiveness of this framework;
 - b. Building capacity and engaging local stakeholder groups/government units, and the private sector to manage marine protected areas;
 - c. Applying complementary land and sea-use planning and development schemes at the national and local levels;
 - d. Institutionalizing innovative administrative, legal, economic, and financial instruments that encourage partnership among local and national stakeholders; and
 - e. Conducting surveys, developing inventories of marine flora and fauna, and storing/sharing acquired information through national, regional, and international databases.

Objective 2:

Safeguarding of rare, threatened and endangered species and genetic resources

Action Programmes

1. Establish a regional accord for the protection of species at risk by:
 - a. Outlining commitments for designating species at risk across the region, based on internationally accepted criteria, such as the IUCN Red List Categories and Criteria, protecting their habitats and developing recovery plans;

^c Such international instruments are the Convention on Biological Diversity, Convention on Migratory Species, World Heritage Convention, Ramsar Convention, MARPOL, UNCLOS and the IMO Revised Guidelines for the Identification and Designation of Particularly Sensitive Sea Areas (PSSAs)

- b. Developing partnerships among national governments, industry (e.g., fishing/aquaculture, tourism, trade, transportation), the private sector, local governments, conservation groups, and the scientific community to effectively protect species at risk; and
 - c. Adopting complementary legislation, regulations, policies and programmes to identify and protect threatened and endangered species and their critical habitats.
- 2. Implement national recovery and management processes for species at risk across the region by:
 - a. Engaging stakeholders at the local level in the preparation of recovery strategies, bringing together the best available scientific, traditional, and community knowledge of the species;
 - b. Formulating and implementing local action plans under the umbrella of the recovery strategy; and
 - c. Levying economic incentives and disincentives and innovative programmes at the local level to help protect the species.
- 3. Create regionwide safety nets for species at risk and genetic resources by:
 - a. Preventing the introduction of controlling or eradicating alien species that threaten indigenous species, their ecosystems or specific habitats;
 - b. Prohibiting trade in endangered species in accordance with the provisions of CITES and networking with existing trade monitoring programmes;
 - c. Adopting measures regarding commercial exploitation of valuable species and addressing by-catch of endangered species;
 - d. Establishing protected areas, which also function as in situ gene banks, in accordance with international guidelines, criteria and standards for protected areas; and
 - e. Developing benefit-sharing arrangements for bioprospecting activities, based on mutually agreed terms and subject to prior informed consent from both the government and local communities.

Objective 3:

Conservation of transboundary areas of social, cultural, historical and geological significance

Action Programmes

- 1. Protect cultural and natural properties deemed to be of outstanding regional value by:
 - a. Agreeing on criteria for cultural and natural properties which represent the most outstanding values from a regional perspective;

- b. Setting in place a nomination and review process for listing transboundary areas as cultural heritage or natural heritage sites, including the participation of local communities, indigenous people, and other pertinent stakeholders in the identification and nomination process;
 - c. Ensuring that legal and/or traditional protection and management arrangements adequately preserve the valued properties; and
 - d. Implementing a monitoring and evaluation procedure to ascertain that listed transboundary areas maintain characteristics of outstanding value, including a procedure for disqualification from the regional list for cause.
2. Manage transboundary cultural heritage and natural heritage sites by:
- a. Adopting the requirements for protected areas under international instruments^d;
 - b. Implementing appropriate legislation and regulations at the national and local levels, including provisions to maintain/reinforce traditional protection and management mechanisms;
 - c. Setting in place suitable administrative arrangements to cover the management of the property, its conservation and its accessibility to the public; and
 - d. Integrating sites into land and sea use zonation planning and development schemes at the national and local levels, including the delineation of appropriate buffer zones around the properties.

^d Such as the Convention Concerning the Protection of the World Cultural and Natural Heritage and the ASEAN Declaration on Heritage Parks

PROTECT

The East Asian countries shall protect ecosystems, human health and society from risks which occur as a consequence of human activity

Principles

Protection of the coastal and marine environment has direct and indirect economic benefits.

States should use the best practicable means at their disposal and in accordance with their capabilities to prevent, reduce and control pollution of the marine environment.

In taking measures to prevent, reduce, and control pollution of the marine environment, States shall act so as not to transfer, directly or indirectly, damage or hazards from one area to another or transform one type of pollution into another.

States shall take all measures necessary to prevent, reduce, and control pollution of the marine environment resulting from the use of technologies under their jurisdiction or control.

The polluter shall bear the costs of pollution through the employment of economic instruments and internalization of environmental costs.

Objective 1:

Subregional mechanisms to combat transboundary environmental threats in regional seas, including LMEs and subregional sea areas

Action Programmes

1. Strengthen and extend intergovernmental cooperation in environmental management of regional seas by:
 - a. Assessing and applying the lessons learned from ongoing “international waters” projects in the region;
 - b. Adopting a systematic and transparent process for identifying and prioritizing transboundary environmental risks;
 - c. Institutionalizing a complementary environmental management framework and strategy to enhance the effectiveness of national efforts to reduce transboundary environmental risks;
 - d. Organizing regional contingency plans, emergency response and cleanup cost recovery and compensation systems to combat catastrophic environmental events of natural or human origin, and to this end, undertaking measures to enhance the capabilities of the countries concerned;

- e. Incorporating intergovernmental initiatives in environmental management of river basins, subregional sea areas and LMEs into a management framework for regional seas; and
 - f. Implementing integrated environmental monitoring programmes, utilizing appropriate environmental indicators to determine the effectiveness of management interventions.
2. Reinforce national and local governments' roles, responsibilities and capabilities in environmental management of regional seas by:
- a. Adopting national policies on environmental management of regional seas, including the implementation of relevant international conventions and instruments;
 - b. Establishing appropriate legal and economic instruments and programmes to extend national capacities in developing and/or managing:
 - human activities resulting in transboundary pollution;
 - subregional growth areas;
 - toxic chemicals and hazardous wastes and their transboundary movements;
 - transboundary effects of habitat degradation/destruction;
 - nearshore and offshore construction, reclamation, and exploitation projects having transboundary implications; and
 - technologies and processes to minimize transboundary threats;
 - c. Engaging local governments to plan, develop, and manage coastal and marine resources within their respective administrative boundaries utilizing the ICM framework and process; and
 - d. Forging partnerships among governments, international agencies, donors, the private sector, and other concerned stakeholders.

Objective 2:

Coastal and marine degradation from land-based human activities arrested

Action Programmes

1. Strengthen capabilities to protect the marine environment from the harmful effects of land-based human activities by:
 - a. Enhancing the awareness of policymakers on the social, economic, and environmental costs incurred as a consequence of degraded marine and coastal ecosystems and related watershed areas;
 - b. Incorporating the aims, objectives, and guidance provided by international conventions and agreements, such as UNCLOS, Agenda 21, and GPA, into new and existing strategies, policies, and programmes of action at the local, national, and regional levels;

- c. Mainstreaming integrated coastal area and watershed management strategies and policies across levels of government, government agencies and institutions, and social and economic sectors;
 - d. Forging institutional cooperation among national and local governments, river basin authorities, port authorities and coastal area managers; and
 - e. Integrating coastal area management issues into relevant legislation and regulations pertaining to watershed management.
2. Implement management programmes, particularly focused at the local level, to combat the negative impacts of sewage, physical alteration and destruction of habitats, nutrients, sediment mobility, litter, microplastics, persistent organic pollutants, inorganic pollutants, heavy metals, harmful aquatic organisms and pathogens, and radioactive substances on the coastal and marine environment by:
- a. Strengthening the capacity of local governments to engage in integrated decisionmaking with stakeholder participation, to apply effective institutional and legal frameworks for sustainable coastal management, and to obtain and utilize sound scientific information in the implementation of ICM programmes;
 - b. Identifying priority risks arising from land-based activities, taking into account the social, economic, and environmental consequences of such activities and the tractability of the problems;
 - c. Preparing a sustainable vision for the coastal and marine area, based on the community's view of the identified problems and assessment of priorities for the future;
 - d. Developing an appropriate action programme to achieve the community's sustainable vision;
 - e. Introducing innovative policy, management, and institutional arrangements at the local government level, including economic instruments and incentive programmes, to encourage participation and partnerships among local government, the private sector, and civil society; and
 - f. Enhancing access by local governments to technical assistance, technology transfer, and financing programmes, to identify and assess needs and alternative solutions to local land-based sources of marine pollution, and to formulate and negotiate self-sustaining partnership arrangements with the private sector, investors, and financial institutions.
3. Adopt a holistic approach to managing the impacts of land-based activities by:
- a. Supporting an integrated management approach for coastal and ocean governance at the local, national, and regional levels, thereby accelerating the implementation of management programmes;
 - b. Incorporating actions to address impacts of land-based activities within the framework of integrated coastal and watershed management, including the protection of rivers, lakes, and tributaries, and promotion of "good practices" in land and water uses;

- c. Improving scientific assessment of anthropogenic impacts on the marine environment, such as impacts of coastal reclamation, construction of coastal structures, drainage, erosion and siltation, including socioeconomic effects;
- d. Building an integrated environmental monitoring and information management and reporting system to better measure the status, progress, and impacts of management programmes, for use in decisionmaking, public awareness and participation, and performance evaluation;
- e. Promoting south-south and north-south technical cooperation, technology transfer, and information-sharing networks;
- f. Putting in place national reforms which reinforce legislation and policies regarding land-based activities that degrade the coastal and marine environment, ensure transparency and accountability of government, provide multi-year investment programmes and establish an enabling environment for investment by the private sector; and
- g. Working with international financial institutions, regional development banks and other international financial mechanisms to facilitate and expeditiously finance environmental infrastructure and services.

Objective 3:

Prevention of adverse impacts from sea-based human activities

Action Programmes

1. Prevent operational and accidental pollution of marine waters from shipping activities by:
 - a. Implementing the requirements of MARPOL 73/78;
 - b. Instituting navigational safety and traffic management measures, especially in areas of congested traffic and/or of marine protected areas and for PSSAs in accordance with relevant IMO guidelines, standards and criteria^e;
 - c. Developing and strengthening capacity for at-sea multisectoral law enforcement and maritime surveillance while ensuring maritime safety and facilitating marine environmental protection;
 - d. Requiring the use of environmentally friendly, anti-fouling compounds on ships' hulls and marine equipment^f;

^e Such as the International Convention for the Safety of Life at Sea (SOLAS), 1974 and the IMO Revised Guidelines for the Identification and Designation of PSSAs.

^f In accordance with the terms of the International Convention on the Control of Harmful Anti-fouling Systems on Ships

- e. Applying appropriate technologies, processes, and procedures to avoid the introduction of alien organisms through ballast water discharges;
 - f. Providing suitable shore reception facilities and services in ports to receive operational wastes from ships; and
 - g. Strengthening safety and environmental management systems in ports and integrating such systems with environmental programmes of local communities.
2. Control ocean-dumping and incineration of wastes at sea in accordance with relevant international agreements.⁹
 3. Counter accidental spills and discharges from sea-based human activities by:
 - a. Adopting contingency plans in accordance with the OPRC 1990 at the regional, subregional, national, and local levels for responding promptly to pollution incidents involving oily, hazardous, and noxious substances;
 - b. Ensuring appropriate response procedures, equipment, materials, and personnel are in place on vessels and in terminals, ports and offshore units;
 - c. Applying appropriate technologies, processes and procedures for the prompt and effective removal of wrecks, when such removal is necessary, and the safe and environmentally sound recycling of ships;
 - d. Establishing agreements among governments, government agencies, industry, the private sector and community groups for tiered preparedness and response including support personnel, equipment, and materials in the event of accidental spills, including joint oil spill response, mutual aid mechanisms and facilities;
 - e. Undertaking regular training exercises involving the response groups; and
 - f. Developing an oil pollution source tracing capability.
 4. Attend to land-and sea-based economic development activities by:
 - a. Incorporating both land and sea-based activities into ICM programmes of local governments;
 - b. Adopting land and sea use zonation plans at the national and local government levels; and
 - c. Assessing and managing the environmental risks of shipping, dredging, land reclamation, aquaculture, seabed exploration and mining, offshore oil and gas exploitation, and other resource extractive industries within the context of ecosystem management and public benefit.

⁹ Such as the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972 (London Convention) and the 1996 Protocol to the Convention of the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 (London Protocol).

Objective 4:

Recovery of cleanup costs and compensation for damages

Action Programmes

1. Expedite the recovery of oil spill cleanup costs and compensation for economic damage by:
 - a. Ratifying and implementing CLC and FUND conventions;
 - b. Ensuring that national laws, administrative and eligibility procedures, and damage assessment processes are consistent with CLC and FUND conventions;
 - c. Setting up contingency plans among countries bordering subregional sea areas regarding accidental spills and discharges which result in, or have the potential to result in, transboundary marine pollution incidents; and
 - d. Negotiating preparatory agreements on eligible fees and charges for response personnel, equipment, materials, and services under the international liability and compensation regimes.

2. Expand cost recovery and damage compensation schemes by:
 - a. Ratifying and implementing international conventions covering a wider scope of damage-causing incidents^h and geographic areas beyond national jurisdictionⁱ;
 - b. Agreeing on a scheme for natural resource damage assessment, including a knowledge base on coastal and marine resources and a system for determining their values;
 - c. Setting up rules, administrative procedures, assessment processes, and financial mechanisms, which broaden eligibility criteria and available funds for damage compensation under national law; and
 - d. Providing local governments with the proper information on assessment processes and administrative procedures in order to increase their capacity to comply with compensation criteria.

3. Apply innovative approaches to restoration of damages by:
 - a. Adopting incentive programmes to encourage restoration of degraded areas by third parties, such as the granting of exclusive development rights to those areas;
 - b. Setting up environmental restoration funds founded on user pay and polluter pay schemes; and
 - c. Adopting compensatory restoration schemes, where resources, services, and equal valued services can be used to offset losses due to damage.

^h International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea, 1996 (HNS) and Basel Convention Protocol on Liability and Compensation, 2000.

ⁱ In accordance with the International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969 and Protocol Relating to Intervention on the High Seas in Cases of Pollution by Substances Other Than Oil, 1973 (Intervention).

ADAPT

The East Asian countries shall undertake steps to improve their capability to ADAPT to the adverse impacts of climate change and other man-made and natural hazards, particularly on ocean and coastal systems and coastal communities.

Managing Risks in Climate Change and Disasters in the Seas of East Asia.

Adapting to climate change and forecasted disasters cannot be decoupled from development and management of coastal and marine areas. This is because climate change and disaster risks are more than just an external shock. They are symptomatic of continuing accumulation of risks resulting from economic and development activities and policies.

Beyond awareness of the biophysical impacts and greater emphasis in socioeconomic conditions of vulnerable locales, vulnerability studies have shown the need to integrate climate change and disaster information into policymaking and decisionmaking. There is need to link policies and institutional arrangements with other national and local planning efforts and structures. It is also a fact that the capacities of the regulatory, oversight and implementing agencies tasked to address climate change and disaster risks remain low. Although the region has instituted and tapped financing instruments, they remain grossly inadequate vis-à-vis the estimated preparedness, response, adaptation and recovery costs.

Moving Beyond Vulnerability Assessments and Action Plans.

Since 2003, the SDS-SEA has provided Country Partners with a framework for sustainable development in coasts and the seas. Measures for adaptation to climate change and disaster risk reduction are seen as a continuum to approaches in natural resource management, pollution reduction, habitat protection, biodiversity conservation, water use and supply management and ocean and coastal governance—approaches which have guided sustainable development through the years.

Integrated coastal management (ICM) has been developed and applied across the region as a systematic approach to achieving the objectives of the SDS-SEA.

The Manila Ministerial Declaration in 2009, followed by the Changwon Declaration in 2012, promotes ICM as a vehicle for managing risks in East Asia. This high-level commitment builds upon previous agreements, and the growth in maturity in coastal/ocean policies and legislations in recent decades. With the adapt strategy incorporated into the SDS-SEA, there is impetus to scale up ICM programmes in the region while twinning them with climate change adaptation and managing disaster risks.

Principles

Climate change adaptation is a key area of concern in the Seas of East Asia region due to its peculiar vulnerability to climate change, the impacts of which cut across various areas and issues.

States shall prioritize climate change adaptation and disaster risk reduction and management to ensure the achievement of sustainable development.

The integrated coastal management approach is an essential mechanism in the sustainable development of coastal and marine areas, as well as in preparing for, adapting, and responding to the impacts of climate change.

Local governments should carry out inclusive coastal adaptation measures that take into account the general well-being of communities and, at the same time, allow adequate space for changes to their activities and lifestyle.

States should institutionalize and strengthen disaster preparedness and response, as well as use post-disaster reconstruction and recovery to reduce future disaster risks.

Objective 1:

Climate change adaptation and disaster risk reduction and management incorporated into development policies, plans, and programmes at national and local levels

Action Programmes

1. Strengthen national and local mechanisms to oversee and guide the implementation of programmes focused on sustainable development, climate change adaptation, and disaster risk reduction and management by:
 - a. Conducting collaborative planning among national and local governments, government agencies, legislators, and stakeholders to address climate change adaptation and disaster risk reduction and management, especially in highly vulnerable coastal areas;
 - b. Aligning sectoral policies, legislation, plans, and programmes in priority coastal, marine and watershed areas, including specific actions to mitigate the impacts of climate change and other natural and man-made hazards;
 - c. Formulating and fully implementing disaster risk management policies, plans and programmes that are linked and synergistic and that address preparing for, responding to, and recovering from natural and man-made hazards, including:
 - i. Establishing a national inter-sectoral coordinating mechanism to oversee implementation;

- ii. Establishing a system to record and account for all disaster losses and impacts, periodically estimating the probability of disaster risks to the population and to economic and fiscal assets;
 - iii. Addressing post-disaster recovery, reconstruction and displacement, particularly in disaster-prone coastal and watershed areas.
 - iv. Guiding the public sector in addressing disaster risk in publically owned, managed or regulated services and infrastructure, and in the environment;
 - v. Regulating and, as appropriate, providing incentives for actions by households, communities, businesses and individuals, particularly at the local level, that contribute to reducing natural and man-made hazards; and
 - vi. Encouraging the integration of voluntary commitments from all stakeholders, including civil society and the private sector, into national and local plans for disaster risk management.
- d. Mainstreaming climate change adaptation and disaster risk reduction and management into sustainable development programmes and investment plans at the national and local levels.
2. Prevent the creation of new risks, reduce existing risks, and strengthen resilience by:
- a. Delineating highly vulnerable coastal areas, communities, and resources and habitats, as well as vulnerable sectors of society, including the poor, women and the youth;
 - b. Developing and applying integrated land- and sea-use zoning plans and schemes to facilitate equitable access to coastal and marine resources and reduce competing and destructive uses;
 - c. Improving the natural defenses of coastal and marine ecosystems to the impacts of climate change and enhance carbon sequestration capacities of relevant habitats through ecosystem-based adaptation including:
 - i. Conservation of marine biological diversity and restoration of habitats and ecosystems;
 - ii. Equitable and sustainable management of fisheries; and
 - iii. Establishment of marine protected areas and marine protected area networks, as appropriate, based on scientifically sound information.
 - d. Decreasing vulnerability, particularly of marginalized and impoverished coastal communities, through:
 - i. Protection and improvement of water quality in coastal areas and associated river basins to enhance ecosystem services and ecosystem health;
 - ii. Addressing hazards associated with unsustainable development on both water quality (e.g., pollution, eutrophication, saltwater intrusion, erosion and sedimentation) and water quantity (e.g., flooding, water shortages, over-extraction, land subsidence);
 - iii. Providing and improving livelihood options through sustainable coastal fisheries and alternative and supplemental livelihood programmes in ecotourism, sustainable aquaculture and mariculture, etc.; and
 - iv. Identifying safe areas and setting up support systems for communities displaced by natural or man-made hazards or those located in high-risk areas.

Objective 2:

Strengthened capacity of national and local governments, communities, and other stakeholders to adapt to the impacts of climate change and respond to natural and man-made hazards

Action Programmes

1. Promote regional cooperation among countries in education and training activities related to ICM and climate change adaptation and disaster risk reduction and management by:
 - a. Organizing and maintaining a comprehensive regional knowledge management platform with linkages to national and local knowledge systems;
 - b. Providing ready access to knowledge products and services for planning and developing investments in climate-proofing and disaster-mitigating projects and programmes at the national and local levels;
 - c. Sharing information and knowledge on the development and application of innovative policies, legislation, technologies and practices in support of ICM programmes, as well as social, economic and environmental benefits being derived;
 - d. Aligning national action plans and programmes with Strategic Action Programmes and other endeavors for achieving target-focused action plans in LMEs and sub-regional sea areas; and
 - e. Strengthening collaboration in scientific research on developments, trends and emerging issues, best practices, and other information on climate change adaptation and disaster risk response and management in the region.
2. Strengthen national and local capacity building programmes on climate change adaptation and disaster risk reduction and management by:
 - a. Providing public awareness, education at all levels, and professional education and training on the inter-dependence of disasters with development, climate change and variability, disaster risk vulnerability, and exposure; and
 - b. Assisting local government and coastal communities in conducting environmental monitoring and effectively utilizing the PEMSEA's State of the Coasts (SOC) reporting or similar system in their planning and investment processes.
3. Foster networks and partnerships to plan, coordinate and implement climate change adaptation and disaster risk reduction and management initiatives at different levels and across different sectors by:
 - a. Pursuing opportunities for innovative partnerships among national and local governments, regional and sub-regional organizations, UN agencies, international financial institutions, donors, the business community, scientific and technical institutions, academe, civil society, and the media; and

- b. Exploring innovative partnerships with the private sector and professional associations to factor climate considerations into project quality standards and mechanisms for compliance, including certification in certain sectors.
- c. Building partnerships with indigenous peoples' groups and local communities to ensure that relevant traditional knowledge, innovation, and practices are considered and utilized in adapting to climate change and responding to hazards.

Objective 3:

Risk-sensitive public and private investments are supported by innovative sustainable financing mechanisms

Action Programmes

1. Develop and strengthen financial and fiscal instruments, including for development projects, in order to:
 - a. Stimulate and promote investments in green industry, technology and practices (e.g., eco-agriculture, eco-aquaculture, eco-friendly coastal and community-based tourism) for improving the resiliency of coastal communities;
 - b. Employ and optimize a range of new and innovative financial mechanisms available in the UNFCCC and other international agreements to develop, implement and sustain ICM programmes (e.g., payment schemes involving blue carbon);
 - c. Support targeted research on the valuation of natural resources and ecosystem services, and the losses to society and economy as a consequence of degradation and destruction; and
 - d. Evaluate, develop and adopt applicable insurance schemes for damages resulting from climate-related phenomena.

2. Develop non-monetary incentives and mechanisms that motivate environment-friendly and sustainable investments affecting oceans, coastal resources and communities by:
 - a. improving adaptive capacity and decreasing vulnerability to risks of coastal communities through technology transfer, including on concessional and mutually agreed terms, to local or community-led ICM programmes; and
 - b. recognizing/certifying the application of green technology and other actions aligned with an ocean-based blue economy at the level of communities and businesses.

DEVELOP

The East Asian countries shall develop areas and opportunities in the coastal and marine environment that contribute to economic prosperity and social well-being while safeguarding ecological values

Principles

Economic development is of vital importance to people and the environment at local, national, and regional levels.

Environmental protection and economic development are compatible with one another.

In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and should not be considered in isolation from it.

Market mechanisms which internalize environmental costs and benefits promote long-term economic growth.

To protect and preserve the marine environment, the use of the full range of available management tools and financing options in implementing national or regional programmes of action, including innovative managerial and financial techniques, should be promoted.

Objective 1:

Promotion of sustainable economic development towards a blue economy^j in coastal and marine areas

Action Programmes

1. Promote appropriate national coastal and marine strategies and policies by:
 - a. Institutionalizing multisectoral stakeholder consultation and participation in decisionmaking; and
 - b. Taking into account diversified regional and local traditions, customs, values, comparative advantages, constraints, and other conditions in the formulation and implementation of national sustainable economic development programmes concerning coastal and marine areas.

^j The Changwon Declaration defines “blue economy” as a “practical ocean-based economic model using green infrastructure and technologies, innovative financing mechanisms and proactive institutional arrangements for meeting the twin goals of protecting our oceans and coasts and enhancing its potential contribution to sustainable development, including improved human well-being, and reducing environmental risks and ecological scarcities.”

2. Adopt mechanisms that promote public participation in planning and development processes by:
 - a. Developing land and sea-use plans, in consultation with stakeholders from the public and private sectors;
 - b. Having a clear process and criteria for achieving major developments in coastal and marine areas;
 - c. Conducting stakeholder consultations and consensus-building to identify, package, and develop environmental investment opportunities;
 - d. Identifying and prioritizing opportunities for development, which complement the shared vision of stakeholders for their coastal and marine areas;
 - e. Employing information and education programmes about the coastal and marine environment and related development opportunities; and
 - f. Strengthening and expanding environmental assessment systems and practices and phasing in use of strategic environmental assessment/IEIA as a tool for integrating environmental and social concerns, as appropriate, at earlier stages of decision making.

3. Integrate economic development and environmental management by:
 - a. Formulating local coastal strategies;
 - b. Preparing strategic environmental and resource use management plans which fulfill the shared vision of local stakeholders;
 - c. Ensuring that national and local development plans complement land- and sea-use zonation plans;
 - d. Aligning developments in coastal and marine areas with social, cultural, and economic characteristics of, and benefits to, local communities;
 - e. Supporting targeted research, development and adoption of innovative green technologies;
 - f. Promoting partnerships in sustainable development and corporate responsibility among marine industries, such as shipping, capture fisheries and aquaculture and the exploration and exploitation of oil and gas and hard minerals, to ensure environmentally sound operations;
 - g. Utilizing the EIA process to address the long-term, communitywide and cross-sectoral implications of proposed developments;
 - h. Improving public access to and benefit from sustainable use of coastal and marine resources through:
 - ecotourism as a medium for promoting appreciation for the natural and cultural environment by local residents, visitors, and tourists;
 - appropriate restrictions on waterfront access by industry and commercial operations;
 - marine industries which return long-term economic and conservation benefits;
 - port development/expansion on coastal lands with deep water access; and
 - public ownership of coastal and marine properties of cultural and natural significance at local, national, and regional levels; and
 - i. Enhancing the capacities of the less-developed regions and localities, as well as local and indigenous communities, in addressing the challenges to sustainable development.

Objective 2:

ICM as an effective management framework to achieve the sustainable development of coastal and marine areas

Action Programmes

1. Reduce conflicting and nonsustainable usage of coastal and marine resources by:
 - a. Implementing ICM programmes at the local level to address multiple-use conflicts;
 - b. Empowering and building the capacity of local governments to realize benefits derived from ICM programmes through demonstration projects, and promote networking among project sites through the PEMSEA Network of Local Governments for Sustainable Coastal Development (PNLG) to facilitate sharing of information, providing mutual assistance and promoting good practices, and applying nationally and/or internationally recognized standards and certification systems for ICM;
 - c. Formulating and implementing ICM programmes at the local level, providing operational linkages among economic activities, natural resource management and social development including poverty alleviation, reduction of vulnerability to natural hazards, and sustainable livelihood; and
 - d. Creating partnerships among national agencies, local governments, and civil society that vest responsibility in concerned stakeholders for use planning, development, and management of coastal and marine resources.
2. Turn knowledge and concern about the coastal and marine environment into actions by:
 - a. Mobilizing local communities, environmental organizations, religious groups, and the private sector to craft a shared vision for their coastal area;
 - b. Enjoining indigenous peoples and marginalized groups in coastal areas as partners in the planning, development, and management of coastal resources;
 - c. Linking local scientific/technical institutions with other stakeholders in the community to provide scientific input into the planning and decisionmaking processes of local government; and
 - d. Implementing action plans that respond to the environmental values and threats that local stakeholders share regarding their coastal and marine environment, e.g., multiple-use zonation scheme, integrated waste management, and habitat conservation.
3. Build sustainable development and environmental conservation programmes at the local level by:
 - a. Institutionalizing legal, administrative, and economic instruments at the local government level in support of the ICM framework and process;
 - b. Creating investment opportunities for sustainable development projects, including environmental improvement projects, by local, national, and international agencies, programmes, investors, and companies;

- c. Applying innovative financial mechanisms to ensure that users and beneficiaries of coastal and marine resources recognize the value for such resources, and compensate accordingly; and
 - d. Enhancing corporate responsibility for sustainable development of natural resources through application of appropriate policy, regulatory and economic incentive packages.
4. Manage the ecological and social impacts of expanding coastal urbanization, particularly large and megacities in the coastal zone, by:
- a. Strengthening multisectoral stakeholder involvement in managing the urban affairs to address adverse impacts that may accompany rapid urbanization and population growth and ensure the implementation of sustainable urban development policies;
 - b. Undertaking risk assessment/risk management programmes with special attention to public health, population density, and the vulnerabilities of urban populations and environment; and
 - c. Increasing awareness and capacity-building programmes related to management of coastal urban areas.

Objective 3:

Subregional growth areas incorporating transboundary environmental management programmes

Action Programmes

1. Adopt a systematic process for evaluating policy, socioeconomic and environmental implications of growth areas on the coastal and marine resources by:
 - a. Incorporating transboundary environmental concerns into bilateral and multilateral agreements on the development and management of growth areas;
 - b. Adopting mechanisms to ensure the participation of local and national stakeholders in the planning, development, and management of subregional growth areas;
 - c. Establishing complementary action programmes to avoid transboundary environmental threats; and
 - d. Implementing an environmental management system within the growth area, including complementary economic instruments and regulatory mechanisms to promote cleaner production technologies and processes and investments in environmental facilities and services.
2. Implement appropriate policies and guidelines on approval of development opportunities by:
 - a. Establishing an environmental assessment procedure for all major developments;
 - b. Assuring that local stakeholders are able to participate in the approval process;

- c. Requiring proposed infrastructure and administrative services, such as transportation and institutional arrangements, to be compatible with the social and economic goals of the subregion;
- d. Ensuring that complementary environmental facilities and services are provided in the development, for public benefit and sustainable use of the resource; and
- e. Stipulating strategies and socioeconomic evaluations for developing, financing, constructing, operating, and maintaining the required infrastructure and ancillary environmental services.

Objective 4:

Partnerships in sustainable financing and environmental investments

Action Programmes

1. Adopt national policies, programmes, and practices to establish a stable investment climate and encourage partnerships by:
 - a. Undertaking necessary structural reforms to facilitate coordination and eliminate interjurisdictional bottlenecks and constraints;
 - b. Promoting local government responsibility, transparency, and accountability in the use of public funds and access to other forms of financing;
 - c. Raising public sector understanding of environmental issues and the partnership process for effective environmental management;
 - d. Implementing clear guidelines, criteria, and processes for developing partnerships with local, national, and international stakeholders, agencies, donors, investors, and operating companies;
 - e. Streamlining environmental assessment and clearance processes to facilitate investment projects and access to domestic and international finance opportunities;
 - f. Having a national accounting of ocean and coastal resources that realistically reflect their intrinsic value as well as the value of the goods and services they provide;
 - g. Creating incentive programmes for investments in environmental infrastructure, cleaner production technologies and processes, eco-efficiency, and supporting technical and scientific services;
 - h. Implementing policies, laws, regulations, and programmes to maintain a well-defined and level playing field among existing and potential partners; and
 - i. Undertaking dynamic information dissemination programmes to attract investment capital in the international and domestic marketplaces.

2. Boost capital flows into environmental investments at the local level by:
 - a. Empowering local governments to provide affordable environmental facilities and services to the public, in concert with national regulations, criteria, and policies;
 - b. Authorizing local governments to enter into partnerships with local, national, and international parties to plan, finance, construct, and operate environmental facilities and support services;
 - c. Building the capacity of local governments as dynamic partners in packaging, promoting, and implementing opportunities for environmental investments;
 - d. Providing local governments with the authority to enter into partnerships with sectoral bodies, river basin authorities, regional development banks, and commercial financing sources; and
 - e. Instituting environmental management systems into local government operations which signal commitment and sustainability, including:
 - strategic environmental management plans;
 - review and approval processes for new developments;
 - enforcement of environmental laws, regulations, and standards;
 - environmental monitoring and evaluation programmes;
 - fair and affordable systems of cost recovery for environmental services;
 - ISO certification of local government units, industry, and commercial enterprises;
 - incentive/reward systems for representative environmental citizens, such as certifications and public awards; and
 - voluntary programmes with industry and commercial enterprises, including community services, environmental audits, and waste minimization initiatives.

3. Strengthen the role of the private sector by:
 - a. Providing legal, administrative, and economic instruments in support of private sector investments, employing financing mechanisms such as public-private sector partnerships, joint ventures corporations and operating contracts;
 - b. Promoting the integration of corporate social responsibility in company policies;
 - c. Encouraging private sector engagement in regional business networks;
 - d. Allocating project risks realistically (e.g., political, technical, commercial, financial) in order to reach a fair balance of risks and benefits among parties;
 - e. Establishing clear investment procedures;
 - f. Adapting private sector investments to population needs and resources, in order to obtain a cost-recovery scheme, which is affordable and acceptable by the local community; and
 - g. Strengthening and facilitating the participation of small business, informal business enterprises, and women in investments and the development of self-sustaining environmental enterprises.

IMPLEMENT

The East Asian countries shall implement international instruments relevant to the management of the coastal and marine environment

Principles

States should fulfill their obligations under these instruments in good faith, in full cooperation, and with a spirit of partnership with one another.

Effective environmental legislation is necessary for the implementation of these instruments.

The environmental standards, management objectives, and priorities of States should reflect the environmental and developmental context to which they apply.

States shall endeavor to harmonize their marine environmental policies with policies, plans, and programmes at the appropriate regional level.

In the implementation of international instruments, regional rules, standards, and recommended practices and procedures to manage the marine environment, characteristic regional features, the economic capacity of developing States, and their need for economic development shall be taken into account.

Objective 1:

National government accession to and compliance with relevant international conventions and agreements

Action Programmes

1. Translate the principles and objectives of international conventions and agreements into desired management outcomes by:
 - a. Evaluating the means and degree to which international instruments serve as a foundation and framework for, or are complementary to, national environmental policies and programmes;
 - b. Prioritizing the country's accession to relevant international conventions and agreements;
 - c. Identifying the gaps and constraints that exist regarding a country's ability to achieve full compliance with its international obligations under current national programmes;
 - d. Consolidating the administrative, operational, and reporting requirements of international conventions and agreements with the planning and management processes of functional agencies; and

- e. Participating in formulation and revision of international instruments to contribute local considerations and needs and ensure their relevance to national, local, and regional situations.
2. Improve the efficiency and effectiveness with which international conventions are implemented by:
- a. Identifying common actions among national agencies, industry, and the private sector that can be integrated;
 - b. Adopting strategies and policies leading to improved coordination of operations at the local and regional levels to meet international commitments;
 - c. Establishing national intersectoral, interagency, and interdisciplinary mechanisms to organize, coordinate, and manage the implementation of the identified common actions and adopted strategies and policies;
 - d. Forging partnerships with stakeholders who are directly affected by or benefit from international rules, standards, and certifications to ensure their full participation and contribution;
 - e. Calling on parties to international conventions and agreements for technical cooperation and assistance to build capacity at the regional, national, and local levels; and
 - f. Strengthening legislation and clarifying mandates among government agencies related to economic development of marine and coastal areas and environmental and resource management.

Objective 2:

Regional cooperation in integrated implementation of international instruments

Action Programmes

1. Enhance synergies and linkages between international conventions and agreements at the regional level by:
- a. Providing a factual basis for countries of the region to consider the benefits derived from multilateral environmental agreements, and establishing complementarities among international conventions, including transboundary issues;
 - b. Developing a guide on integrated implementation of conventions which covers complementarities at the substantive obligation level and at the working programme level;
 - c. Examining institutional, scientific, and management mechanisms that support integrated implementation of international conventions, holistic approaches to related issues, information-sharing and joint capacity-building initiatives; and
 - d. Reviewing the implications for enhanced funding, technical assistance, and technical cooperation from GEF, World Bank, international agencies, and donors.

2. Review and continually improve the SDS-SEA as a functional framework for regional cooperation in integrated implementation of international conventions and agreements by:
 - a. Updating the regional strategy in line with new and amended international agreements, recognizing individual and common responsibilities to implement the strategy;
 - b. Developing and maintaining a regional fund to serve as an incentive and reward system for local governments to transition to a blue economy.
 - c. Developing holistic management approaches to achieving the objectives of environment-related international conventions, such as ICM, ecosystem-based management, vulnerability assessment, and risk reduction and management;
 - d. Identifying common actions that contribute to the implementation of international conventions, such as conserving and restoring habitats, emergency response, protecting threatened species, pollution prevention and management, public awareness and environmental monitoring;
 - e. Establishing concerted action plans to coordinate the common efforts of countries to address transborder environmental issues, and to improve the efficiency and cost-effectiveness of environmental programmes;
 - f. Strengthening the use of the State of Coasts (SOC) reporting system or similar reporting systems at the local, national and regional levels for monitoring and evaluation;
 - g. Formulating multilateral project proposals on subregional initiatives to attract extra-budgetary funds and environmental investments;
 - h. Building capacity through sharing of information, experience, and expertise among countries; and
 - i. Based on existing mechanisms, making more effective regional arrangements, taking into account advantages and constraints of various options, including regional conventions and agreements, to facilitate the implementation of the common strategy and action programmes.

Objective 3:

Execution of obligations under international conventions and agreements at the local government level

Action Programmes

1. Scale up ICM programmes to enable local stakeholders to effectively contribute to Agenda 21, the Johannesburg Plan of Implementation, the Sustainable Development Goals, GPA, and other international instruments^k for sustainable development as updated by:
 - a. Establishing ICM policies and programmes at the national and local levels that transform obligations under international conventions into on-the-ground actions;
 - b. Empowering local governments to plan, develop, and manage the coastal and marine resources within their jurisdiction, including actions designated under international conventions and agreements;
 - c. Building local capacities for integrated management, including ICM, community-based management of coastal resources, integrated waste management and sustainable tourism; and
 - d. Providing seed funding and creating incentive programmes to help local stakeholders with the development and startup of appropriate facilities, services, and programmes.

^k Such as The Future We Want, the Aichi Biodiversity Targets, the Strategic Plan for Biodiversity 2011-2020, the Pyeongchang Roadmap, among many others.

COMMUNICATE

The East Asian countries shall communicate with stakeholders to raise public awareness, strengthen multisectoral participation and obtain scientific support for the sustainable development of the coastal and marine environment

Principles

States shall facilitate and encourage public awareness and participation by making information widely available on the state of the coastal and marine environment, as well as programmes related to its sustainable development.

The creativity, ideal, and courage of the youth of the world should be mobilized to forge a global partnership in order to achieve sustainable development.

Women have a vital role in environmental management and development. Their full participation is therefore essential to achieve sustainable development.

Understanding of the importance of, and the measures required for, the protection and preservation of the marine environment shall be propagated through various media, and developed and included in educational and public awareness programmes.

Objective 1:

Raising public awareness and understanding of coastal and marine environmental and resource management issues and processes

Action Programmes

1. Establish good information exchange between stakeholders by:
 - a. Determining the values that different sectors of society place on coastal and marine resources and the existing and potential threats to those values as perceived by the different stakeholders, including:
 - fishing, aquaculture, seaweed farming, tourism, etc.;
 - navigation;
 - tourism and recreation;
 - social, cultural, and aesthetic characteristics; and
 - protection from typhoons, coastal erosion, flooding, and other ocean-related disturbances.

- b. Turning disparate views regarding the coastal and marine environment into a shared vision among stakeholders through information and education campaigns that:
 - alert stakeholders to the environmental issues and needed changes;
 - identify direction, purpose, a focus for action, and roles and responsibilities;
 - promote interest and commitment through public forums/events;
 - encourage openness to unique and creative solutions; and
 - develop loyalty through involvement and ownership (e.g., voluntary agreements).
2. Strengthen the use of available information on environmental issues, technologies, processes and lessons learned at the local, national and regional levels by:
- a. Setting up/enhancing knowledge sharing platforms and communication networks among stakeholder groups;
 - b. Adopting capacity-building and information dissemination initiatives aimed at assisting civil servants, government officials, NGOs, POs, religious groups, teachers, trainers, and the media to promote environmental management among civil society;
 - c. Improving methods of communicating with indigenous people and marginalized groups in coastal areas to encourage participation in and ownership of local environmental management programmes;
 - d. Strengthening scientific and technical education and training in sustainable environmental management of coastal and marine ecosystems; and
 - e. Translating and disseminating information on the dynamics of coastal and marine ecosystems and their sustainable development into local languages.

Objective 2:

Utilization of science and traditional knowledge in decisionmaking processes

Action Programmes

1. Establish information technology (IT) as a vital tool in sustainable development programmes at the local, national, and regional levels systems by:
 - a. Aligning national information management systems with the framework and standard of the Integrated Information Management System (IIMS) developed by PEMSEA for environmental information management at the local, national, and regional levels;
 - b. Building local government capacities to help decisionmakers and to sensitize the local public on environmental matters;
 - c. Linking people via computer networks to exchange information, encourage collaboration, and develop new opportunities;

- d. Cooperating with the private sector to spur investment in and use of IT;
 - e. Encouraging sharing of environmental information and lessons among countries and institutions as one way to build capacity and learn from one another's experiences; and
 - f. Applying innovative IT technologies to minimize costs, advance understanding of available information and serve as decision-support instruments for policymakers and other stakeholders.
2. Utilize science and traditional knowledge in environmental policy development and decisionmaking by:
- a. Forging partnerships with scientists and scientific institutions to encourage information and knowledge sharing at the local and national levels;
 - b. Supporting scientific research and applying established scientific information and tools which advances knowledge of ecosystem management and provides input to decisions on sustainable economic development, including:
 - new technology and practices that support the sustainable use of resources;
 - economic valuation of coastal and marine resources;
 - preservation of biodiversity and the natural and cultural heritage of the peoples and countries of the Seas of East Asia, including in situ and ex-situ research;
 - effective management of transboundary issues at the local, national, subregional, and regional level; and
 - the carrying capacity of the ecosystem to establish levels for sustainable resource use and economic development activities;
 - c. Applying the knowledge, innovations, practices and technologies of indigenous local communities in planning, development, and management processes;
 - d. Involving indigenous peoples and other stakeholders in gathering, analysis and use of information on habitats and biological diversity;
 - e. Coordinating local interest groups to undertake surveys/monitoring and other management efforts; and
 - f. Contributing to the regular process of the Global Marine Environment Monitoring and Assessment called for by the Johannesburg Plan of Implementation.

Objective 3:

Mobilization of governments, civil society and the private sector utilizing innovative communication methods

Action Programmes

1. Enhance dissemination of reliable and relevant data by:
 - a. Setting up local, national, and regional networks of organizations to collate, organize, and disseminate information on coastal and marine environmental and resource management (e.g., a marine electronic highway);
 - b. Creating virtual (online) media resource information centers to serve as clearinghouses/ depositories of information on coastal and marine environmental and resource management;
 - c. Establishing a news monitoring and quick response system vis-à-vis issues relating to coastal and marine environmental and resource management; and
 - d. Linking with international agencies, programmes, and activities to enhance IT skills in the creation of websites and management of networks and Internet services.

2. Encourage information sharing by:
 - a. Rewarding those who share information through access to innovative applications and/or information networks;
 - b. Creating opportunities for profit-sharing/cost-recovery through e-commerce;
 - c. Identifying market needs and potential users of shared information and developing responsive packaging/analytical techniques;
 - d. Promoting wider application of traditional knowledge and practices with the approval and involvement of communities concerned; and
 - e. Ensuring integrity and ownership of knowledge and information and equitable sharing of benefits derived from their utilization.

3. Build a sense of ownership among stakeholders in the sustainable development of the coastal and marine areas by:
 - a. Providing for effective procedures for stakeholder participation and public consultation in policymaking and implementation; and
 - b. Developing mechanisms for resolving disputes concerning the use of coastal and marine resources.

MONITORING THE STRATEGY

Monitoring the Strategy

A series of indicators have been developed to assess progress across the region regarding implementation of the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA). The indicators provide a systematic approach for each country to track its movement toward management arrangements, systems, and processes identified in the Strategy.

The State of the Coasts (SOC) reporting system is a tool to assist local governments in assessing the progress and benefits of ICM implementation. The SOC allows local governments to document and measure the effectiveness and impacts of policy and management interventions in support of sustainable coastal development, and evaluate progress towards local, national and international targets for sustainable development.

The SOC uses a series of processes, social, economic and environmental indicators as the basis to measure existing conditions at an ICM site, as well as to determine changes that occur over time. The SOC indicators are simple, meaningful and measurable parameters which are applicable in the EAS region and complement those of relevant regional and international instruments (e.g., Agenda 21, WSSD, MDG, SDS-SEA, CBD, UNFCCC, Sendai Framework of Action, etc.).

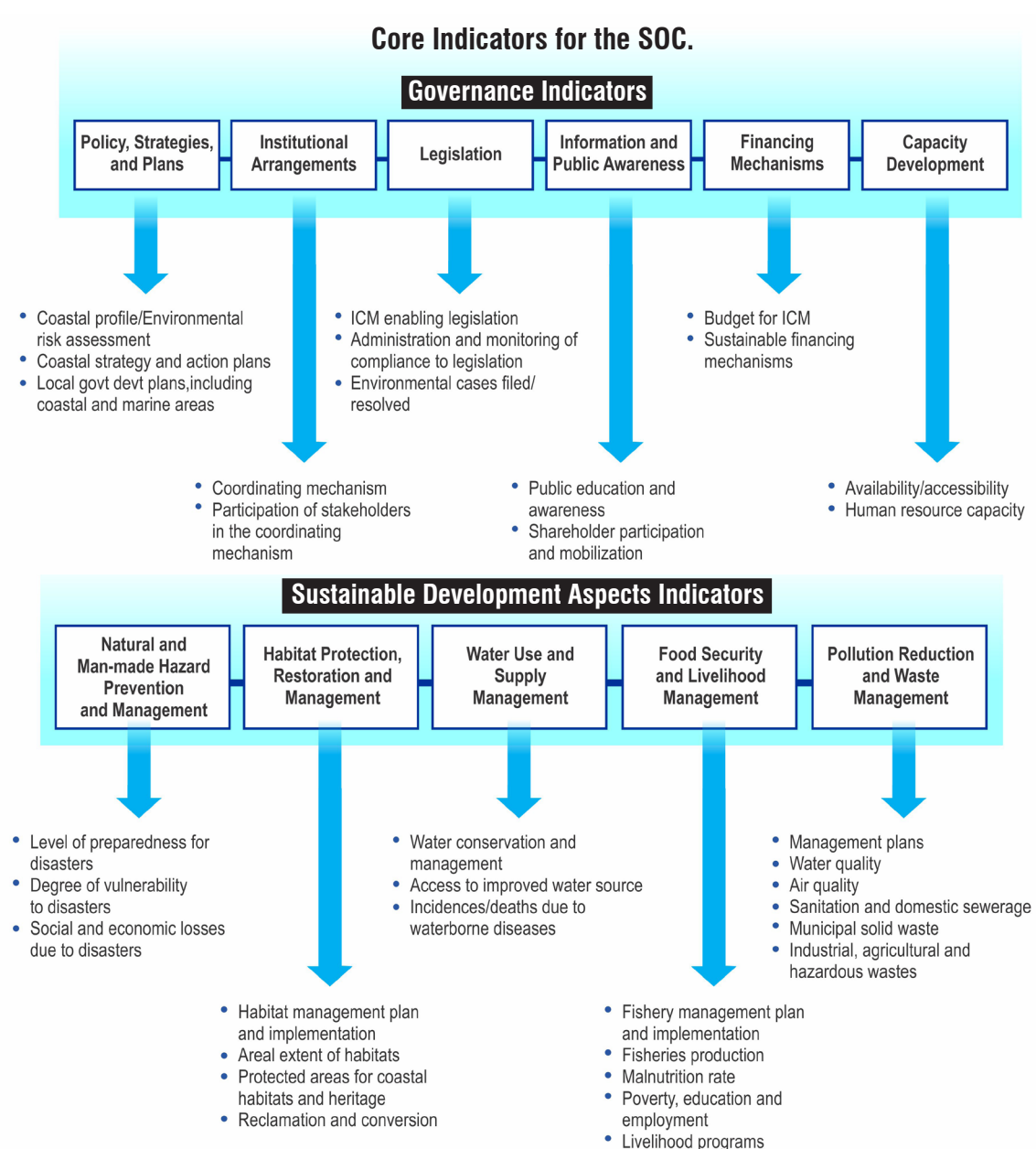
The figure below illustrates examples of the SOC indicators and their relevance to regional and international instruments.

Examples of SOC Indicators and their Relevance to Regional and International Instruments.

Regional/International Agreements	Targets	SD Framework	SOC Indicators
Sustainable Development Strategy for the Seas of East Asia <ul style="list-style-type: none"> • Haikou Partnership Agreement • Manila Declaration 	National coastal and ocean policies and supporting institutional arrangements in place in at least 70% of PEMSEA Partner Countries by 2015 ICM programmes for sustainable development of coastal and marine areas and climate change adaptation covering at least 20% of the region's coastline by 2015	Policy, strategies and plans/Institutional arrangements/ Legislation/Financing mechanisms	<ul style="list-style-type: none"> • [002] Coastal strategy and action plans • [003] Local government development plans integrating coastal and marine areas • [004] Coordinating mechanism • [005] Participation of stakeholders in coordinating mechanism • [006] ICM enabling legislation • [013] Budget for integrated coastal management
Sendai Framework of Action	Reduce disaster risk by 2030	Natural and man-made hazard prevention and management	<ul style="list-style-type: none"> • [015] Level of preparedness for disasters • [016] Degree of vulnerability to disasters • [017] Social and economic losses due to disasters
Convention on Biological Diversity	By 2020, the rate of loss of all natural coastal and marine habitats in coastal and marine areas of significant environmental value are at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced (modified from the Aichi Biodiversity Targets, B5)	Habitat protection, restoration and management	<ul style="list-style-type: none"> • [018] Habitat management plan and implementation • [019] Areal extent of habitats • [020] Protected areas for coastal habitats and heritage

Core Indicators for the State of the Coasts (SOC) Reporting System

From a total of 160 indicators, 35 were initially identified as the basic set of indicators for evaluating changes that occur in coastal areas over time, the management responses undertaken, as well as the effectiveness and impacts of ICM implementation. The SOC reporting is an evolving process. Recently, the indicator system was expanded to include additional indicators for disaster risk reduction, climate change adaptation, biodiversity protection, livelihood and food security, river basin management, and pollution control and mitigation. The figure below outlines the indicator system of the SOC.



A N N E X E S

- 1. Major International Instruments Relating to the Coastal and Marine Environment**
- 2. Major International and Regional Programmes of Action on the Coastal and Marine Environment**
- 3. International Conventions**

Annex 1

Major International Instruments Relating to the Coastal and Marine Environment

1. Rio Declaration 1992
2. United Nations Convention on the Law of the Sea, 1982 (UNCLOS)
3. United Nations Framework Convention on Climate Change, 1992 (UNFCCC)
4. Convention on Biological Diversity, 1992 (CBD)
5. Convention on International Trade in Endangered Species of Wild Fauna and Flora, 1973 (CITES)
6. International Convention for the Regulation of Whaling, 1946
7. Ramsar Convention on Wetlands, 1971 (Ramsar Convention)
8. Convention Concerning the Protection of the World Cultural and Natural Heritage, 1972 (World Heritage Convention)
9. Convention on the Conservation of Migratory Species of Wild Animals, 1979 (Convention on Migratory Species)
10. Code of Conduct for Responsible Fisheries
11. International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 Relating Thereto (MARPOL 73/78)
12. Convention on the Prevention of Marine Pollution by Dumping Wastes and Other Matter, 1973 and Its 1996 Protocol (London Convention)
13. Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, 1989 (Basel Convention)
14. International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990 (OPRC)
15. International Convention on Civil Liability for Oil Pollution Damage, 1969 and Its 1992 Protocol (CLC)
16. International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971 and Its 1992 Protocol (FUND)
17. International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea, 1996 (HNS)
18. Basel Convention Protocol on Liability and Compensation, 2000

19. International Convention on Civil Liability for Bunker Oil Pollution Damage, 2001 (Bunker Oil Convention)
20. International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969 and Protocol Relating to Intervention on the High Seas in Cases of Pollution by Substances Other Than Oil, 1973 (Intervention)
21. International Convention on Salvage, 1989 (Salvage)
22. The Future We Want 2012
23. Sustainable Development Goals 2015
24. Rio Ocean Declaration 2012
25. Ballast Water Management Convention, 2004 (BWM)
26. Nairobi International Convention on the Removal of Wrecks, 2007 (Nairobi Convention)
27. Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009 (Hong Kong Convention)
28. Minamata Convention on Mercury, 2013 (Minamata Convention)
29. Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity, 2010 (Nagoya Protocol)
30. Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, 2009
31. International Guidelines for the Management of Deep-sea Fisheries in the High Seas, 2008
32. International Guidelines on Bycatch Management and Reduction of Discards, 2011
33. Aichi Biodiversity Targets, 2010

Annex 2

Major International and Regional Programmes of Action on the Coastal and Marine Environment

1. Agenda 21, Chapter 17
2. World Summit on Sustainable Development Declaration and Plan of Implementation
3. United Nations Millennium Declaration and Development Goals
4. Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA)
5. Jakarta Mandate on Marine and Coastal Biological Diversity, 1995
6. Association of Southeast Asian Nations (ASEAN) Hanoi Plan of Action, 2000-2004
7. ASEAN Cooperation Plan on Transboundary Pollution, Kuala Lumpur, June 1995
8. ASEAN Agreement on the Conservation of Nature and Natural Resources, 1985
9. Regional Action Programme for Environmentally Sound and Sustainable Development, 2001-2005, Economic and Social Commission for Asia and the Pacific
10. Transboundary Diagnostic Analysis, and Strategic Action Programme, for the South China Sea, 2000, United Nations Environment Programme (UNEP) East Asian Seas Action Plan
11. Overview on Land-based Sources and Activities Affecting the Marine Environment in the East Asian Seas, 2000, UNEP East Asian Seas Action Plan
12. Vision and Plan: A Systematic Approach, 2000, UNEP East Asian Seas Long-term Plan
13. Northwest Pacific Action Plan (NOWPAP)
14. Asia-Pacific Economic Cooperation Action Plan for the Sustainability of the Marine Environment, 1997
15. Tokyo Memorandum of Understanding on Port State Control for the Asia Pacific
16. Awareness and Preparedness for Emergencies at Local Level (APELL)
17. Yellow Sea Large Marine Ecosystem Programme
18. Hyogo Framework for Action, 2005 (HFA)
19. Sendai Framework for Disaster Risk Reduction, 2015-2030
20. Coral Triangle Initiative on Coral Reefs, Fisheries, and Food Security (CTI-CFF) Regional Plan of Action, 2009
21. Strategic Action Programme for the South China Sea, UNEP 2008
22. Strategic Action Plan for the Yellow Sea Large Marine Ecosystem, UNDP 2009
23. Strategic Action Programme for Arafura and Timor Seas, UNDP 2013
24. Strategic Action Programme for the Bay of Bengal, FAO 2012
25. Comprehensive Action Plans of the Sulu-Sulawesi Marine Ecoregion, Asian Development Bank, 2011
26. New Strategic Direction for Coastal Areas of the East Asia Region, COBSEA, 2008

Annex 3

International Conventions

International conventions have a crucial role in the management of the marine environment. International conventions on the environment contain global standards by which the marine environment may be protected and managed. They provide both theoretical basis and practical means for addressing problems. In addition, they include a number of related international agreements to protect the environment, such as the Rio Declaration, Agenda 21, and the Global Programme of Action (GPA), which are not legally binding but have gained moral force through widespread international acceptance. These agreements have been strengthened by the follow-up document to the Rio Declaration, *The Future We Want*, and the new United Nations Sustainable Development Goals.

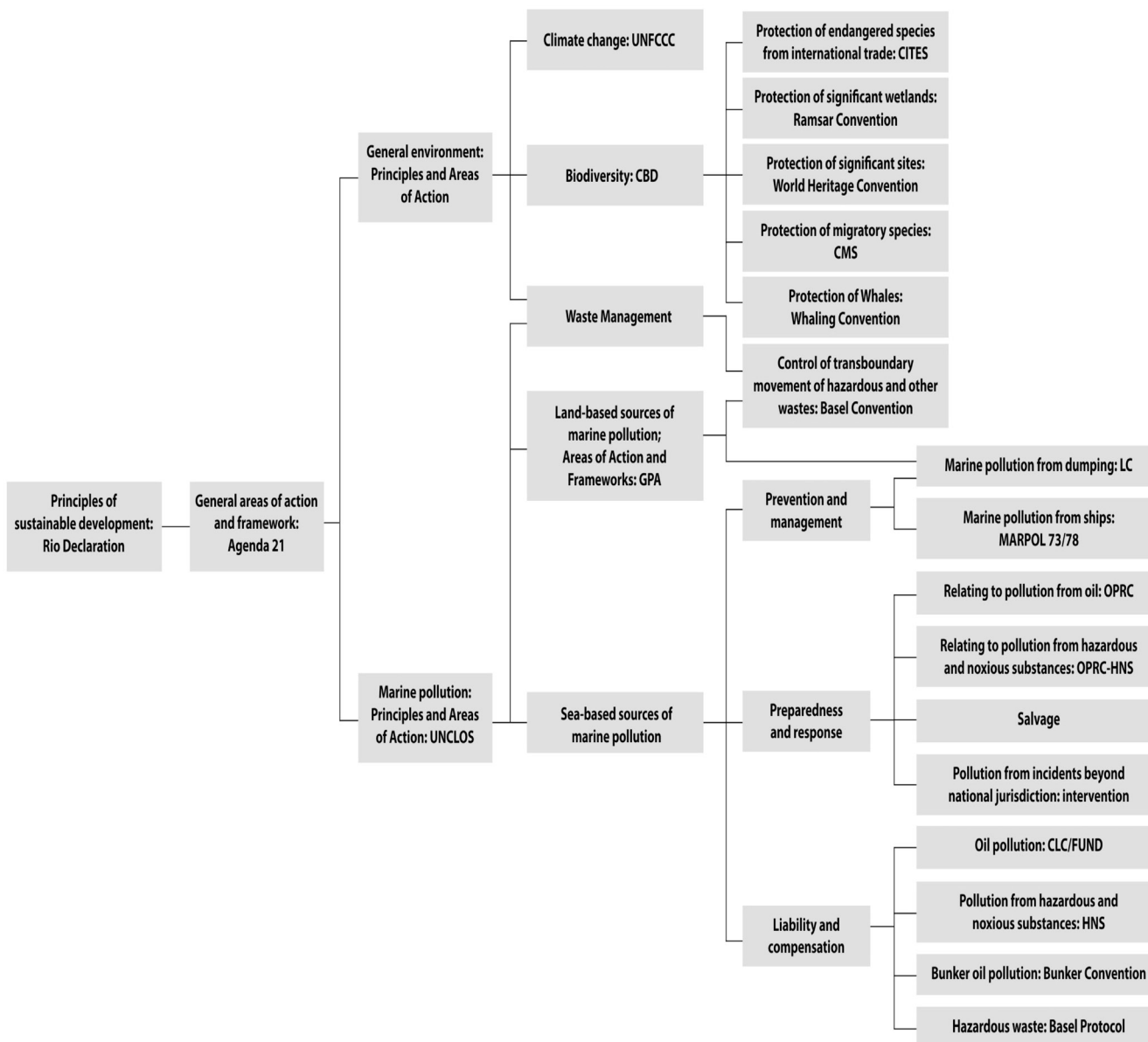
International conventions provide principles and frameworks upon which management of the marine environment rests. For example, the application of the precautionary and polluter pays principles are required by many conventions (the London Convention, the UNFCCC, the OPRC/HNS, etc.) and integrated coastal management is the “framework of choice” of Agenda 21, UNFCCC, CBD, and GPA.

International conventions on the environment are a relatively recent phenomenon in the realm of international law. At the time they were drafted, it was already understood that environmental problems do not recognize boundaries. This is especially true for the marine environment because of the nature of the medium that binds this environment—water. Thus the conventions deal especially with transboundary environmental problems, particularly the marine environment, and take special recognition of the need for regional cooperation. This represents a departure from traditional international law. With regard to navigation, for example, a ship has for centuries been regarded as an extension of the flag state’s territory, and is therefore subject only to that state’s jurisdiction. In the past three decades, International Maritime Organization conventions have evolved a system of port state control (without abandoning the flag state system) through which a state may impose environmental requirements over ships calling at its ports.

International Convention in an Integrated Implementation Framework

Taken all together, international conventions provide an overall and integrated framework for the protection of the marine environment (see Figure below). However, it is not yet a complete framework. There are many areas which may be the subject of future conventions, or which national legislation alone may cover. A key advantage of international conventions is that they represent global acceptance of environmental threats and solutions in addition to providing a framework for addressing transboundary problems on international and regional basis, as well as on a national basis.

International Conventions in an Integrated Implementation Network.



Implementation of International Conventions

International conventions and other instruments are not adopted according to a grand design. They are negotiated and concluded as the need arises, and may be as detailed and specific or general as is acceptable at the time. Thus conventions do not have the same level of “implementability”—some of them have provisions that are detailed enough to immediately enforce, while others need more development under national legislation and processes.

Acceptability to the majority of the states negotiating a convention also governs its provisions. For this reason, a convention may not reflect the best possible solutions or the application of the most advanced technology to particular problems. Thus, in implementing a convention, countries may, in a national context and/or multilaterally, go beyond the provisions of the convention.

The implementation requirements of international conventions intersect and combine to form a web of actions and approaches that protect the marine environment.

A legal, administrative, and facilities infrastructure can therefore be designed to promote the implementation of many conventions simultaneously.

For example, certain basic sets of actions such as monitoring, port state control, protected areas, and integrated waste management are included in a number of conventions. The table below shows how common implementation elements may bind different conventions together. By undertaking certain action programmes, obligations under many conventions are complied with.

Action Programmes for Integrated Implementation of International Instruments.

A C T I O N	C O N V E N T I O N															
	Rio Declaration	Agenda 21	UNCLOS	UNFCCC	GPA	CBD	Ramsar	CITES	Basel Convention	London Convention	MARPOL	OPRC	CLC/FUND/HNS	Ballast Water Convention	Nairobi Convention	Hong Kong Convention
ICM	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Integrated waste management	✓	✓	✓		✓				✓	✓	✓	✓				✓
Protected areas	✓	✓	✓		✓	✓	✓			✓	✓					
EIA	✓	✓		✓	✓	✓			✓	✓					✓	✓
Risk assessment		✓		✓	✓	✓				✓		✓	✓			✓
Monitoring		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	
Port state control			✓								✓	✓	✓	✓		

Ratification of International Conventions Relating to Marine Pollution (as of 26 August 2015).

CONVENTION	MARPOL 73/78					London Convention		COLREG Convention	Intervention		CLC			FUND		
	Annex					Convention	Protocol		Convention	Protocol	Convention	Protocol	Protocol	Convention	Protocol	Protocol
COUNTRY	III	III	IV	V	VI	72	96	72	69	73	69	76	92	71	92	03
Brunei Darussalam	86							87			D	92	03	D	03	
Cambodia	95	94	94	94				94			95	01	02		02	
China	83	94	06	88	06	85	06	80	90	90	D	D	00	D	00*	
DPR Korea	85	85	85	85				85								
Indonesia	87							79A			78		00	D		
Japan	83	83	83	83	05	80	07	77	75		D	94	96	D	96	05
Lao PDR																
Malaysia	97			97				80			D		05	95	05	
Myanmar	88															
Philippines	01	01	01	01		73							98		98	
Rep. of Korea	84	96	04	96	06	93	09	77A			D	93	98	D	98	10
Singapore	91	94	05	99	00			77			D	82	98		98	
Thailand	08							79								
Timor-Leste																
Vietnam	91	15	15	15	15			90					04			

CONVENTION	SUA		SOLAS			LL	Salvage	OPRC	HNS		OPRC-HNS	Bunkers	Anti-Fouling	Ballast Water	Nairobi WRC	Hongkong Convention
	Convention	Protocol	Convention	Protocol	Protocol	Protocol			Convention	Protocol						
COUNTRY	88	88	74	78	88	88	89	90	96	10	00	01	01	04	07	
Brunei Darussalam	04	04	87	87												
Cambodia	06	06	95	95	01	01										
China	92	92	80	83	00	00	96	98			10	09	11			
DPR Korea			85	85	01	01						09				
Indonesia			81	88												
Japan	98	98	80	81	00	00		96			07		03			
Lao PDR	12	12														
Malaysia			84	84	12	12		97			14	09	10	10	13 a	
Myanmar	03		88	88												
Philippines	04	04	82					14								
Rep. of Korea	03	03	81	83	00	00		00			08	09	08	09		
Singapore	04		81	84	00	00		99			07	08	10			
Thailand			85					00								
Timor-Leste																
Vietnam	02	02	91	93	02	02						10				

Note: Numbers represent year of ratification/accession. a – approval; A – Acceptance; D – Denounced.

Ratification of International Conventions and Agreements Relating to the Marine Environment (as of 26 August 2014).

A C T I O N	C O N V E N T I O N											
	UNFCCC 1992	Biodiversity 1992	Jakarta Mandate 1995	Ramsar 1971	CITES 1973	Migratory Species 1979	World Heritage 1972	Whaling 1946	Montreal Declaration 2001	Nagoya Protocol 2010	Minamata Convention 2013	Sendai Framework for Action 2015
Brunei Darussalam	2007	2008			1990							
Cambodia	1995	1995	Y	1999	1997		1991	2006	Y			
China	1993	1993	Y	1992	1981		1985	1980	Y	2013		
DPR Korea	1994	1994	Y				1998					
Indonesia	1994	1994	Y	1992	1978		1989					
Japan	1993	1993	Y	1980	1980		1992	1951	Y			
Lao PDR	1995	1996					1987	2007		2012		
Malaysia	1994	1994	Y	1995	1995		1988		Y	2014		
Myanmar	1994	1994	Y	2005	2005		1994		Y			
Philippines	1994	1993	Y	1994	1994	1994	1985	1981-88	Y			
RO Korea	1993	1994	Y	1997	1997		1988	1978	Y			
Singapore	1997	1995			1986		2012					
Thailand	1994	2004		1998	1998		1987		Y			
Timor-Leste	2006	2006										
Vietnam	1994	1994	Y	1989	1989		1987			2014		

Note: The numbers in the table represent the year of ratification/accession. Y – participated in the conference.

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