Manual on Strategies, Tools and Techniques for Implementing International Conventions on Marine Pollution in the East Asian Region

GEF/UNDP/IMO Regional Programme for the Prevention
and Management of Marine Pollution in the East Asian Seas

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1999

Published by the

GEF/UNDP/IMO Regional Programme for the Prevention
and Management of Marine Pollution in the East Asian Seas

Printed in Quezon City, Philippines

MPP-EAS. 1999. Manual on strategies, tools and techniques for implementing international conventions on marine pollution in the East Asian Seas region. MPP-EAS Technical Report No. 26/PEMSEA Technical Report No. 4, 184p. Global Environment Facility/United Nations Development Programme/ International Maritime Organization Regional Programme for the Prevention and Management of Marine Pollution in the East Asian Seas, Quezon City, Philippines.

ISBN 971-812-002-5

MISSION STATEMENT

The primary objective of the Global Environment Facility/United Nations Development Programme/International Maritime Organization Regional Programme for the Prevention and Management of Marine Pollution in the East Asian Seas is to support the efforts of the eleven (11) participating governments in the East Asian Region to prevent and manage marine pollution at the national and subregional levels on a long-term and self-reliant basis. The 11 participating countries are: Brunei Darussalam, Cambodia, Democratic People's Republic of Korea, Indonesia, Malaysia, People's Republic of China, Republic of the Philippines, Republic of Korea, Singapore, Thailand and Vietnam. It is the Programme's vision that, through the concerted efforts of stakeholders to collectively address marine pollution arising from both land- and sea-based sources, adverse impacts of marine pollution can be prevented or minimized without compromising desired economic development.

The Programme framework is built upon innovative and effective schemes for marine pollution management, technical assistance in strategic maritime sectors of the region, and the identification and promotion of capability-building and investment opportunities for public agencies and the private sector. Specific Programme strategies are:

- Develop and demonstrate workable models on marine pollution reduction/ prevention and risk management;
- Assist countries in developing the necessary legislation and technical capability to implement international conventions related to marine pollution;
- Strengthen institutional capacity to manage marine and coastal areas;
- Develop a regional network of stations for marine pollution monitoring;
- Promote public awareness on and participation in the prevention and abatement of marine pollution;
- Facilitate standardization and intercalibration of sampling and analytical techniques and environment impact assessment procedures; and
- Promote sustainable financing mechanisms for activities requiring long-term commitments.

The implementation of these strategies and activities will result in appropriate and effective policy, management and technological interventions at local, national and regional levels, contributing to the ultimate goal of reducing marine pollution in both coastal and international waters, over the longer term.

Dr. Chua Thia-Eng
Regional Programme Manager
GEF/UNDP/IMO Regional Programme
for the Prevention and Management
of Marine Pollution in the East Asian Seas

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ASEAN	–	Association of Southeast Asian Nations
BBREPC	–	Batangas Bay Region Environmental Protection Council
CLC	–	International Convention on Civil Liability for Oil Pollution Damage, 1969 and 1992
DAO	–	Department of Environment and Natural Resources (Philippines) Administrative Order
DENR	–	Department of Environment and Natural Resources, Philippines
EEZ	–	exclusive economic zone
EGF	–	environmental guarantee fund
EIA	–	environmental impact assessment
EMA	–	Environmental Management Act, Indonesia
EMF	–	environmental management fund
EPL	–	Environmental Protection Law, China
EQA	–	Environmental Quality Act, Malaysia
FUND	–	International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971 and 1992
GEF	–	Global Environment Facility
GIS	–	geographic information system
GPA	–	Global Programme of Action for the Protection of the Marine Environment from Land-based Activities, 1995
HNS	–	International Convention of Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea, 1996
IBC	–	International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk, 1983
ICM	–	integrated coastal management
IMDG	–	International Marine Dangerous Goods (Code)
IMO	–	International Maritime Organization
IOPC	–	International Oil Pollution Compensation (Fund)
IOPP	–	International Oil Pollution Prevention (Certificate)
ISPP	–	International Sewage Pollution Prevention (Certificate)
LGU	–	local government unit
MARPOL	–	International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto

MEPC	–	Marine Environment Protection Committee, IMO
MEPL	–	Marine Environmental Protection Law, China
MMCO	–	Marine Management and Co-ordination Office, Xiamen
MOMAF	–	Ministry of Marine Affairs and Fisheries, Republic of Korea
MOU	–	memorandum of understanding
MPP-EAS	–	Regional Programme for the Prevention and Management of Marine Pollution in the East Asian Seas
NEP	–	National Environmental Policy, Malaysia
NEQA	–	Enhancement and Conservation of National Environmental Quality Act, Thailand
NGO	–	non-government organisation
NLS	–	International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk
NPA	–	national programme of action
OPRC	–	International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990
OSRAP	–	Oil Spill Response and Preparedness Action Plan (ASEAN)
PG-ENRO	–	Provincial Government-Environment and Natural Resources Office, Batangas
ROK	–	Republic of Korea
SDR	–	Special Drawing Right
SEMP	–	Strategic Environmental Management Plan
UNCLOS	–	United Nations Convention on the Law of the Sea, 1982
UNCED	–	United Nations Conference on Environment and Development
UNDP	–	United Nations Development Programme
UNEP	–	United Nations Environment Programme

Acknowledgments

This manual was prepared by Dr. Antonio G.M. La Viña, Ms. Stella Regina Bernad, and Ms. Therese Desiree Perez in partial fulfillment of contracts with the GEF/UNDP/IMO Regional Programme for the Prevention and Management of Marine Pollution in the East Asian Seas. Mr. Dan Calica provided research assistance. The work represents one activity of the International Conventions Component co-ordinated by Mr. S. Adrian Ross, Senior Programme Officer of the Regional Programme.

The manual was validated during the Training Workshop on Strategies, Tools and Techniques for Implementing International Conventions on Marine Pollution in the East Asian Region, held in Bangkok, Thailand on 21-24 September 1998. The following resource persons are acknowledged for their contribution to the training course and to the manual: Ms. Eunice Agsaoay, Mr. Zafrul Alam, Ms. Brenda Jay Angeles, Mr. Robert Beckman, Dr. Chua Thia-Eng, Mr. Rene Coenen, Mr. George dela Cuesta, Dr. John Hambrey, Mr. James Kho and Raja Petra Mohamed.

The assistance of the following staff of the GEF/UNDP/IMO Regional Programme is gratefully acknowledged: Ms. Ma. Socorro Manguiat for technical editing and Mr. Jonel Dulay for cover design.

Introduction

This manual was developed by the GEF/UNDP/IMO Regional Programme for the Prevention of Marine Pollution in the East Asian Seas. One of the principal objectives of the Regional Programme is to assist participating countries in ratifying and fully implementing international conventions on marine pollution.

To share the many lessons learned and experiences gained from the activities of the Regional Programme, a Training Workshop on Strategies, Tools and Techniques for Implementing International Conventions on Marine Pollution in the East Asian Region was implemented. The training programme consolidated local, national, and regional experiences and practices regarding the implementation of international conventions on marine pollution. It focused on disseminating to legal and other relevant users in the participating countries such practical information and tools as procedural and substantive information on drafting national and local legislation on marine pollution and awareness on the application of practical management tools in marine pollution prevention and management.

This manual is a compendium of lessons learned by the Regional Programme in the field of the ratification and implementation of international conventions on marine pollution and the legal aspects of marine pollution and prevention. It contains the information necessary to actively participate in the legal training programme and is intended principally for use in the said programme. However, it has also been designed to be an easily available and readable reference for legal and other relevant practitioners in the context of their actual work and the situation in their respective countries. It can also be used as a reference for developing and conducting other regional, national and local training exercises.

Manual Layout

The manual has five main chapters: (a) International Law, the Marine Environment and Marine Pollution; (b) Status of International Conventions in East Asia; (c) Developing National Policies and Legislation; (d) Strategies, Tools and Techniques in Marine Pollution Prevention and Management; and (e) Regional Mechanisms and Initiatives.

Chapter 1, International Law, the Marine Environment and Marine Pollution, provides the reader with a background and overview of the state of the international law on the marine environment, in particular, on marine pollution. The chapter includes an outline of the relevant international law, including UNCLOS and the pertinent IMO Conventions, and recent developments in this area (e.g. Agenda 21, the Global Programme of Action and amendments of IMO conventions).

Chapter 2, Status of International Conventions in East Asia, provides an assessment of existing marine pollution legislation within the region and looks at issues and problems related to the ratification and implementation of relevant international conventions. Legislation from selected countries is evaluated in relation to the requirements of international legal norms. National experiences in ratifying and/or implementing specific conventions, such as MARPOL, are also discussed as examples of national responses that are evolving in the region. The chapter includes an update on the status of ratification in the East Asian region of these international agreements, and ends with a section on how countries can develop action plans for the ratification and implementation of international conventions on marine pollution.

Chapter 3, Developing National Policies and Legislation, has three main sections. First, the chapter provides an overview of the basic principles and processes of integrated coastal management, including insights into its legal aspects, as the framework policy for national coastal management and for marine pollution prevention and management. Second, experiences in developing and implementing national coastal action plans are analysed for lessons learned and to guide coastal policy development. Third, guidelines for the development of national marine pollution laws are presented.

Chapter 4, Strategies, Tools and Techniques in Marine Pollution Prevention and Management, includes sections on (a) consensus building, conflict management and appropriate dispute resolution; (b) the role of local governments in marine pollution prevention and management; (c) environmental impact assessment and related instruments; and (d) sustainable financing of marine pollution prevention and management.

Chapter 5, Regional Mechanisms and Initiatives, presents a survey of existing regional initiatives and mechanisms in the East Asian region. It poses the question of whether or not it is time to expand the concept of regional cooperation and explore the possibility of a legally mandated regional approach.

CHAPTER 1: INTERNATIONAL LAW, THE MARINE ENVIRONMENT AND MARINE POLLUTION[1]

FRAMEWORK INSTRUMENTS RELEVANT TO MARINE POLLUTION

- United Nations Convention on the Law of the Sea, 1982 (UNCLOS)
- Rio Declaration
- Agenda 21 (Chapter 17)

INTERNATIONAL MARITIME ORGANIZATION (IMO) CONVENTIONS RELEVANT TO MARINE POLLUTION

- International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78)
- Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 (London Convention) and its 1996 Protocol
- International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990 (OPRC)
- International Convention on Civil Liability for Oil Pollution Damage, 1969 (CLC) and its 1992 Protocol
- International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971 (FUND) and its 1992 Protocol
- International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea, 1996 (HNS)
- International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969, and Protocol

[1] This chapter is based on the texts of the conventions, various briefing papers prepared by the IMO Secretariat and *Focus on IMO* issues and IMO, 1993.

Relating to Intervention on the High Seas in Cases of Pollution by Substances Other Than Oil, 1973 (Intervention)
- International Convention on Salvage, 1989 (Salvage)

United Nations Environment Programme (UNEP) Instruments Relevant to Marine Pollution

- Washington Declaration and Global Programme of Action for the Protection of the Marine Environment from Land-based Activities
- Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, 1989 (Basel Convention)

United Nations Convention on the Law of the Sea, 1982 (UNCLOS)

By ratifying the UNCLOS, most East Asian countries signified their willingness to apply international laws, norms and precepts in the management of their marine environment. Legislation in these countries is continuously changing to accommodate international laws and norms, although it is still unclear to what extent international principles will guide the management of marine development in the region.

The UNCLOS:
- Regulates all aspects of the use of the world's oceans and seas. It also regulates pollution from all sources and provides the legal basis for protecting, conserving and promoting sustainable development of the marine and coastal environment and its resources.
- Divides the ocean into jurisdictional zones:
  - the internal waters;
  - the archipelagic waters;
  - the 12-mile territorial sea;
  - the 200-mile exclusive economic zone (EEZ); and
  - the high seas.
- Outlines the rights and responsibilities of states in these zones.

UNCLOS

It allows states to adopt laws to preserve the environment and prevent pollution in their territorial sea provided the laws do not deny or impair the right of innocent passage.

Within the EEZ, coastal states may adopt laws and standards conforming to and giving effect to generally accepted international rules and standards established through a competent international organisation, such as the IMO, or a general diplomatic conference.

The convention's provisions on pollution from ships and from dumping incorporate by implication provisions of other major environmental conventions, such as the London Convention and MARPOL. State parties to the UNCLOS are obliged to adopt rules and standards set out in many of the major IMO conventions.

The provisions on pollution from ships are among the most detailed in the UNCLOS. They outline the rights, duties and obligations of the flag state, coastal state and port state, while giving due consideration to maritime interests.

States' Basic Obligations with Respect to Marine Pollution

- Prevent, reduce and control pollution of the marine environment from any source. The convention recognises that states are at different stages of development and may not be able to take the same measures. They must, however, use the best practicable means at their disposal and in accordance with their capabilities.
- Ensure that activities under their jurisdiction or control do not pollute other states' environment.
- Ensure that pollution arising from incidents or activities under their jurisdiction does not spread beyond areas where they exercise sovereign rights.
- Adopt laws and regulations to prevent, reduce and control land-based pollution, taking into account internationally agreed-upon rules, standards and recommended practices and procedures.
- Minimise the release of toxic, harmful or noxious substances, especially those that are persistent, from land-based sources.
- Protect from pollution rare or fragile ecosystems and all forms of marine life.

- Prevent the intentional or accidental introduction of any potentially harmful species into the marine environment.
- Establish international rules and standards to prevent, control and reduce pollution and to promote the use of routing systems designed to minimise the threat of accidents that might cause pollution.
- Harmonise state policies at the regional level and co-operate to prevent, reduce and control pollution from ships, dumping, seabed operations, land-based sources and the atmosphere.
- Publicise, impose and enforce unilateral requirements, including design, construction, manning and equipment standards, as a condition of ships' entry into ports.
- Adopt measures designed to minimise pollution that are no less effective than international rules, standards and recommended practices and procedures with regard to offshore states.

Rio Declaration and Agenda 21

Both the Rio Declaration and Agenda 21 were adopted during the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro in 1992. They do not impose obligations on states, but legitimise and encourage initiatives to protect the environment, and set the agenda for further development of international law. In this sense, they constitute "soft law."

The Rio Declaration

The Rio Declaration is the best summary of general principles of international environmental law. It is a non-binding statement of 27 broad principles for guiding environmental policy.

Objectives

- To protect the environment as part of economic development.
- To safeguard the ecological systems of other nations.

Rio Declaration

- To give priority to the needs of developing countries, which are considered to be the "most environmentally vulnerable."
- To establish the right of human beings to a healthy and productive life in harmony with nature.
- To call on states and people to co-operate in good faith and in a spirit of partnership to fulfil the principles of the Rio Declaration and to further develop international law in the field of sustainable development.

Key Principles

- States must ensure that activities within their jurisdiction or control do not damage the environment of other states or of areas beyond the limits of national jurisdiction.
- Economic progress must equitably meet the developmental and environmental needs of present and future generations.
- Environmental issues are best handled with the participation of all concerned citizens at the relevant level. At the national level, each individual shall have:
    - appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in communities; and
    - the opportunity to participate in decision-making processes.
- States shall enact effective environmental laws. Environmental standards, management objectives and priorities should be appropriate to the societies to which they apply.
- States shall develop a national law regarding liability and compensation for the victims of pollution and other environmental damage.
- States should co-operate to discourage or prevent the relocation and transfer to other states of any activity or substance that will harm the environment and people.
- States shall apply the precautionary approach according to their capabilities in managing the environment.
- States must promote the internalisation of environmental costs and the use of economic instruments to make polluters bear the cost of pollution, keeping in mind the public interest and without distorting international trade and investment.

Rio Declaration

- Environmental impact assessment shall be undertaken nationally for proposed activities that are likely to have an adverse impact on the environment.
- Indigenous peoples and their communities, and other local communities, have a vital role in environmental management and development because of their knowledge and traditional practices.

Agenda 21

Agenda 21 lists 40 actions designed to promote sustainable development. It raises the need to change all economic activities in order to improve standards of living and to conserve natural resources.

It is not a binding legal instrument. It is an action plan designed to guide states in developing strategies and plans to protect and preserve the marine environment. It recognises the UNCLOS as the basic framework for states' rights and responsibilities with respect to the marine environment and marine pollution.

<u>Chapter 17: Protection of the Oceans, All Kinds of Seas, Including Enclosed and Semi-enclosed Seas and Coastal Areas and the Protection, Rational Use and Development of Their Living Resources</u>

The major contribution of Chapter 17 is that it calls for the adoption of new, integrated, precautionary and anticipatory approaches to marine and coastal management and development at the national, sub-regional, regional and global levels.

<u>Programme Areas for the Marine Environment</u>

1. Integrated management and sustainable development of coastal areas, including exclusive economic zones;
2. Marine environmental protection;
3. Sustainable use and conservation of marine living resources in the high seas;
4. Sustainable use and conservation of marine living resources in the areas under national jurisdiction;

5. Addressing critical uncertainties for the management of the marine environment and climate change;
6. Strengthening international, including regional, co-operation and coordination; and
7. Sustainable development of small islands.

International Convention for the Prevention of Pollution from Ships, 1973, as Modified by the Protocol of 1978 Relating Thereto (MARPOL)

Background

The first international convention to deal with pollution from ships was the International Convention for the Prevention of Pollution of the Sea by Oil, 1954 (OILPOL). In the late 1960s, technological developments and the realisation that pollutants other than oil also required action led to the convening of a conference for a new treaty on ship pollution. The resulting convention was the MARPOL, first adopted in 1973. A protocol was adopted in 1978 to amend the 1973 convention, which was not yet in force at that time. The 1973 and 1978 documents are taken together as one instrument.

Objective

To prevent pollution of the marine environment by the operational discharge of oil and other harmful substances from ships and to minimise their accidental discharge.

The MARPOL:

- Imposes strict limitations on discharges into the sea of oil, noxious liquid substances (or chemicals), sewage and garbage resulting from the normal operation of ships.
- Imposes standards for the transport by ship of harmful substances in packages.
- Imposes limitations on the emission of air pollution from ships.
- Provides strict standards for ship construction and equipment in order to minimise the extent of the release of oil and chemicals in case of an accident.
- Allows the designation of special areas where discharge criteria are even more stringent.

MARPOL

- Requires the provision of adequate reception facilities for oil and chemical residues, sewage and garbage.
- Requires mandatory ship inspections and surveys to ensure compliance.
- Requires immediate reporting of incidents involving oil, noxious liquid substances in bulk (or chemicals carried in tankers) and harmful substances in packaged form (or in containers).
- Establishes a system of co-operation among governments in the detection of pollution and in the enforcement of the convention's provisions.
- Has six technical annexes containing regulations governing different types of pollutants. (IMO, 1995:27).

The Annexes

Annex I—Pollution by Oil

Annex I requires ship owners to do the following:

1. Follow specific procedures and maintain certain equipment, depending on the size and specific types of ship, including the following:
   - crude oil washing (COW);
   - segregated ballast tanks (SBTs);
   - dedicated clean ballast tanks (CBTs);
   - retention of oil on board (slop tanks);
   - oil discharge and monitoring system and oily-water separating and oil-filtering equipment; and
   - pumping, piping and discharge arrangements.
2. Construct ships taking into consideration the following (depending on the type of ship):
   - limitation of size and arrangement of cargo tanks;
   - subdivision and stability requirements; and
   - double hulls.
3. Possess an International Oil Pollution Prevention (IOPP) Certificate.
4. Maintain an Oil Record Book.
5. Follow a Shipboard Oil Pollution Emergency Plan.
6. Comply with discharge requirements that:
   - the ship be a particular distance from the coast;
   - the ship be *en route* at a given speed;

MARPOL

- the oil content in the water be at a particular level;
- a particular rate of discharge be observed;
- a total quantity of oil be discharged; and
- the ship observe discharge requirements for special areas.

Annex II—Pollution by Noxious Liquid Substances in Bulk

Annex II requires ship owners to do the following:

1. Categorise liquid substances carried in bulk. Substances posing a threat of harm to the marine environment are divided into four categories (A, B, C and D; substances in A being those that pose the greatest threat; in D, the least).
2. Comply with discharge requirements. Annex II prohibits the discharge into the sea of any effluent containing substances falling into the categories except when the discharge is made under the following conditions specified in detail for each category:
    - The ship is *en route* at a specified speed.
    - A maximum concentration of and quantity of substance per tank is discharged.
    - The ship is at least 12 nautical miles from the coast and the water has a minimum depth of 25 meters.
    - The discharge is below the waterline.
    - The ship observes discharge requirements for special areas.
3. Design, construct and equip ships according to the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code) or the Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (BCH Code).
4. Possess an International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk (NLS Certificate).
5. Maintain a Cargo Record Book.

Annex III—Pollution by Harmful Substances Carried by Sea in Packaged Form

Annex III requires that packaging, marking, labelling, documentation, stowage, quantity limitations, exceptions and notification for preventing or minimising pollution of the marine envi-

MARPOL

ronment by harmful substances be done in accordance with the following requirements of the International Maritime Dangerous Goods (IMDG) Code that:

1. the words "Marine Pollutant" be used in all documents related to the carriage of the substance at sea;
2. a special manifest or list of the harmful substances be on board;
3. a detailed stowage plan be used; and
4. the quantity of certain harmful substances carried aboard the ship be limited based on technical and scientific reasons.

Annex IV—Pollution by Sewage

Annex IV requires ship owners to do the following:

1. Have a suitable sewage treatment plant or comminuting and disinfecting system, or holding tanks and a standard shore connection.
2. Possess an International Sewage Pollution Prevention (ISPP) Certificate.
3. Comply with the following discharge requirements that:
   - the sewage be comminuted and disinfected;
   - the ship be *en route* at a given speed during the discharges;
   - the ship be at a specified distance from the coast; and
   - the ship observe discharge requirements for special areas.

Annex V—Pollution by Garbage

Annex V requires ship owners to do the following:

1. Maintain collection, processing, storage and disposal facilities on board (incineration, compaction, comminution) and to shore reception facilities.
2. Display placards notifying the crew and passengers of the disposal requirements.
3. Follow a Garbage Management Plan.
4. Keep a Garbage Record Book.
5. Comply with the discharge requirements that:
   - the ship be at a specified distance from the coast, depending on the type of garbage it is carrying;
   - the garbage be comminuted or ground, depending on the type of garbage;

MARPOL

- the garbage not include plastics, synthetic ropes, fishing nets and plastic garbage bags; and
- the ship observe discharge requirements for special areas.

Annex VI—Air Pollution from Ships

Annex VI does the following:

1. Limits the amount of sulphur oxide and nitrogen oxide emissions from ship exhaust.
2. Prohibits deliberate emissions of ozone-depleting substances, including halons and chlorofluorocarbons (CFCs).
3. Prohibits the incineration on board of certain products such as contaminated packaging materials and polychlorinated biphenyls (PCBs).
4. Requires ships to have an exhaust gas cleaning system or other technological method to limit sulphur oxide emissions.

Geographical Scope / Jurisdiction

- Over the state's flag vessels, wherever they may be.
- Over all ships within the state's national jurisdiction.

Vessel Types Covered

Annex I applies to:

- oil tankers, or any ship carrying oil as cargo, 150 gross tons and above;
- all other ships 400 gross tons and above; and
- drilling rigs and other platforms.

Annex II applies to all ships carrying noxious liquid substances in bulk (chemical tankers).

Annex III applies to all ships that carry harmful substances in packaged form.

Annex IV applies to all ships except those under 200 gross tons carrying 10 persons or fewer.

Annex V applies to all ships.

MARPOL

Annex VI applies to all ships.

Exceptions

- Warships.
- Naval auxiliary ships.
- Other ships owned or operated by a state during a non-commercial voyage.

Definitions

Ship. Any vessel operating in the marine environment, including hydrofoil boats, air-cushion vehicles, submersibles, floating craft and fixed or floating platforms.

Harmful substance. Any substance which, if introduced into the sea, is liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea. It includes any substance subject to control by the present convention.

Discharge. Any release from a ship, including any escape, disposal, spilling, leaking, pumping, emitting or emptying.

Oil. Petroleum in any form, including crude oil, fuel oil, sludge, oil refuse and refined products (other than petrochemicals), including the substances listed in Appendix I of Annex I.

Noxious liquid substance. Any substance designated in Appendix II to Annex II or provisionally assessed under the provisions of regulation 3(4) as falling into Category A, B, C or D.

Harmful substance. Any substance which, if introduced into the sea, is liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea. It includes any substance subject to control by the present convention.

Packaged form. Any form of containment other than the structure of the ship. It includes packaging, freight containers, portable tanks and road and rail tank wagons.

MARPOL

`Sewage.` Any of the following:

- drainage and other wastes from any form of toilet, urinal and WC scupper;
- drainage from medical premises (dispensary, sick bay, etc.) via wash basins, wash tubs and scuppers located in such premises;
- drainage from spaces containing living animals; and
- other waste waters when mixed with the drainage defined above.

`Garbage.` All kinds of victual, domestic and operational waste, excluding fresh fish and parts thereof, generated during the normal operation of the ship and liable to be disposed of continuously or periodically, except those defined or listed in the annexes of the convention.

`Reception facility.` Any facility used for the reception of oil, noxious liquid substances, sewage or garbage at a port or terminal.

`Special area.` A sea area where, for recognised technical reasons in relation to its oceanographical and ecological condition and to the particular character of its traffic, the adoption of special mandatory methods for the prevention of sea pollution by oil is required. Designated special areas are the Mediterranean Sea, Baltic Sea, Black Sea, Red Sea, Gulfs Area, Gulf of Aden, Antarctic, North Sea, Wider Caribbean Region and Northwest European waters.[2]

Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972, and its Protocol of 1996 (London Convention)

Background

The convention, formerly known as the London Dumping Convention, was adopted in response to the recognition that the

[2] Effective 1 August 1999.

London Convention

marine environment does not have an unlimited capacity to assimilate the products of human activities.

Objectives

- To prevent, reduce and, where practicable, eliminate pollution caused by dumping or incineration at sea according to scientific, technical and economic capabilities.
- To protect and preserve the marine environment from all sources of pollution.

The `London Convention` requires the state to do the following:

- Control the disposal of wastes and materials into the sea by
  - prohibiting
    - the dumping of Annex I (Black List) materials and
    - the incineration at sea of industrial wastes and sewage sludge;
  - requiring a special permit for the dumping of Annex II (Grey List) materials; and
  - allowing the dumping of all other materials only with a general permit.
- Monitor individually, or in collaboration with other parties and the IMO, the condition of the seas for the purposes of the convention.

The `1996 Protocol`:

- Prohibits all dumping into the sea (including burial or storage of wastes in sub-seabed repositories) except of substances listed under Annex I.
- Allows the dumping of Annex I materials only with a permit.
- Prohibits incineration at sea.
- Requires the state to apply the precautionary approach.
- Provides an incentive for proper allocation of environmental costs through the application of the "polluter pays" principle.
- Recommends the use of the Waste Assessment Guide and Dredged Materials Waste Assessment Guide to assist the administration in making decisions relating to permits.
- Prohibits export of wastes or other matter to other countries for dumping or incineration at sea.

London Convention

Geographical Scope / Jurisdiction

- The state's territorial sea, EEZ and continental shelf including the seabed thereof. The state may decide to apply different but equivalent measures to the internal waters.
- The state's internal waters, at the state's discretion under the 1996 Protocol.

Vessel Types Covered

Any vessel, aircraft, offshore platform or other man-made structures, including those discarded into the sea.

Exceptions

The law does not apply in the following situations:

- Wastes are derived from the exploration and exploitation of seabed mineral resources.
- It is necessary to secure the safety of life or vessels in cases of *force majeure*.
- Emergencies on land pose unacceptable risk to human health and admit no other feasible solution, subject to consultation with countries that are likely to be affected and with the IMO.
- Vessels and aircraft are entitled to sovereign immunity under international law.

Definitions

`Dumping`. Any deliberate disposal at sea of wastes or other matter from vessels, aircraft, platforms or other man-made structures at sea, and the deliberate disposal of such vessels, aircraft and platforms or other man-made structures at sea. The 1996 Protocol includes the storage of wastes or other matter in the seabed and the subsoil and the abandonment or toppling at site of platforms or other man-made structures at sea for deliberate disposal.

`Wastes or other matter`. Materials and substance of any kind, form or description.

Convention on the Control of the Transboundary Movement of Hazardous Wastes and their Disposal, 1989 (Basel Convention)

Background

The convention does not directly concern marine pollution. However, it is related to other marine pollution conventions in the sense that together they form a regime governing the management of polluting substances.

Objectives

- To minimise the generation of hazardous wastes and other wastes by controlling their transboundary movement (export, import, transit and disposal).
- To ensure that all operations relating to the export, import, transit and disposal of hazardous wastes are done in an environmentally sound manner.
- To achieve the above objectives by:
    - improving national capabilities to manage hazardous wastes in an environmentally sound manner;
    - developing a technical and legal infrastructure (including legislation and instruments of enforcement);
    - ensuring that packaging, labelling and transporting of hazardous wastes and other wastes conform to generally accepted rules and standards and take into account internationally recognised practices, whether or not they are obligatory; and
    - establishing international co-operation between parties.

The Basel Convention:

- Regulates the transboundary movement of hazardous wastes and other wastes for disposal, excluding radioactive waste (which is the subject of another convention).
- Provides measures to ensure that the generation of hazardous wastes and other wastes within the state's jurisdiction is reduced to a minimum, taking into account social, technological and economic aspects.
- Requires the state to ensure the availability of adequate disposal facilities for hazardous wastes and other wastes.

Basel Convention

- Prohibits the importation or export of hazardous wastes and other wastes if there is reason to believe that they will not be managed in an environmentally sound manner in the country of import.
- Provides a system of notification, documentation and licensing for the importation, exportation, transport and disposal of hazardous wastes and other wastes, including the requirement for a movement document duly signed by all concerned, from commencement up to the end of the transboundary movement.

Geographical Scope / Jurisdiction

All "areas under the national jurisdiction of a state" defined as any land area, marine area or air space within which a state exercises administrative and regulatory responsibility for the protection of human health and environment, with regard to the generation, carriage, import, export and disposal of wastes.

Exceptions

- Radioactive wastes (which are subject to other international control systems).
- Wastes that derive from the normal operations of a ship (which are covered by another international instrument).

Polluting Substances Covered

Hazardous wastes and other wastes.

Definitions

`Hazardous wastes.` Those listed in Annex I, unless they do not exhibit any of the characteristics listed in Annex III.

`Other wastes.` Those listed in Annex II.

`Transboundary movement.` The movement of hazardous or other wastes from an area under the national jurisdiction of one state to or through an area under the national jurisdiction of another state or to or through an area not under the national jurisdiction of any state, provided at least two states are involved in the movement.

International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990 (OPRC)

Background

No matter how stringent the prevention measures taken, accidents will happen. There are measures that can be taken to minimise the pollution effects of such accidents, and they are particularly effective if done in co-operation with others. This convention was adopted in response to a need for a global framework for international co-operation in combating major incidents or threats of marine pollution.

Objectives

- To mitigate the consequences of major oil pollution incidents involving ships, offshore units, sea ports and oil-handling facilities.
- To facilitate international co-operation and mutual assistance in preparing for and responding to a major oil pollution incident.
- To encourage states to develop and maintain adequate capability to deal with oil pollution emergencies.

The OPRC:

- Requires the establishment of a national system for responding promptly and effectively to oil pollution incidents. The system must have, as a basic minimum, a national contingency plan, designated national authorities and operational focal points responsible for oil pollution preparedness and response, reporting and handling requests for assistance.
- Encourages the establishment of a system for international and regional assistance and co-operation to combat oil spills.
- Provides the standards of preparedness for oil pollution response to be enforced in vessels, ports, oil terminals and offshore units.

OPRC

- Provides a framework for technical assistance in capacity-building for oil pollution response.
- Establishes a system of reporting of incidents resulting in oil pollution or a threat of oil pollution.

Geographical Scope / Jurisdiction

Vessels, ports, oil terminals, offshore units and areas within the state's jurisdiction.

Vessel Types Covered

- Oil tankers of 150 gross tons and above.
- Ships other than oil tankers of 400 gross tons and above.

Exceptions

- Warships.
- Naval auxiliary ships.
- Other ships owned or operated by a state during a non-commercial voyage.

Polluting Substance Covered

Oil.

Definitions

`Oil.` Petroleum in any form, including crude oil, fuel oil, sludge, oil refuse and refined products.

`Oil pollution incident.` An occurrence or series of occurrences having the same origin, which results or may result in a discharge of oil and which poses or may pose a threat to the marine environment, or to the coastline or related interests of one or more states, and which requires emergency action or other immediate response.

`Ship.` A vessel of any type whatsoever operating in the marine environment, including hydrofoil boats, air-cushion vehicles, submersibles and floating craft of any type.

`Offshore unit.` Any fixed or floating offshore installation or structure engaged in gas or oil exploration, exploitation or production activities, or in loading or unloading of oil.

`Sea ports and oil-handling facilities.` Those facilities which present a risk of an oil pollution incident, including, *inter alia*, sea ports, oil terminals, pipelines and other oil-handling facilities.

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)

Background

Under international law, the high seas are beyond national jurisdiction, where the "freedom of the high seas" may be exercised with no curtailment from any country. However, after the *Torrey Canyon* disaster in 1967, the international community recognised that occurrences on the high seas may lead to pollution of coasts. The matter of the right of a country to take action to protect itself from such pollution, vis-à-vis the freedom of the high seas, was the subject of a conference held in Brussels in 1969. The result of the conference was the Intervention Convention. The convention covered only oil pollution, but the 1973 Protocol extended its coverage to pollution by other substances.

Objective

To allow states to take such measures on the high seas necessary to prevent, mitigate or eliminate grave and imminent danger to their coastline or related interests from pollution or threat of pollution of the sea by oil, following a maritime casualty.

The `Intervention Convention`:

- Requires that the intervention measures shall not be in excess of what is reasonably necessary to prevent, mitigate or eliminate the danger.

Intervention

- Provides for a procedure including consultation with other affected states and independent experts and notification of affected persons prior to undertaking intervention measures.

Geographical Scope / Jurisdiction

The high seas.

Vessel Types Covered

All ships.

Exceptions

- Warships.
- Other ships owned or operated by a state, during non-commercial voyages.

Polluting Substances Covered

- Oil.
- Substances other than oil.

Definitions

`Oil.` Crude oil, fuel oil, diesel oil and lubricating oil.

`Substances other than oil.`

(a) Those enumerated by the Marine Environment Protection Committee (MEPC) of IMO and annexed to the Protocol.

(b) Those other substances which are liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea.

`Ship.`

(a) Any sea-going vessel of any type whatsoever.

(b) Any floating craft, with the exception of an installation or device engaged in the exploration and exploitation of the resources of the seabed and the ocean floor and the subsoil thereof.

`Maritime casualty`. A collision of ships, stranding or other incident of navigation, or other occurrence on board a ship or external to it resulting in material damage or imminent threat of material damage to a ship or cargo.

`Related interests`. The interests of a coastal state directly affected or threatened by the maritime casualty, such as:
(a) maritime coastal, port or estuarine activities, including fisheries activities, constituting an essential means of livelihood of the persons concerned;
(b) tourist attractions of the area concerned; and
(c) the health of the coastal population and the well-being of the area concerned, including conservation of living marine resources and of wildlife.

International Convention on Salvage, 1989 (Salvage)

Background

This convention replaces the 1910 convention on salvage, in order, among others, to provide incentives, which were lacking under the old rules, to protect the environment during salvage operations.

Objective

To provide an internationally uniform framework for the salvage regime with greater emphasis on the protection of the environment.

The `Salvage Convention`:
- Requires that due care be taken during salvage operations to prevent or minimise damage to the environment.
- Includes the skill and efforts of the salvors in preventing or minimising damage to the environment among the criteria in fixing the reward for salvage.
- Provides that special compensation shall be paid for salvage operations where the vessel or its cargo posed a threat to the environment.

Salvage

Geographical Scope / Jurisdiction

In any water whatsoever where salvage operations are carried out. The convention applies to proceedings relating to salvage operations in a court or an arbitral tribunal in a member state, regardless of who the parties are. Parties to the proceedings do not have to be nationals of the member state.

Vessel Types Covered

Any ship or craft, or any structure capable of navigation.

Exceptions

- Warships.
- Other non-commercial vessels owned or operated by a state and entitled, at the time of salvage operations, to sovereign immunity under generally recognised principles of international law.

Definitions

`Salvage operation`. Any act or activity undertaken to assist a vessel or any other property in danger in navigable waters or in any other waters whatsoever.

`Damage to the environment`. Substantial physical damage to human health or to marine life or resources in coastal or inland waters or areas adjacent thereto, caused by pollution, contamination, fire, explosion or similar major incidents.

International Convention on Civil Liability for Oil Pollution Damage, 1969 (CLC), and the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971 (FUND), as modified by the 1992 Protocols

Background

Due to the difficulty of determining liability and compensation for damages from oil pollution, a convention was adopted in

CLC and FUND

1969 providing for strict liability of the ship owner for such damages, and requiring such owner to be prepared through mandatory insurance. In turn, the owners would be granted limitations on their liability. As these limitations often led to cases where the owners could not compensate victims fully for the damages, another convention was adopted in 1971 to establish a fund to provide subsidiary compensation, to which the oil cargo interests would contribute. The scheme proved successful. But higher compensation limits were needed. The 1992 Protocols were adopted to increase compensation limits and to modify the entry-into-force requirements.

Objectives

The CLC:

- To ensure prompt and adequate compensation to persons who suffer damage caused by pollution resulting from the escape or discharge of oil from ships.
- To provide uniform international rules and procedures for determining questions of liability in such cases.

The FUND:

- To provide supplementary compensation even where no liability for damage arises under the CLC, or where the ship owner is financially incapable of meeting his obligations under the CLC, thus providing a form of security for claimants who have suffered oil pollution damage.

The CLC:

- Holds ship owners strictly liable for oil pollution damage caused by their oil tankers.
- Provides for limits on such liability of ship owners, depending on the size of the ship, up to a maximum of 59.7 million SDRs[3] (US$81.8 million), as increased by the 1992 Protocol

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[3] The Special Drawing Right (SDR) is an artificial "basket" currency serving as the International Monetary Fund's (IMF's) unit of account and as a basis for the unit of account for a number of other international organisations. It is a basket of five currencies whose weights are determined by the IMF every five years. Like any currency, its exchange rate varies from day to day. As of 14 September 1999, the exchange rate was 1 SDR to US$1.37070.

CLC and FUND

from 14 million SDRs (US$19 million) under the 1969 Convention, and the procedure for invoking such limits.
- Establishes a system of compulsory insurance for certain oil tankers.
- Allows persons who suffer damage from oil pollution to have recourse directly against the ship owner, without involving states.

The FUND:
- Establishes the International Oil Pollution Compensation (IOPC) Fund to provide additional compensation so that the victims may be adequately compensated up to the maximum amount of 135 million SDRs (US$185 million), as increased by the 1992 Protocol from 60 million SDRs (US$82 million) under the 1971 Convention.
- Establishes the fund from a levy on oil importers or receivers, who are mainly the oil companies whose cargo the vessels are likely to be carrying.

Geographical Scope / Jurisdiction

Under the 1969 and 1971 conventions, the geographical coverage was limited up to the territorial sea. The 1992 Protocols expand the geographical scope of the conventions to include the EEZ.

Vessel Types Covered

Any sea-going vessel and sea-borne craft of any type whatsoever constructed or adapted for the carriage of oil in bulk as cargo. This means mostly tankers, laden and unladen.

Exceptions

- Warships.
- Other ships owned or operated by a state, during non-commercial voyages.

Polluting Substance Covered

Persistent oil.

CLC and FUND

Definitions

`Oil.`

- Any persistent hydrocarbon mineral oil such as crude, fuel, heavy diesel and lubricating oil, whether carried on board a ship as cargo or in the ship's bunkers.
- Asphalt, bitumen and orimulsion (according to recent decisions).

`Pollution Damage.`

- Loss or damage caused outside the ship by contamination resulting from the escape or discharge of oil from the ship, wherever such escape or discharge may occur, provided that compensation for impairment of the environment other than loss of profit from such impairment shall be limited to costs of reasonable measures of reinstatement actually undertaken or to be undertaken.
- The costs of preventive measures and further loss or damage caused by preventive measures.

`Preventive measures.` Any reasonable measures taken by any person after an incident has occurred to prevent or minimise pollution damage.

Compensation Regime

The CLC

`The ship owner is liable` to pay compensation for:

- pollution damage caused in the territory, territorial sea and EEZ of the member state; and
- preventive measures wherever taken.

`The ship owner shall not be liable` if the damage:

- resulted from an act of war, hostilities, civil war, insurrection or a natural phenomenon of an exceptional, inevitable and irresistible character; or
- was wholly caused by an act or omission done with intent to cause damage by a third party; or
- was wholly caused by the negligence or other wrongful act of any government or other authority responsible for the

CLC and FUND

maintenance of lights or other navigational aids in the exercise of that function; or

- resulted from an act or omission done with intent to cause damage by the person who suffered the damage or from the negligence of that person.

The FUND

`The IOPC Fund is liable` to pay compensation to the following:

- Any person suffering pollution damage if such person has been unable to obtain full and adequate compensation for the damage because:
    - no liability for the damage arises under the CLC;
    - the owner liable for the damage under the CLC is financially incapable of meeting his obligations in full and his insurance is insufficient; and
    - the damage exceeds the owner's liability under the CLC.
- The ship owner for expenses reasonably incurred or sacrifices reasonably and voluntarily made to prevent or minimise pollution damage.

`The IOPC Fund shall not be liable` in any of the following situations:

- The damage resulted from an act of war, hostilities, civil war or insurrection or was caused by oil which had escaped or been discharged from a warship or other ship owned or operated by a state and used, at the time of the incident, only on government non-commercial service.
- The claimant cannot prove that the damage resulted from an incident involving one or more ships.
- The damage resulted from an act or omission done with intent to cause damage by the person who suffered the damage or from the negligence of that person, except with regard to preventive measures.

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

Background

As the CLC and FUND regime covers only pollution from oil, the international community realised that there was a need to provide a similar regime for hazardous and noxious substances, as the threat of damages from pollution from them is just as bad or even worse than from oil. This convention answers this need. However, it is not yet in force.

Objectives

- To ensure adequate, prompt and effective compensation to persons who suffer damage caused by incidents in connection with the carriage by sea of hazardous and noxious substances.
- To adopt uniform international rules and procedures for determining questions of liability and compensation in respect of such damage.

The HNS Convention:

- Was adopted as the equivalent of the CLC and FUND with regard to pollution damage from hazardous and noxious substances carried as cargo.
- Covers not only pollution, but also the risks of fire and explosion arising from the carriage by sea of hazardous and noxious substances.
- Establishes two levels of liability, structured analogously to the CLC and FUND:
  - the liability of the ship owner; and
  - the liability of the HNS Fund, which supplements the first.
- Introduces strict liability for the ship owner at limits higher than those established by other regimes.
- Provides for a system of compulsory insurance.

HNS

Geographical Scope / Jurisdiction

- As to any damage, up to the territorial sea.
- As to damage by contamination of the environment, up to the EEZ.
- As to damage other than damage by contamination of the environment, caused by a substance carried on board a ship of a state party, wherever occurring.
- As to preventive measures, wherever taken.

Vessel Types Covered

All ships. But a state may declare the exemption of ships that:

- do not exceed 200 gross tons;
- carry HNS only in packaged form; or
- are *en route* between ports or facilities of that state.

Exceptions

- Warships.
- Naval auxiliary ships.
- Other ships owned or operated by a state during a non-commercial voyage.

Polluting Substances Covered

Hazardous and noxious substances.

Definitions

`Hazardous and noxious substances.`

- Any of the following substances, materials and articles carried on board a ship as cargo:
  - oils carried in bulk (in tankers) listed in Appendix I of Annex I of the MARPOL;
  - noxious liquid substances carried in bulk (chemicals in tankers) referred to in Appendix I of Annex II of the MARPOL;
  - dangerous liquid substances carried in bulk (in tankers) listed in Chapter 17 of the IBC Code;

HNS

- dangerous, hazardous and harmful substances, materials and articles in packaged form (in containers, etc.) covered by the IMDG Code; and
- others.
- Residues of these substances.

Damage.

- Loss of life or personal injury on board or outside the ship carrying the HNS caused by those substances.
- Loss of or damage to property outside the ship carrying the HNS caused by those substances.
- Loss or damage by contamination of the environment caused by the hazardous and noxious substance, provided compensation of the environment other than loss of profit from such impairment shall be limited to costs of reasonable measures or reinstatement actually undertaken or to be undertaken.
- Costs of preventive measures and further loss or damage caused by preventive measures.

Preventive measures. Any reasonable measures taken by any person after an incident has occurred to prevent or minimise damage.

Compensation regime

The ship owner is liable to pay compensation for any damage caused by hazardous and noxious substance in connection with their carriage by sea on board the ship, up to the following limits:

- 10 million SDRs (US$13.7 million) for a ship not exceeding 2,000 tons;
- for ships exceeding 2,000 tons, the following additional amounts, provided that the total shall not exceed 100 million SDRs (US$137.07 million):
  - 1,500 SDRs (US$2,056) for each ton from 2,001 to 50,000 tons;
  - 360 SDRs (US$493) for each ton over 50,000 tons.

HNS

`The ship owner shall not be liable` when the damage is:

- a result of an act of war, hostilities, civil war, insurrection or a natural phenomenon of an exceptional, inevitable and irresistible character;
- wholly caused by an act or omission done with the intent to cause damage by a third party;
- wholly caused by the negligence or other wrongful act of any government or other authority responsible for the maintenance of lights or other navigational aids in the exercise of that function; or
- a result of an act or omission done with intent to cause damage by the person who suffered the damage or from the negligence of that person.

`The HNS Fund is liable` to pay compensation, up to a maximum of 250 million SDRs (US$346.67 million) to the following:

- Any person suffering damage if such person has been unable to obtain full and adequate compensation because:
  - the owner has no liability;
  - the owner is financially incapable of satisfying the obligations in full and any financial security provided is inadequate to meet the claims for compensation for damage; or
  - the damage exceeds the owner's liability limits.
- The ship owner for expenses reasonably incurred or sacrifices reasonably and voluntarily made to prevent or minimise damage.

`The HNS Fund shall not be liable` in any of the following situations:

- The damage resulted from an act of war, hostilities, civil war or insurrection or was caused by hazardous and noxious substances which had escaped or been discharged from a warship or other ship owned or operated by a state and used, at the time of the incident, only on government non-commercial service.
- The claimant cannot prove that the damage resulted from an incident involving one or more ships.
- The damage resulted from an act or omission done with intent to cause damage by the person who suffered the

damage or from the negligence of that person, except with regard to preventive measures.

Global Programme of Action for the Protection of the Marine Environment from Land-based Activities, 1995 (GPA)

Background

While the international community has adopted at least two instruments dealing specifically with land-based sources of marine pollution—the 1985 Montreal Guidelines for the Protection of the Marine Environment against Pollution from Land-based Sources and the Global Programme of Action—neither is in the form of a convention. To this day, while there are a number of regional conventions or protocols, there is no binding global instrument on land-based sources, from which as much as 80% of marine pollution originates.

However, the UNCLOS requires its states parties to pass laws to protect the marine environment from land-based activities, to harmonise them at the regional level, and to attempt to establish global and regional rules, standards and recommended practices and procedures on the matter.

In 1995, the international community attempted to deal with land-based sources of marine pollution in a comprehensive and practical manner. The result was the GPA, which was adopted at a United Nations Environment Programme conference organised in response to recommendations made at the 1992 UNCED Conference.

Objectives

- To prevent the degradation of the marine environment from land-based activities by helping states preserve and protect the marine environment.
- To assist states in taking actions individually or jointly in accordance with their policies, priorities and resources, which will lead to the prevention, reduction, control and/or elimination of the degradation of the marine environment, as well as to its recovery from the impacts of land-based activities.

GPA

The GPA:

- Provides conceptual and practical guidance for national and/ or regional authorities in devising and implementing sustained action to prevent, reduce, control and/or eliminate marine degradation from land-based activities.
- Promotes and facilitates the development or adaptation of regional and national action programmes.
- Recommends the preparation or review of a national programme of action through a six-step process.
- Identifies nine categories of land-based threats to the marine environment that need urgent action (sewage, persistent organic pollutants, radioactive substances, heavy metals, oil [hydrocarbons], nutrients, sediment mobilisation, litter and physical alteration including habitat modification and destruction in areas of concern).
- Provides assistance for countries in identifying schemes to finance sustained activities.

Geographical Scope / Jurisdiction

All areas of national jurisdiction.

Polluting Substances Covered

In general, all polluting substances from land-based activities; in particular, from the nine identified source categories (see above).

Status of Ratification of Marine Pollution Conventions in East Asia

See Table 1.

Table 1. Ratification in East Asia of International Conventions Relating to Marine Pollution (As of 31 December 1999)

COUNTRY	UNCLOS	MARPOL					London Convention		Inter-vention		CLC			FUND			Salvage	OPRC	Basel	HNS
		73/78 Annex	Annex				Conv	Prot	Conv	Prot	Conv	Prot	Prot	Conv	Prot	Prot				
	82	I/II	I	IV	V	VI	72	96	69	73	69	76	92	71	76	92	89	90	89	96
Brunei	96	86									92	92		92						
Cambodia		94	94	94	94						94									
China	96	83	94		88		85		90	90	d	86	99				94	98	92	
DPR Korea		85	85	85	85															
Indonesia	86	86									78		99	d					93	
Malaysia	96	97			97						95			95				97	93	
Philippines	84						73						97			97			93	
Republic of Korea	96	84	96		96		93				d	92	97	d		97			94	
Singapore	94	90	94		99						d	81	97			97		99	96	
Thailand																			97	
Vietnam	94	91																	95	

Numbers represent year of ratification / accession

d—denounced

Chapter 2: Status of International Conventions in East Asia[1]

Marine Pollution Legislation in East Asia

As commercial sea trading expanded, East Asian countries developed marine pollution regimes whose efficacy has been dictated by the countries' degree of political maturity and level of environmental awareness.

Countries use a variety of mechanisms to control marine pollution, among the most effective of which are flag state control and port state control of ships. Considering that all the East Asian countries are coastal states, that some are petroleum exporters and that the East Asian seas are important international navigation routes, it is important to define and strengthen national control over both local flag ships and other flag ships within the states' territorial waters and ports.

As almost 80% of marine pollution is caused by land-based activities, environmental protection and marine pollution laws should cover all pollution sources within a state's sovereignty and territorial jurisdiction, both on land and at sea.

Marine pollution legislation in nine East Asian countries is summarised below.

Cambodia

Framework law on marine environment and protection

Cambodia has the least developed environmental legislation among the surveyed countries. However, it has taken the first step by passing a framework environmental protection law, the `Law on Environmental Protection and Natural Resource Management`, which deals with the following areas of concern: environmental impact assessment (EIA); waste management; inventory, prevention, reduction and control of toxic and

[1] This chapter is excerpted from MPP-EAS, 1997a.

hazardous substances; determination of protected areas; public participation and access to information; and establishment of an Environment Endowment Fund.

Principles of environmental management

- "The State protects the environment and balances of abundant natural resources and establishes a precise plan of management of land, water, air, wind, geology, ecologic systems, mines, energy, petrol and gas, rocks and sand, gems, forests and forestal products, wildlife, fish, and aquatic resources." (Article 59, Constitution)

Conventions ratified

Cambodia has ratified but not yet implemented the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL) and its first five annexes, and the International Convention on Civil Liability for Oil Pollution Damage, 1969 (CLC).

Certain national laws, mostly old issuances, have some provisions on marine pollution. The country has little infrastructure to deal with marine pollution, which is not yet, however, a big problem.

People's Republic of China

Framework laws on marine environment and protection

The Environmental Protection Law (EPL) provides for:

- an EIA system; and
- a system of fees for dischargers using the "polluter pays" principle.

The Marine Environmental Protection Law of 1983 (MEPL) implements a scheme of marine pollution regulation with categories of regulation based on pollution sources.

Marine Pollution Legislation in East Asia

Sources of marine pollution laws are the following:

- the Constitution;
- National People's Congress and its Standing Committee;
- State Council;
- local government units; and
- Local People's Congress and its Standing Committee.

This multi-tiered system of legislation often results in overlapping of functions.

Principles of environmental management

- "The state shall insure the suitable utilisation of natural resources and protect rare animals and plants." (Article 9 (ii), Constitution)
- "The state shall protect and improve the environment of areas of human habitation and ecosystems and prevent and eliminate pollution and other hazards to the public." (Article 26, Constitution)
- "The state environmental protection plan shall be incorporated into the national economic and social development plan. The state shall adopt economic and technological policies and measures favourable to environmental protection so as to harmonise the work of environmental protection with economic and social development." (Article 4, EPL)
- "The State Council and people's governments at various levels in coastal areas shall strengthen marine environment protection. Discharge of pollutants and dumping of wastes into the seas, coastal construction and offshore oil exploration and exploitation must be conducted in compliance with provisions of law so as to guard against pollution and damage to the marine environment." (Article 21, EPL)

Conventions ratified

Among the countries in the region, China has ratified the most number of international conventions relating to marine pollution. In 1999, it ratified the Convention on Oil Pollution Preparedness, Response and Co-operation, 1990 (OPRC).

Marine Pollution Legislation in East Asia

Indonesia

Framework laws on marine environment and protection

The largest archipelago in the world, Indonesia has several laws and regulations dealing with the following aspects of the marine environment: the exclusive economic zone (EEZ); continental shelf; navigation; fishery; water pollution; and water quality standards. All touch on protection of the marine environment. A number of laws deal with land-based sources of marine pollution.

Indonesia first passed a framework environmental protection law in 1982. The Law Regarding Environmental Management (EMA-1997) replaced it in 1997.

Principles of environmental management

- Every person has the right to a healthy living environment. Every person has the obligation to maintain and protect the environment. (Article 5 (1), EMA-1997)
- The polluter pays for damage done to the environment. (Article 34, EMA-1997)
- Every factory or business that is considered likely to have significant impact on the environment must submit to EIA. (Article 15, EMA-1997)
- Environmental conditions must be incorporated into the license of activities. (Article 8, EMA-1997)
- Every person has the right to participate in environmental management. (Article 5(3), EMA-1997)
- Victims of environmental damage and/or pollution must be compensated. The living environment must be restored. (Article 35, EMA-97)

Conventions ratified

Indonesia has ratified and implements the MARPOL (Annexes I and II). It is in the process of ratifying the OPRC and the London Convention. In 1998, it passed implementing legislation for the Basel Convention, which it ratified in 1993. In 1999, it ratified CLC 1992 and denounced FUND 1971.

Malaysia

Framework laws on marine environment and protection

The Environmental Quality Act (1974, amended in 1996; the EQA-1974) has chapters on prevention of pollution of the atmosphere, soil and inland waters; prevention of waste discharges into the sea; environmental labelling; audit; and impact assessment. Regulations issued under authority of this law cover sewage and industrial effluents, EIA, and waste treatment and disposal.

The Exclusive Economic Zone Act of 1994 and Continental Shelf Act prohibit pollution of the marine environment.

The Merchant Shipping (Oil Pollution) Act 1994 is the implementing legislation for the CLC and FUND, which were ratified in 1995. The 1992 Protocols of the CLC and FUND are under review for future ratification.

Principles of environmental management from the National Environmental Policy (NEP)

- Maintenance of a clean and healthy environment.
- Maintenance of the quality of the environment relative to the needs of the growing population.
- Minimisation of the impact of the growing population, mineral exploration, deforestation, agriculture, urbanisation and tourism.
- Balance between the goals of socioeconomic development and the need to bring the benefits of development to the broad population against the goal of preserving the environment.
- Emphasis on the prevention through conservation rather than curative measures by preserving the country’s unique and diverse cultural and natural heritage.
- Determination of the implications of proposed projects and the cost of the required environmental mitigation measures by conducting EIA.
- Promotion of co-operation and co-ordination between national and local authorities as well as among countries of the Association of Southeast Asian Nations (ASEAN).

Marine Pollution Legislation in East Asia

Conventions ratified

In the last five years, Malaysia ratified the UNCLOS, MARPOL, CLC, FUND and OPRC. Implementing legislation for the MARPOL and OPRC is still being developed. While the country is not a member of the London Convention, its EEZ Act of 1984 incorporates the convention's prohibitions. The Basel Convention, which Malaysia ratified in 1993, is implemented by guidelines under the Customs Act, as well as some of the 1996 amendments to EQA-1974.

The Philippines

Framework law on marine environment and protection

The country has a framework environmental law and a marine pollution law, in addition to numerous other laws concerning the marine environment, but they have yet to be maximised. The country has the most developed EIA system and the most significant public participation in governmental processes in the region. It is experimenting with market-based instruments.

A number of government agencies have overlapping mandates with respect to the marine environment, with no single body effectively performing a lead agency or co-ordinating role.

Principles of environmental management

- "The State shall protect and advance the right of the people to a balanced and healthful ecology in accord with the rhythm and harmony of nature." (Article II, Section 16, Constitution)
- "The State shall protect and promote the right to health of the people and instill health consciousness among them." (Article II, Section 15, Constitution)
- "The State shall protect the nation's marine wealth in its archipelagic waters, territorial sea, and the exclusive economic zone, and reserve its use and enjoyment exclusively to Filipino citizens." (Article XII, Section 2, Constitution)

Conventions ratified

The country has been a member of the London Convention since 1973. However, its laws and regulations relating thereto are too general for effective compliance and enforcement. Moreover, it still does not have the technical capacity to fully implement the London Convention. Ratification of the MARPOL is under way. The Basel Convention was ratified in 1993, but the laws, rules and regulations implementing the convention have yet to fully comply with the terms of the convention. The CLC and FUND Protocols were recently ratified and took effect in July 1998. Implementing measures are being formulated. The Philippines is also a party to the UNCLOS.

The Republic of Korea

Framework law on marine environment and protection

After decades of prioritising development, the Republic of Korea (ROK) realised that it had to protect its environment. Within the past decade, it has passed an impressive number of laws relating to the environment, particularly the marine environment. It has a Framework Act on Environmental Policy and an Environmental Impact Assessment Act. The Prevention of Marine Pollution Act deals with pollution from ships and ocean dumping, the Water Quality Conservation Act with pollution from land-based sources. There are also various laws on waste.

The ROK is unique in the region because of its Coastal Management Law, and the resulting integration of all jurisdiction pertaining to activities in the marine environment in the Ministry of Marine Affairs and Fisheries (MOMAF). The objective of this measure is to manage the utilisation of the coastal environment in an integrated manner and reduce multiple-use conflicts by incorporating the principles of sustainable development, ICM and the precautionary principle.

Main components of the Coastal Management Law

- Declaration of national policy on and basic principles of coastal management.

- Definition of the coastal management boundary.
- Establishment of an ICM plan at the national level.
- Identification of elements of coastal management committees at the national and sub-national levels.
- Establishment and implementation of a coastal zone enhancement plan.

Conventions ratified

Next to China, the ROK has ratified the most marine pollution conventions in the region, including the UNCLOS, MARPOL (except Annex IV), London Convention, CLC and FUND 1992, Salvage, and Basel Convention.

Singapore

Framework law on marine environment and protection

Due to its small size, its affluent population, the fact that it has a single port, and political will and efficiency, Singapore is able to implement its laws and policies on marine pollution management effectively. Its Prevention of Pollution of the Sea Act of 1990 is a model law for implementing the MARPOL and related conventions.

Singapore does not have a framework environmental law or a law on EIA. However, the Ministry of Environment may require EIA for projects that may affect public health.

Conventions ratified

The country has acceded to the UNCLOS, MARPOL Annexes I, II and III, Basel Convention, CLC and FUND. In 1999, it ratified Annex V of the MARPOL and the OPRC.

Singapore can play a key role in developing international norms for managing the marine environment. It is a major player in international shipping and maritime trade. It has a well-informed machinery that can assess whether it is in the interest of Singapore to be a party to an international agreement.

Factors in Singapore's success

- The government
  - assumes that industries are much more likely to comply if they are performing well and thus gives them its strong support;
  - provides incentives to upgrade production and improve environmental management practices; and
  - exercises its political will.
- Multinational corporations often operate within parameters that exceed national standards because of their adherence to international codes of practice.

Thailand

Framework law on marine environment and protection

In 1992, Thailand amended its Enhancement and Conservation of National Environmental Quality Act (NEQA), which deals extensively with land-based sources of pollution. Among its innovative features is the establishment of the Environmental Fund, which assists in waste management, and other projects that promote and conserve environmental quality. Thailand uses market-based instruments more than other countries. It also has an EIA system.

While national legislation on land-based sources of marine pollution is extensive and scattered throughout many different laws, legislation on sea-based sources is limited to three articles in the Navigation in Thai Waters Act.

Principles of environmental management

- The state shall pass legislation to conserve the environment and maintain the balance of natural resources, prevent and eliminate pollution, and plan the suitable use of soil and water. (Section 78, 1991 Constitution as amended)
- Every person shall have the duty to conserve natural resources and environment as provided by law. (Section 21, 1991 Constitution as amended)

Marine Pollution Legislation in East Asia

Conventions ratified

Thailand ratified the Basel Convention in November 1997 and is in the process of developing regulations to conform thereto. Although the government has announced its intention to ratify the UNCLOS, MARPOL, CLC and FUND, it has not yet ratified any international convention on marine pollution.

Vietnam

Framework law on marine environment and protection

The country has a framework Law on Environmental Protection and a Maritime Code, which have provisions on marine pollution, but do not necessarily conform to the requirements of international conventions.

The government is gradually introducing measures, such as market-based mechanisms, to deal with the country's problems, which include the following: limited resources to purchase the equipment necessary to protect the environment; lack of incentives to establish environment-friendly practices; a complex bureaucracy; and inconsistent application of regulations by the national and local governments.

Principles of environmental management

- "State organs, units of the armed forces, economic and social bodies, and all individuals must abide by State regulations on the rational use of natural wealth and on environmental protection. All acts likely to bring about exhaustion of natural wealth and to cause damage to the environment are strictly forbidden." (Article 29, Constitution)
- "The Government of Vietnam shall implement all international treaties and conventions relating to the environment which it has signed or participated in, honour all international treaties and conventions on environmental protection on the basis of mutual respect for each other's independence, sovereignty, territorial integrity and interests." (Article 45, Law on Environmental Protection)

Conventions ratified

The country ratified the MARPOL (Annexes I and II) in 1991 and has several implementing regulations. It is in the process of developing national laws conforming to the convention. It subsequently ratified the UNCLOS in 1994 and the Basel Convention in 1995. It is in the process of ratifying the CLC, FUND, OPRC and London Convention.

Assessment of Marine Pollution Legislation in East Asia

The review of legislation in the nine countries surveyed emphasises both the similarities and diversity in the region. All the countries, except Singapore, have framework environmental laws, which, while diverse in form and approach, contain all the basic elements for protection of the environment, except for market-based instruments. (See Table 2)

Four countries have framework maritime transportation laws, but only Singapore's and Indonesia's provide good bases for marine pollution management. Most of the countries have provisions on marine pollution, but these are spread throughout many laws.

The use of market-based instruments is less common, although there is some statutory basis for them in most of the countries. Public participation is required in varying degrees in all the countries.

Environmental Impact Assessment

A common requirement is the conduct of EIA. The Philippines and Indonesia have the most comprehensive systems, while Cambodia has just passed its framework law, which provides for EIA generally, and is just beginning to implement it.

Toxic and Hazardous Waste

Most of the countries have legislation on toxic and hazardous waste, mostly taking the "cradle-to-grave" approach, but not all implement the Basel Convention to the letter.

Table 2. National Legislation Relating to Marine Pollution in East Asia.

Type of Legislation	Country			
	Cambodia	**China**	**Indonesia**	**Malaysia**
Framework Environmental Law	Law on Environmental Protection and Natural Resource Management, 1996	Environmental Protection Law, 1989	Basic Provisions for the Management of the Living Environment Act, 1997	Environmental Quality Act 1974, as amended in 1996
Other Environmental Legislation	Law of Land Management of Urbanization and Construction, 1993		Spatial Use Management Act, 1992; Natural Resources and Ecosystem Conservation Act, 1990	
Environmental Impact Assessment (EIA)		Environmental Protection Law, 1989; specific laws, e.g., Management Measures for Certification of Environmental Impact Assessment of Construction Projects	Environmental Impact Assessment Regulation, 1993	Environmental Impact Assessment Order, 1987
General Law on Pollution			Circular on the Procedure to Minimize Environmental Pollution and Destruction, 1987	
General Law on Marine Pollution		Marine Environmental Protection Law, 1983		
Specific Laws on Marine Pollution				
Sea-based Sources			Indonesian Exclusive Economic Zone Act, 1983	

(Continued)

Table 2. National Legislation Relating to Marine Pollution in East Asia *(continued)*.

Country				
Philippines	**Rep. of Korea**	**Singapore**	**Thailand**	**Vietnam**
Philippine Environmental Policy, 1977 and Philippine Environment Code, 1977	Framework Act on Environmental Policy, 1990		Enhancement and Conservation of National Environmental Quality Act, 1992	Law on Environmental Protection, 1994
National Integrated Protected Areas System Act, 1992	Natural Environment Conservation Act	Environmental Public Health Act, 1987		
Presidential Decree Establishing an Environmental Impact Statement System, 1978; Rules and Regulations for the Environmental Impact Statement System, 1996	Environmental Impact Assessment Act, 1993 and its Presidential Decree		Notifications of the Ministry of Science, Technology and Environment specifying types and sizes of projects and activities, 1993	Decree Providing Guidance on the Implementation of the Law and Environmental Protection, 1994 (Chapter 3 on Assessment of Environmental Impact)
National Pollution Control Decree of 1976				
Marine Pollution Decree, 1974, as amended in 1976	Prevention of Marine Pollution Act, 1991	Prevention of Pollution of the Sea Act, 1990		
Revised Coast Guard Law, 1974				

(Continued)

Table 2. National Legislation Relating to Marine Pollution in East Asia *(continued)*.

Type of Legislation	Country			
	Cambodia	**China**	**Indonesia**	**Malaysia**
Navigation/ maritime/ shipping	Sub-decree on Harbour Rules for Foreign Ships, 1983	Marine Environmental Protection Law, 1983; Regulations on Prevention of Pollution of Sea Areas by Vessels, 1983; Regulations Concerning Dumping of Wastes into the Sea by Vessels, 1983	Navigation Act, 1992; Decree on Oil Pollution Certificate and Noxious Liquid Substances Certificate, 1986	Merchant Shipping (Oil Pollution) Act, 1994; Merchant Shipping Ordinance (Part VA on Pollution from Ships)
Exclusive Economic Zone			Indonesian Exclusive Economic Zone Act, 1983	Exclusive Economic Zone Act, 1984
Continental Shelf		Regulations on Environmental Protection in Offshore Oil Exploration and Exploitation, 1983; Regulations on the Exploitation of Offshore Petroleum Resources in Cooperation with Foreign Enterprises	Indonesia's Continental Shelf Act, 1973	Continental Shelf Act, 1966; Petroleum Mining Act, 1966
Fisheries		Fisheries Law, 1986	Fishery Act, 1985	

(Continued)

Table 2. National Legislation Relating to Marine Pollution in East Asia *(continued)*.

Country				
Philippines	**Rep. of Korea**	**Singapore**	**Thailand**	**Vietnam**
Philippine Coast Guard Memorandum Circular on the Prevention, Containment, Abatement and Control of Marine Pollution, 1994	Prevention of Marine Pollution Act, 1991; Compensation for Oil Pollution Damage Guarantee Act	Prevention of Pollution of the Sea Act, 1990; Merchant Shipping (Civil Liability and Compensation for Oil Pollution) Act, 1998	Navigation in Thai Waters Act, 1914, as amended in 1972	Maritime Code, 1990; Regulations for Foreign Ships Operating in Maritime Zones of Vietnam, 1980
			Royal Proclamation Establishing the Exclusive Economic Zone of the Kingdom of Thailand, 1981	
				Petroleum Law
The Philippine Fisheries Code of 1998	Fisheries Act			

(Continued)

Table 2. National Legislation Relating to Marine Pollution in East Asia *(continued)*.

	Country			
Type of Legislation	**Cambodia**	**China**	**Indonesia**	**Malaysia**
Land-based Sources		Regulations on Prevention of Pollution Damage to the Marine Environment by Land-based Pollution, 1990; by Coastal Construction Projects, 1990		Prescribed Premises Regulations, 1977, 1978 issued pursuant to the Environmental Quality Act
Water Pollution		Water Pollution Prevention Law	Regulation on Control of Water Pollution, 1990	
Toxic and Hazardous Wastes		Rules for Environmental Management of Chemicals Imported for the First Time and of Imported and Exported Toxic Chemicals and a number of other special rules and circulars	Regulation on Hazardous and Toxic Waste Management, 1994, as amended in 1995	Scheduled Wastes Regulations, 1989 and Customs Orders, 1993
Agricultural Wastes			Decree on Limitation for Pesticide Registration, 1973; Regulation on Control, Distribution, Storage and Use of Pesticides, 1973; Act No. 12/1992 on Horticulture System, regarding Fertilizer and Pesticide Use, plus several decrees of the Ministry of Agriculture	Prescribed Premises (Crude Palm-Oil) Regulations, 1977, and Order, 1977; Prescribed Premises (Raw Natural Rubber) Regulations, 1978, and Order 1978

(Continued)

Table 2. National Legislation Relating to Marine Pollution in East Asia *(continued)*.

Country				
Philippines	**Rep. of Korea**	**Singapore**	**Thailand**	**Vietnam**
	Wastes Control Act, 1991, Water Quality Conservation Act, 1990	Water Pollution Control and Drainage Act, 1975	Public Health Act	
Water Code, 1976	Water Quality Conservation Act, 1990	Water Pollution and Drainage Act, 1975	Underground Water Act, 1977	Law on Water Resources, 1998; Ordinance on Protection of Aquatic Resources, 1998
Toxic Substances and Hazardous and Nuclear Wastes Control Act, 1990		Hazardous Waste (Control of Export, Import and Transit) Act, 1997	Toxic and Hazardous Substances Act, 1992	
Fertilizer and Pesticide Authority (FPA) Decree (1977); FPA Rules and Regulations on Importation, Manufacture, Formulation, Repacking, Distribution, Delivery, Sale, Storage and Use of Pesticides				

(Continued)

Table 2. National Legislation Relating to Marine Pollution in East Asia *(continued)*.

Type of Legislation	Country			
	Cambodia	**China**	**Indonesia**	**Malaysia**
Mineral wastes		Mineral Resources Law, 1996	Mining Act, 1967	
Sewage/Industrial waste	Regulation (Prakas) prohibiting the discharge of liquid industrial waste and sewage into the sea, rivers and lakes, 1994	Measures Governing Sewage Treatment Facilities and Environmental Protection; and at least seven other administrative regulations	Industry Act, 1984; Decree on Control of Industrial Pollution to the Environment, 1986	Sewage and Industrial Effluents Regulations, 1979; Prohibition on the Use of Controlled Substance in Soap, Synthetic Detergent and Other Cleaning Agents Order, 1995
Others		Regulations on Management of Laying Submarine Cable and Pipelines	Guidelines on Environmental Quality Standards (Coastal Water Quality Standards), 1988	

(Continued)

Assessment of Marine Pollution Legislation in East Asia

Many of the countries have sectoral laws on industrial, agricultural and mineral wastes, but only Malaysia, the ROK and China have special laws on sewage. Other countries have special laws that enumerate prohibited discharges, including sewage, but no specific law on sewage.

Navigation and Maritime Laws

Indonesia, Thailand, Vietnam and Singapore have framework navigation/maritime laws. Indonesia's navigation law addresses pollution in detail, while the Thai and Vietnamese laws do not. Malaysia, the ROK and Singapore have special laws on civil liability for oil pollution that implement the CLC and Fund. All countries, except Cambodia, have provisions on prevent-

Table 2. National Legislation Relating to Marine Pollution in East Asia *(continued)*.

Country				
Philippines	**Rep. of Korea**	**Singapore**	**Thailand**	**Vietnam**
Philippine Mining Act of 1995 and its rules and regulations; Revised Forestry Code of the Philippines, 1975			Mineral Act, 1967	Mining Law, 1994, Ordinance on Mineral Resources
	Act of the Disposal of Sewage, Excreta and Livestock Wastewater, 1991; Wastes Control Act, 1991		Factor Act, 1992	
The Sanitation Code, 1975	Coastal Management Act, 1999			

ing sea-based pollution, but these are scattered throughout many laws. Even Cambodia, however, has provisions prohibiting discharge of oil and sewage into the sea in its Harbour Rules for Foreign Ships.

Laws on Liability

The laws of the surveyed countries have more provisions for criminal than civil liability. However, most of the framework environmental laws have at least a general provision on compensation for causing damage to or pollution of the environment.

Penalties of imprisonment in most countries are usually stiff, but most fines are so low that they do not discourage violations.

Assessment of Marine Pollution Legislation in East Asia

It is not known whether these provisions of law have prevented marine pollution.

While Indonesia, Malaysia and Vietnam provide for the ship owner's liability for oil pollution damage, only Singapore, the ROK and Malaysia strictly conform to CLC and FUND requirements of strict liability for pollution damage. Singapore acceded to the 1992 Protocols in 1997 and passed a law to implement its obligations thereunder in 1998.

Use of Market-based Instruments

China, Singapore, Thailand and the ROK are the most advanced users of market-based instruments in the region, while Vietnam and Cambodia have only recently been exposed to the concept. Although Indonesia has the legal authority to use market-based instruments, it does not use them.

The most common market-based instruments are tax incentives and applications of the "polluter-pays" principle. Malaysia imposes an effluent-related fee for major polluting industries, such as agro-based industries and toxic and hazardous waste generators, as well as tax incentives. Under current EIA regulations, proponents of specified type of projects located in the Philippines must set up environmental guarantee and monitoring funds which could potentially enhance private sector responsibility and public sector participation in environmental management. The Philippines is also experimenting in a limited area with a pollution charge system, which, it is hoped, may become nation-wide in coverage. Thailand uses a combination of incentives (such as tax exemptions) and penalties to promote waste reduction, recycling and reuse. China and the ROK utilise user and discharge fees.

Thailand, Malaysia and China are the only countries with a National Environment Fund. In Thailand and China, the fund is used to provide loans for waste treatment facilities. In Malaysia, it may be used for research on pollution and measures for pollution prevention, response and mitigation. China's Subsidy for Environmental Protection may also be used by the environmental protection agencies to improve their equipment and installations. Cambodia also has an Environmental Endowment Fund for environmental protection and natural resource conservation, but this is to be built up from donations rather than fees to be collected by the government.

Public Participation

The degree of public participation in marine pollution management processes varies from country to country. In Cambodia, one of the purposes of the Law on Environmental Protection and Natural Resource Management is to encourage and enable the public to participate in environmental protection and natural resource management. In Vietnam, the Constitution provides for the citizens' right to participate in the administration of the state. The Standing Committee of the National Assembly may solicit comments from the public on bills and draft ordinances. A special law requires state bodies to fully consider the recommendations of social organisations and individuals to implement measures for the management and protection of mineral resources and the surrounding environment. Similar processes exist in China and Singapore, although public participation is limited.

The Philippines has a national policy of consulting the public on legislation. The law on EIA also specifies public consultation. Non-governmental organisation participation in government affairs has been institutionalised; NGOs are the main link between the government and the people.

In Malaysia, no law explicitly requires public participation in pollution management, but provisions in the Constitution on the National Land Council, National Financial Council, and National Council for Local Governments and the EIA provisions of the Environmental Quality Act, may be used to promote it.

In Thailand, the NEQA provides for the right of the public to participate in and to be informed about pollution management. NGOs may be registered with the Ministry of Environment for some limited activities. However, few NGOs are active in the field of marine environment.

In Indonesia, the EMA-1997 provides that every person has the right to participate in the management of living resources, but does not institutionalise the process.

Many NGOs in the ROK were suppressed by the government before the 1990s, but are now undergoing a renewal and often participate in the decision-making process on natural resource utilisation and contribute to changing national environment policy.

The Constitution, laws and regulations of China encourage the public to participate in environmental protection. In practice, however, NGOs and the private sector have had minimal participation in the field of environmental protection, owing to the perception that only the government and its agencies are responsible for the prevention of pollution and the protection of the environment.

Singapore has strong awareness-building and capacity-building programmes. Members of the academe provide policy research and extend training to the shipping community to keep the sector updated on the latest developments in the industry.

Ratifying and Implementing International Conventions: National Experiences

Although more countries are ratifying international conventions, studies show that they have a poor record of implementation. The MARPOL and Basel Convention are the most commonly ratified. Only Cambodia has not ratified the Basel Convention. Only Thailand and the Philippines have not ratified the MARPOL, although they are preparing to do so.

While most countries in the region have signified their intention to ratify the international conventions, actual ratification does not necessarily follow due to constraints enumerated below. Implementation also does not follow as a matter of course in many of the countries, except for Singapore, where compliance is at a high level.

In many cases, there is similarity between the provisions in the national legislation on the same topic as a particular requirement of an international convention, but the laws do not necessarily completely conform to the convention provisions.

UNCLOS

Among the nine countries surveyed, only Cambodia and Thailand have not ratified the UNCLOS, although Thailand is considering ratifying it. Thus, the framework for pollution management provided in Part XII of the convention has been accepted by the majority of countries.

MARPOL

All countries surveyed, except Cambodia, implement the MARPOL to a certain extent. Cambodia, however, is the only country that has ratified all the convention's annexes (in 1994). Ironically, the Philippines has the greatest number of implementing laws, but it has not ratified the convention. Indonesia ratified Annexes I and II in 1986. The general provisions of its framework navigation law (1992) contain many elements of the MARPOL. The regulations containing the implementation details are not available, although it is known that Indonesia implements the convention.

Thailand has not ratified the convention, but it has been preparing to do so for a number of years. Any relevant regulations it might have are not available. Malaysia ratified the MARPOL and Annexes I, II and V in 1997, but does not have implementing legislation yet. Only the general provisions are found in Malaysian environmental laws. Vietnam has several regulations and is developing national legislation to implement Annexes I and II.

China has ratified all annexes except Annex IV. Singapore has ratified Annexes I, II, III and V and is preparing to accede to Annex VI.

London Convention

Only China, the Philippines and the ROK have ratified the London Convention. None has ratified the 1996 Protocol. The Philippines and the ROK implement the convention through their respective pollution laws and a specific regulation. In 1985, China ratified the convention and issued implementing regulations. All the other countries have general laws forbidding dumping and discharge of various polluting substances into marine waters; Malaysia is more specific, requiring a license.

Ratifying and Implementing International Conventions: National Experiences

Basel Convention

All nine countries have laws requiring the proper management and disposal of toxic and hazardous wastes, but with different levels of thoroughness. Indonesia, Malaysia, Singapore, the Philippines and the ROK have ratified the Basel Convention, and their statutes substantially comply with the convention requirements. This may also be said of Thailand, which has a law on hazardous substances. China has regulations on the management and disposal of hazardous waste, but these must be updated to conform to its obligations under the convention. The framework legislation of Vietnam and Cambodia have general provisions on hazardous wastes.

OPRC

China, Malaysia and Singapore ratified the OPRC within the last two years. Singapore passed implementing regulations this year.

ASEAN's Oil Spill Response and Preparedness (OSRAP) organisation promotes regional co-operation in combating oil spills. Many ASEAN countries have developed co-operative oil spill contingency plans under OSRAP, although these are not reflected in their laws.

Intervention and Salvage Conventions

Only China has ratified the conventions. However, it has not developed special implementing legislation for them. A provision in Malaysian law categorically authorises the government to take action to prevent pollution in Malaysian waters, but it does not specify or limit where.

None of the countries has legislation fully implementing the provisions of the Salvage Convention.

CLC and FUND

Cambodia ratified the CLC in 1994 but has not adopted any implementing measures. Indonesia ratified the CLC 1992 in 1999, but has no implementing law. It also denounced FUND 1971 in 1999. Malaysia, however, ratified the 1969/71 conventions in

1995, and has a very clear implementing law (Act 515, 1994). The Philippines, the ROK and Singapore ratified the 1992 Protocols in 1997. Implementing legislation has been passed in Singapore and ROK but not in the Philippines.

China ratified the CLC 1976 Protocol in 1986 and 1992 Protocol in 1999. Vietnam and Thailand have not ratified either convention. While Vietnam has provisions of law on liability and compensation, these conform to traditional maritime law rather than the CLC and FUND regime.

Reasons for Non-ratification and Non-implementation

East Asian countries usually fail to ratify and/or implement international instruments due to the following constraints:

- lack of human and financial resources, including technical expertise;
- administration issues;
- fragmented legislation;
- lack of awareness; and
- lack of political will.

Lack of resources

The most common stumbling block to ratifying and implementing international conventions is the lack of resources. Because of their consistent economic growth, Singapore and the ROK have bigger budgets for marine environmental protection than the other countries, whose budgets have to be allocated among many competing interests and where marine pollution typically has low priority. The other countries thus have a limited capacity to collect the information necessary to formulate policy, to translate policy into implementing measures and to effectively enforce the measures.

At least four of the countries need to translate the conventions into the local language, which is difficult due to the technical nature of the conventions' subject matter.

Because of recent events in Cambodia, the country has a shortage of managerial and technical staff. However, for the same reason, the problem of marine pollution is not yet as extreme in Cambodia as in other countries.

Ratifying and Implementing International Conventions: National Experiences

Administration issues

Except for the ROK and Singapore, all the countries suffer due to diffused authority over marine-related activities. Agencies hardly co-ordinate with each other, resulting in piecemeal, duplicate or even conflicting efforts. The unclear division of functions leads to friction due to overlapping jurisdiction or, at the other extreme, the absence of accountability of any agency. This is especially pronounced in the Philippines, Indonesia, Vietnam, China and, to a lesser extent, Malaysia.

In China, the law divides jurisdiction over the sea into four areas—traffic, fishing, coastal and offshore concerns—resulting in conflict as to which government agency is in charge of pollution matters. In the Philippines, the consensus of at least five government agencies with interlocking functions was required to initiate the ratification of the MARPOL.

There is also the conflict between the national and local governments in many East Asian countries. In Vietnam and China, for example, they compete for turf.

It will be interesting to see the results of the ROK's attempt to lodge marine-related authority, previously spread among 10 government agencies, in a single body—the MOMAF.

Fragmented legislation

In many of the surveyed countries, provisions on marine pollution are scattered throughout several laws. Piecemeal passage of laws should not be a problem, provided that it is guided by a coherent overall policy. However, in most of the countries, the implementing agencies try to fit the different laws together only after they are passed, not while they are being drafted.

In some countries, legislation does not provide for enforcement measures, such as documentation, reporting, monitoring and the use of market-based instruments. Even laws heavy with penalties may be ineffective because the implementing agencies have insufficient enforcement authority or strategies.

Lack of awareness

The above issues may all be traced to the lack of awareness of the causes of marine pollution and the means to control them.

Ratifying and Implementing International Conventions: National Experiences

The surveyed countries are not active in the IMO and do not participate in formulating international conventions on marine pollution except for Singapore which in the past decade has become an active participant in IMO processes. Traditionally, therefore, the countries have little knowledge of the conventions and a weak sense of commitment to adopting them.

Awareness-building efforts in the region and the increasing visibility and urgency of marine pollution are slowly but surely changing this.

Lack of political will

In the end, it is the strength of their political will that will determine whether or not countries ratify and implement the international conventions. Lack of resources and other common problems are not insurmountable obstacles if a country is determined to deal with marine pollution. The level of political will, which was very low not too many years ago, has risen steadily but has not yet reached an optimum level in all countries.

Lessons Learned

The nine countries surveyed have begun to study the international conventions on marine pollution and their national applications. Now they need to go beyond theory and actually control marine pollution.

Like ratification, legislation is an extended process. A law is usually passed long after its need is recognised, so it reflects national developments only to a certain extent. But laws are necessary to achieve goals and it is essential to update and to enforce them.

Implementing the laws and applying marine pollution standards are even more difficult than passing laws and ratifying conventions. However, countries and organisations are constantly developing strategies to achieve their goals. The learning process should include not just incorporating international instruments into national law but also developing the means to enforce them.

Ratifying and Implementing International Conventions: National Experiences

Essential Activities for Better Implementation of International Conventions

- Capacity and awareness building.
- Clear designation of authority and delineation of functions.
- Public participation.
- Proactive management of marine pollution.

Capacity and awareness building

Building the capacity and awareness of the bureaucracy and general public is paramount. A country aware of the importance of ratifying the international conventions will be able to participate in shaping marine pollution standards. A country must first know what information it needs and then co-ordinate its efforts to collect the information. Capacity building allows a country to fully realise the benefits of ratification.

In China, the government has begun the arduous and long-term task of instituting public environmental education by sending scholars from its legislative and executive branches to universities and institutes. The education programme is the government's response to the public's perception that poor implementation of laws is caused by the government's failure to achieve the level of technical expertise required by international instruments.

In Cambodia, awareness and capacity building take on new meaning in the context of the country's political turmoil. Due to events in its recent history, the country lacks the human resources to develop environmental legislation. For example, oil exploration companies require environmental inspectors to evaluate, monitor and control environmental problems, but Cambodia lacks EIA experts.

Singapore, however, takes awareness and capacity building seriously. Before ratifying the MARPOL in 1990, as early as 1980 it held consultations with all stakeholders to resolve various multiple-use conflicts and to avoid fragmentation of effect and interest. It created an inter-departmental body for consultation in order to co-ordinate policy and procedures among the different stakeholders.

Clear designation of authority and delineation of functions

Clarity of authority and functions, as well as co-ordination of policy and operations, are important especially where there are multiple implementing agencies. The mechanisms for co-ordination must be institutionalised.

The Philippines' experience in implementing the CLC and FUND underlines how necessary it is for agencies to co-ordinate with each other. First of all, at least six agencies are involved in implementing the conventions. Second, at least three private sector stakeholders (receivers, ship owners, insurers) need to know how to execute the conventions. The stakeholders agreed that the formation of a technical working group, with representatives from all the sectors concerned, is the most efficient way to implement the conventions.

Public participation

Public participation in all aspects of ratification is essential to ensure the smooth implementation of international instruments. All stakeholders are necessarily partners of the government in laying the groundwork for effective and rational implementation.

The extent to which the government involves the public in the initial stages of ratification and then implementation varies from country to country. Almost all the countries surveyed allow some form of public participation.

The Philippines has had a positive experience in co-operating with NGOs and people's organisations in managing the environment. Public participation has made strong headway, particularly in community-based resource management programs. Many countries have made similar efforts.

Proactive management

Proactive management of marine pollution gives the government a psychological edge, putting it at the vanguard in the fight against pollution. This approach, which anticipates problems rather than waits for them to happen, is built into the international conventions.

For example, Singapore has made a strong commitment and is able to chart the direction of its environmental protection regime.

Developing Action Plans to Ratify and Implement International Conventions on Marine Pollution

Much of the success of implementing international conventions depends upon the use of effective strategies. It is important that countries learn from each other. However, no single strategy is applicable in all countries. The peculiarities and complexities of each country, the local wisdom, historical antecedents and socio-political and economic realities are essential considerations in crafting a reliable strategy.

Strategies must also be developed and applied by building an informed consensus, which entails adequate consultation with all parties affected by the conventions.

Questions Countries Must Ask Before Ratifying a Convention

- What benefits does a country gain from ratifying a marine pollution convention? The economic, social, political and environmental advantages must be identified in order to generate public support for ratification.
- What are the costs of ratification and how should they be paid? The economic, social and political costs must be weighed in relation to the benefits and advantages.
- Who will be affected, directly or indirectly, by ratification? The stakeholders from the public and private sectors and from civil society should be identified and brought into the process.
- What are the obligations imposed by a convention? The enforcement requirements, administrative mechanisms, facilities and services needed and reporting responsibilities should be addressed.

Developing Action Plans to Ratify and Implement International Conventions on Marine Pollution

Developing Strategic Action Plans

Action plans are effective tools in helping policy makers generate and select strategies. They identify targets that a country seeks to achieve and the means to achieve them. They ensure that a country's programs and policies incorporate the lessons discussed earlier, lessons which, for some countries, were learned the hard way. Cambodia, for example, suffered the consequences of ratifying the MARPOL without adequate planning and preparation.

It is necessary for countries to ratify and implement international conventions in a systematic, comprehensive and integrated way. The Philippines, Indonesia and Vietnam have thus developed action plans to do so for specific conventions.

Elements of action plans

- Baseline data.
- Participation of all stakeholders.
- Designation of a lead agency.
- Specific and workable options.
- Commitment by stakeholders.

Baseline data

Baseline data on the subject of regulation are important to ensure that the problems sought to be addressed by the government are related to the problems addressed by the international convention. The data should include information regarding the level of environmental degradation in a country in order to enable the stakeholders to determine the areas of priority and the appropriate response to particular problems.

Baseline data should indicate the country's level of compliance with prescriptions under a particular convention in order to allow the government to strengthen regulation. Information on existing infrastructure needed to implement a convention is essential in assessing what should be given priority.

Baseline data are also important for another reason. Conventions should be viewed not just in terms of their legal and technical problems, but also in terms of their potential economic cost and benefits. A country, in deciding whether or not to ratify the MARPOL, for example, must consider the economic impact

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of the convention on its fleet, older vessels and outlying areas. It may be necessary for economists and data analysts or statisticians to examine the shipping sector as a whole and the implications of full implementation.

The experience of the Philippines in preparing its action plan to ratify and implement the MARPOL exemplifies the need for adequate baseline data. The government found it difficult to obtain data on sea vessels, their carrying capacity, the types and volume of waste loaded and unloaded, the number of calls per port, among others—all of which were necessary to prepare the MARPOL action plan and to determine the level of compliance which the Philippines seeks to achieve and the readiness of the sectors, especially the shipping sector, to comply.

The absence of such crucial information necessitated a cost-benefit analysis on MARPOL compliance. Assisted by the IMO, the government commissioned a study to determine the cost implications of and the options in phasing in MARPOL implementation.

Similarly in Indonesia, a workshop on the establishment of cost-effective shore reception facilities in Jakarta identified as a problem the limited data on the types and quantity of wastes being offloaded/disposed from domestic and foreign vessels.

While preparing to accede to the OPRC, Vietnam also found it difficult to determine whether or not local oil companies would comply with a law requiring them to establish contingency plans and to provide the equipment needed to deal with oil spills.

Stakeholders' participation

All stakeholders must participate in the drafting of any action plan. They should include representatives from the policy and administrative level of all government agencies that will implement the convention, from all entities in the regulated sector and from the general public that will be affected by the convention's implementation.

The representatives must have at least a working understanding of the convention. More important, they must have sufficient authority to bind the agency or organisation they represent. This is necessary to ensure that the commitments made by the representatives will be honoured by their principals. Moreover, it guarantees appropriate response in cases of high-level decision making.

Developing Action Plans to Ratify and Implement International Conventions on Marine Pollution

Designation of a lead agency

A lead agency must be designated to oversee the implementation of the action plan. It must have adequate authority to exact commitments made by the stakeholders and to decide with dispatch matters regarding a specific issue or concern.

In most East Asian countries, it is difficult to designate one lead agency because agencies' powers often overlap or are diffused.

Multisectoral implementation is ideal for most East Asian countries, which must balance numerous interests. It is thus not surprising that multisectoral groups or task forces have begun to flourish as countries prepare to implement more international conventions.

Multisectoral task forces do have one disadvantage: they usually get bogged down in tedious consensus building. However, the pay-off—smooth and well-oiled implementation—is worth it.

In order to develop an action plan to establish cost-effective port reception facilities, Indonesia formed a multisectoral legal team to assess the state of legislation in the country and its compliance with the MARPOL. From the beginning, however, the Directorate General of Sea Communications was the lead agency. The ROK government's decision to consolidate in one ministry all powers and responsibilities relating to the marine environment and activities theoretically eliminates the question of responsibility and the need for multi-agency co-ordination in implementation. The ROK should provide a good case study for other East Asian countries.

Specific and workable options

Action plans' strategies must be specific and feasible. The choice of strategy will be influenced by limitations in infrastructure, the level and cost of technical and administrative expertise and political realities.

Commitment

Strategies will be effective only if they are supported by all the stakeholders, whose commitment must be certain in terms of the means and time of performance. The action plan must provide for a definite timetable and implementers must ensure that deadlines are met.

Developing Action Plans to Ratify and Implement International Conventions on Marine Pollution

Representatives must be able to give their institution's commitment without need for further authorisation.

Ensuring Success

The success or failure of any action plan is determined by the political will of the general public, the stakeholders and, ultimately, the policy makers. It is the stakeholders and people who implement the action plans who can most effectively influence policy makers by providing the rationale for strategies and solutions to problems, and by ensuring that action plans are accomplished to the extent feasible. The lead agency plays a pivotal role as it endeavours to keep the action plans' momentum going by making sure that stakeholders keep their commitments and by securing the requisite political support for the action plans.

It is too early to know whether or not the action plans so far developed will be successful. However, it is unquestionable that they have moulded the future of marine pollution management in the region.

Chapter 3: Developing National Policies and Legislation

The previous chapter pointed out that the successful implementation of international conventions on marine pollution depends greatly on the presence of comprehensive and integrated national coastal policies, including framework legislation on marine pollution. While a convention-by-convention approach is desirable, even indispensable, effective and efficient implementation of international norms starts with appropriate national policies and framework laws.

Integrated Coastal Management (ICM)

ICM is anchored on the principle that the environment is best managed holistically, that is, by treating all its parts as interdependent. The sustainable use of coastal resources requires an understanding of the complex ecological interrelationships of land, air and water. Coastal areas contain rich and diverse ecosystems and resources that are strategically important to the economic and social well-being and development of nations. Applied in a timely and comprehensive fashion, ICM paves the way for sound investment and sustainable use of the coastal areas and their natural resources (Chua, 1993, 1996; Clark, 1992, 1996; Cicin-Sain and Knecht, 1998).

Definition of ICM

ICM is a resource management system that employs an integrative, holistic approach and an interactive planning process to address complex coastal management issues. It serves as a blueprint for attaining the goals of sustainable development by maintaining the functional integrity of the coastal resource systems, reducing resource-use conflicts, maintaining the health of the environment and facilitating the progress of multisectoral development (Cicin-Sain and Knecht, 1998).

Integrated Coastal Management

ICM and Agenda 21

ICM is the ideal approach to coastal management. Chapter 17 of Agenda 21 calls for the adoption of "new approaches to marine and coastal management and development at the national, sub-regional, regional and global levels, approaches that are integrated in content and are precautionary and anticipatory in ambit." It also calls for, among others, integrated management and sustainable development of coastal areas, including exclusive economic zones (EEZs).

Agenda 21 mandates states to co-operate in preparing national guidelines for integrated coastal zone management and development. It asks coastal states to commit themselves to integrated management and sustainable development of coastal areas and the marine environment under their national jurisdiction. To this end, according to Agenda 21, it is necessary to:

(a) Provide for an integrated policy and decision-making process, involving all sectors, to promote compatibility and a balance of uses;
(b) Identify existing and projected uses of coastal areas and their interactions;
(c) Concentrate on well-defined issues concerning coastal management;
(d) Apply preventive and precautionary approaches in project planning and implementation, including prior assessment and systematic observation of the impacts of major projects;
(e) Promote the development and application of methods, such as national resource and environmental accounting, that reflect changes in value resulting from uses of coastal and marine areas, including pollution, marine erosion, loss of resources and habitat destruction; and
(f) Provide concerned individuals, groups and organisations access, as far as possible, to relevant information and opportunities for consultation and participation in planning and decision making at appropriate levels.

Under Agenda 21, coastal states should establish or strengthen appropriate co-ordinating mechanisms (such as a high-level policy planning body) for integrated management and sustainable development of coastal and marine areas and their resources, at both local and national levels. Such mechanisms

Integrated Coastal Management

should include consultation, as appropriate, with the academic and private sectors, non-governmental organisations (NGOs), local communities, resource-user groups and indigenous people (Chua, 1992, 1998; Clark, 1998; Cicin-Sain and Knecht, 1998; Scura et al., 1992). Such national co-ordinating mechanisms could provide for:

(a) Preparation and implementation of land and water use and siting policies;
(b) Implementation of integrated coastal and marine management and sustainable development plans and programmes at appropriate levels;
(c) Preparation of coastal profiles identifying critical areas, including eroded zones, physical processes, development patterns, user conflicts and specific priorities for management;
(d) Prior environmental impact assessment, systematic observation and follow-up of major projects, including systematic incorporation of results in decision making;
(e) Contingency plans for human-induced and natural disasters (including likely effects of potential climate change and sea-level rise) and for degradation and pollution of anthropogenic origin (including spills of oil and other materials);
(f) Improvement of coastal human settlements, especially in housing, drinking water facilities and treatment and disposal of sewage, solid wastes and industrial effluents;
(g) Periodic assessments of the impacts of external factors and phenomena to ensure that the objectives of integrated management and sustainable development of coastal areas and the marine environment are met;
(h) Conservation and restoration of altered critical habitats;
(i) Integration of sectoral programmes on sustainable development for settlements, agriculture, tourism, fishing, ports and industries affecting the coastal area;
(j) Infrastructure adaptation and alternative employment;
(k) Human resource development and training;
(l) Public education, awareness and information programmes;
(m) Promoting environmentally sound technology and sustainable practices; and
(n) Development and simultaneous implementation of environmental quality criteria.

Integrated Coastal Management

Elements of Integrated Coastal Management

ICM recognises that the features of the coastal zone are dynamic and frequently changing. The diversity of ecosystems and resources in the coastal zone poses a special challenge to managers and regulators.

Within the zone can be found ecosystems of great productivity and biodiversity. Human populations rely on them as sources as well as launching pads of their activities. Coastal areas are the most populated areas in most countries.

Coastal zones are also characterised by diversity of human activities—marine recreation, fishing, marine transportation, offshore mineral development—which, in turn, significantly impact on the environment and coastal resources. However, because coastal and marine resources are finite, conflicts often arise among competing users of resources, including commercial and small-scale fishers, industrial users and tourists, among others.

Coastal zones thus pose complex technical, environmental, social, economic and legal issues and challenges to planners and decision makers. While coastal zones are best managed holistically, administrative jurisdictions are unfortunately typically narrow in range, and bureaucracies are highly protective of their core responsibilities. A holistic approach includes broad and far-reaching jurisdictional responsibilities, as well as encroachment on the most sacred of bureaucratic jurisdictions. ICM challenges policy makers to develop novel and imaginative legal perspectives and mechanisms. In particular, it demands a re-examination of the arbitrary demarcation of zones that ignores the special character of the coastal zone.

Legislation and reorganisation both require a comprehensive, holistic perspective and vertical and horizontal co-ordination. Vertical co-ordination between agencies of the national and local governments is necessary to ensure complementary and internally consistent policies and adequate technical assistance and budget allocation, while horizontal co-ordination is necessary among implementing agencies in executing management actions (Sorensen and McCreary, 1990; Boelart-Suominen and Cullinan, 1994; Tobin, 1992).

A non-holistic approach often results in policy conflicts. The ineffectiveness of many sectoral (e.g., fishery, coral reef and mangrove) or special area (e.g., marine park/reserve) management programmes outside the ICM framework springs from the inability to resolve legal, interagency and other cross-sectoral conflicts (Chua, 1998, 1999).

ICM requires a strong legal and institutional framework that integrates control of pollution, protection of biodiversity and management of sectoral development. The framework should have the following features:

- a long-term, dynamic ICM programme subject to periodic review and revision;
- policies that make use of one or more management strategies—including land-use plans, environmental impact statements and other regulatory measures—to rationalise and systematise allocation decisions; and
- management strategies selected for their systems perspective and multilateral approach that recognise the interconnections among coastal systems.

How ICM Improves Development Planning

- It furthers a thorough understanding of the natural resource systems that are unique to the coastal areas and of their sustainability within the context of a variety of human activities.
- It optimises the multiple use of the coastal resource systems by integrating ecological, social and economic information.
- It promotes interdisciplinary approaches and intersectoral co-operation and co-ordination to address complex development issues and formulate integrated strategies for the expansion and diversification of economic activities.
- It helps governments improve capital investment and natural and human resources to meet economic, social and environmental objectives as well as international obligations to protect the coastal and marine environment.

Steps in Developing ICM Initiatives

(IWICM, 1996; Chua, 1993)

1. Awareness
   - Developing awareness of the value of coastal resources within national economic and social development programmes.

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- Developing awareness of the ability of coastal ecosystems to sustain more than one economic or social activity.
- Developing awareness of the common dependence of different groups on the availability of goods and services generated by the coastal systems.

2. Co-operation
   - Promoting co-operation among the different sectoral institutions—the private sector and community groups—to achieve common objectives.
3. Co-ordination
   - Developing co-ordinated policies, investment strategies, administrative arrangements and harmonised standards by which performance can be measured.
4. Integration
   - Implementing and monitoring policies, investment strategies, administrative arrangements and harmonised standards as part of a unified programme, and making adjustments, if necessary to ensure that stated objectives are being met.

Good Practices in Implementing ICM (IWICM, 1996)

- Adopt a systematic, incremental approach in developing and implementing ICM projects and programmes.
- Involve the public in ICM.
- Integrate environmental, economic and social information from the very beginning of the ICM process.
- Establish mechanisms for integration and co-ordination.
- Establish sustainable financing mechanisms.
- Develop ICM capacity at all levels.
- Monitor the effectiveness of ICM projects and programmes.

<u>Adopt a systematic, incremental approach in developing and implementing ICM projects and programmes.</u>

ICM should be developed systematically in order to:

- allow time to solicit financial resources and build local managerial and technical capacities to identify and implement appropriate technological interventions;
- promote interagency and stakeholder co-operation; and

- foster perception and attitude changes among policy makers, resource and economic managers and research scientists.

ICM should be applied at the local level, and then to district, provincial and national programmes after sufficient expertise has been developed. While it is beneficial to have a broad base of national support to facilitate sectoral co-operation and consistency in policies, ICM initiatives must build strong public support by integrating interested and affected parties (stakeholders) into the ICM planning and management processes.

Apply the ICM framework to sectoral management.

Systematically employ the ICM framework to administer a combination of policy, management and technological interventions to address sectoral economic development issues. The framework can help in the effective management of fisheries, aquaculture, tourism, ports and marine parks, among others.

Use a combination of management actions.

In developing ICM, combine management actions, including market-based and regulatory instruments, education and training programmes and alternative forms of livelihood.

Adopt precautionary approaches.

Development should not proceed where information on the possible social, economic and environmental effects is insufficient to decide whether such effects are acceptable. This approach will prevent or minimise use conflicts, adverse impacts and irreversible loss of future development options.

Strictly follow the ICM procedure.

Follow the step-by-step processes of planning, implementation, monitoring and evaluation, which are integral and sequential parts of ICM programme design. Strict compliance ensures the success of the programme and the improvement and refinement of its management measures.

<u>Involve the public in ICM.</u>

Involve the stakeholders at all phases and levels of ICM programme development and implementation. Broad public support enhances awareness of the special features and values of the coastal zones at all levels, from local communities to decision makers. Public and private stakeholders can help identify use conflicts and environmental management problems, determine their causes and effects, and resolve them. Broad public support also provides a mechanism for consultation, co-ordination and, eventually, integration of the efforts of government agencies to bring about sustainable coastal development.

<u>Integrate environmental, economic and social information from the very beginning of the ICM process.</u>

Due to the complex and dynamic nature of the coastal systems, it is important to have accurate scientific information, which can strengthen planning and management processes and help monitor the effectiveness of plans and management strategies.

Information gathering is a continuous process in ICM. The main role of research is to ensure that information is available at each strategic stage of ICM development. While much of the baseline information may be available, hard data on ecosystem dynamics and interactions between the resource users and coastal ecosystems are often lacking.

Filling such data gaps may require considerable research. Most countries have a wealth of secondary information on demography, the physical environment and the political, cultural and socioeconomic conditions that shape coastal policies and environmental management strategies. However, much of the information may be in the custody of line agencies, archives of universities and personal collections of experts. These sources of information should be identified and the information retrieved, processed and analysed to form a systematic coastal environmental profile, which will help identify critical gaps in information.

Promote management-oriented research.

Set the research agenda to narrow the information gaps and to strengthen the scientific basis for management. The collection and analysis of environmental, social and economic data can be expensive and time-consuming. Priority should thus be given to acquiring information that will help solve important problems and issues and provide a sound base for formulating plans and management strategies.

Effective research identifies alternatives for the sustainable economic development of coastal areas and resources and anticipates potential adverse impacts. It can identify and build into ICM projects measures to mitigate potential adverse impacts and to complement economic, social and environmental development objectives. Where unavoidable adverse impacts are identified, environmental impact assessment (EIA) may be required.

Integrate EIA in ICM programme development and implementation.

Late application of EIA is often less effective in modifying project/programme design than early application. The proactive use of environmental, economic and social information early on can greatly reduce the need for costly and time-consuming EIA. It clearly identifies the impacts and factors that need to be assessed in order to determine whether project design or additional mitigation measures should be modified.

Integrated EIA is an effective screening and diagnostic tool for measuring adverse environmental changes caused by the cumulative or synergistic impacts of economic activities. It enables the ICM programme to establish proactive or reactive responses within the limits of the environment's carrying/absorption capacity. ICM enables integrated EIA to be more focused and effective in areas or zones designed for multiple forms of development.

Consider common property features in economic assessment.

Common property features of the coastal resources should be fully incorporated into the economic assessment of the value of coastal areas and alternative forms of development. The long history of coastal development in Asia and other tropical regions has given rise to complex patterns of resource use and rights of access to natural resources. Many of the natural systems, such as coral reefs, estuaries, mud flats, seagrass beds and mangroves, are considered part of the public domain or common property of society. Traditional forms of resource management often cannot be maintained under conditions of rapid population growth and pressure to expand and intensify development. ICM helps avoid or alleviate the problems associated with overexploitation and degradation of common property resources by using measures such as allocation of user rights, creation of

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zoning areas for multiple-use management and introduction of improved resource management practices.

Include cost-benefit analysis in the assessment of development alternatives.

A cost-benefit analysis facilitates the adoption and approval of the ICM programme. Consider both the direct and indirect values of natural resources—that is, the economic and environmental goods and services generated by the coastal ecosystems. Exercise caution in the valuation of cultural, spiritual or less tangible aspects, which can be highly variable, depending on the interests of different social or economic interest groups. Qualitative values associated with the non-consumptive use of coastal and marine resources can be important to policy makers.

<u>Establish mechanisms for integration and co-ordination.</u>

Institutional mechanisms facilitate integration and co-ordination of the ICM programme. Integration and co-ordination are mutually supportive elements.

Integration harmonises policies and legislation of national, provincial/state and local governments; builds close management linkages between resource systems; and results in co-ordination among concerned resources governance and management agencies. Integration begins at the initial planning stage.

Co-ordination plays a central role in fostering understanding and co-operation among stakeholders, line agencies, researchers, policy makers and resource managers. An institutional mechanism for co-ordinating the development and implementation of the ICM programme is essential, especially at the local level, and will be acceptable to the parties involved if it is built upon an existing management structure.

<u>Establish sustainable financing mechanisms.</u>

Sustainable financing mechanisms ensure the continuity of an ICM programme. They are as important as institutional mechanisms. In formulating an ICM project or programme, sources of finance to sustain management activities should be explored before finalising the project or programme plan.

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Develop ICM capacity at all levels.

The capacity of stakeholders to contribute to the ICM programme should be strengthened. A major constraint in ICM programmes is the lack of technical and management skills, especially at the local level. ICM requires coastal managers with broad-based environmental management training to lead and co-ordinate programme development and implementation. However, few coastal managers have the interpersonal skills to co-ordinate interagency activities, mobilise human and financial resources, and direct management-oriented research and information development. Coastal managers should develop a wide range of technical and professional management skills in the following fields:

(a) environmental evaluation and resources analysis;
(b) environmental economics;
(c) environmental impact assessment;
(d) geographic information systems (GIS) and information management;
(e) sociology;
(f) law;
(g) policy and land-use planning;
(h) pollution mitigating technologies;
(i) programme development; and
(j) communication.

An ICM programme's strategies must strengthen human resources and institutional capacities. One of the best ways to acquire knowledge and practical management skills is through in-service training and active participation in existing ICM programmes. The ability of stakeholders to contribute to ICM can be improved through public meetings, extension services and workshops.

Monitor the effectiveness of ICM projects and programmes.

Environmental, social and economic impacts should be monitored throughout the life of an ICM programme. Due to the complex and dynamic nature of the coastal systems, it is not always feasible to accurately predict the economic effectiveness and environmental performance of ICM projects and programmes.

Integrated Coastal Management

This is especially true for tropical coastal systems, where scientific knowledge is often limited. Factors to be monitored must be identified and standards and procedures for monitoring established early on in the ICM process.

Monitoring is a powerful tool for assessing the performance of projects. It gives early warning of adverse effects so that the design and management of projects can be modified to avoid irreversible impacts. It also provides means of assessing whether an ICM project or programme meets its goals and objectives.

Legal Aspects of Implementing ICM

Legal aspects of designing and implementing ICM programmes include defining the extent of coastal zones and recognising property rights over specific resources.

The most challenging legal issue is probably clarifying the vertical and horizontal roles of government agencies, including identifying interagency processes, particularly in terms of policy development, enforcement and implementation of laws, rules and regulations, and issuance of permits. Mapping out and reconciling overlapping jurisdictions and mandates is a formidable task and requires efficient co-ordination mechanisms.

Legal imagination and creativity are also required to develop and adopt modalities and procedures of public and community participation in decision making and implementation, including incentives for partnerships between the public and private sectors.

Finally, the legal basis for sustainable financing mechanisms must be explored and enacted.

DEVELOPING A NATIONAL COASTAL POLICY: EXPERIENCES AND LESSONS[1]

Although most Asian countries recognise the need for it, they do not have an integrated national coastal or marine policy. The few attempts made thus far have focused on institutional integration. Only the Republic of Korea (ROK) has integrated key agencies under one institution. Others, such as Thailand, rely on co-ordinating committees to harmonise policies and programmes. The Philippines and China grant local governments the discre-

[1] This section is excerpted from MPP-EAS, 1999a.

tion to adopt integrated management. However, institutional integration alone is insufficient. The ROK bears watching as it implements its Coastal Management Law that will form the basis for integrated management.

Coastal uses are similar throughout East Asia. Batangas Bay in the Philippines and Xiamen in China represent and best illustrate the characteristics and conditions of fast-growing coastal areas. The management issues and problems confronting these demonstration sites may be serious, but they are not without solutions.

ICM offers a workable approach to management issues, requiring the adoption of the following measures:

- a system of policy formulation and legislation;
- institutional arrangements and administrative mechanisms;
- implementation and enforcement;
- monitoring and assessment;
- scientific and technological backstopping and capability building; and
- sustainable financing mechanisms.

Minimum Elements of a National Coastal Policy

- Clear policy and management objectives;
- Institutional arrangements and administrative mechanisms;
- Directions for preparing, implementing and enforcing plans;
- Monitoring and assessment of the environment, policy, and effectiveness of implementation/enforcement;
- Capability building;
- Mechanisms for stakeholder participation; and
- Sustainable financing mechanisms.

These elements cannot all be accomplished overnight and all together. Timing is crucial, as they are so linked to each other that the accomplishment of one element paves the way for the realisation of the others.

The experiences of Batangas Bay and Xiamen, both ICM demonstration sites of the Global Environment Facility (GEF)/ United Nations Environment Programme (UNDP)/International Maritime Organization (IMO) Regional Programme for the Prevention and Management of Marine Pollution in the East Asian Seas (MPP-EAS), illustrate the dynamics among these elements.

Developing a National Coastal Policy: Experiences and Lessons

Clear policy and management objectives

A major policy objective for both Batangas and Xiamen was to set up an appropriate institutional mechanism to implement ICM.

In both sites, a multisectoral body was created to provide a system for policy formulation and direction and to determine the parameters of the programmes on coastal management. Policies were issued through local legislation, and served as the legal framework for all participating agencies.

Batangas Bay

In the Philippines, environmental management, which includes the power to implement and enforce environmental laws, was traditionally a function of the national government. Various government agencies, mandated under the Philippine Administrative Code, had specific powers and functions pertaining to coastal resources.

In 1991, the Local Government Code (Republic Act 7160) was enacted. General powers and functions of environmental management were devolved to the local governments, giving them the opportunity to formulate their own environmental management strategies.

The Local Government Code gives the provincial, city and municipal governments of Batangas wider latitude in managing their environment and natural resources. Theoretically, each local government may institute programmes within its own jurisdiction. Thus, they passed and implemented ordinances and undertook environmental awareness and consciousness programmes, but did not co-ordinate to protect the bay. However, vertical and horizontal integration is necessary, as the bay is shared by the coastal municipalities around it.

The national government employs the general sectoral management approach in Batangas Bay. The Department of Environment and Natural Resources (DENR) is the lead agency tasked with conserving natural resources and protecting the environment. Several other agencies manage specific resources and regulate specific activities, such as tourism, navigation and pollution from ships.

In response to the institutional inadequacy in coastal resource management in Batangas Bay, an integrated coastal management council (the Batangas Bay Region Environment Protection Council [BBREPC]) was created to co-ordinate and consult with stakeholders on coastal development policies and to implement the strategic environment management plan (SEMP) for the bay. It is a multisectoral and multilateral body composed of representatives of government agencies, coastal municipalities and key stakeholders (e.g., industries and NGOs). The Provincial Government-Environment and Natural Resources Office (PG-ENRO) serves as the secretariat and operating arm of the BBREPC.

The BBREPC is structured to suit the circumstances of Batangas Bay. Existing agencies retain their mandates and no single body possesses comprehensive regulatory powers. Inter-agency conflicts are minimised. Most important of all, the council's mechanism is politically feasible.

Xiamen

In China, the Marine Environmental Protection Law embodies the basic principles of environmental protection and gives priority to pollution prevention and mitigation. It applies to China's internal waters, territorial seas and other waters under the country's jurisdiction.

Under this law, the Environmental Protection Administration of the State Council is in charge of environmental protection for the whole country. The State Oceanic Administration is responsible for "comprehensive marine management," which involves organising scientific investigation, monitoring, surveillance and research on the marine environment and protecting marine waters against damage and wastes.

Local laws are enacted by the Local People's Representative Congress and its Standing Committee. Various laws recognise the authority of the Local People's Government to formulate measures, regulations and standards.

Marine environmental management in China includes, among others, the following: environmental quality standards; EIA; a system of three-concurrency requiring design and construction of pollution prevention and mitigation facilities simultaneously with the development of the projects to which they relate; monitoring, surveillance and inspection; marine pollution reporting; a system of application, registration and licensing for pollutant discharges; imposition of a pollution discharge fee; and imposition

Developing a National Coastal Policy: Experiences and Lessons

of legal liabilities such as penalties, fines and suspension of operation.

The government addresses the problem of lack of co-ordination and clear delineation of functions and operational limits among technical agencies in Xiamen through the Interagency Task Force/Committee on Marine Management and Co-ordination (Leadership Group), which is composed of 24 line agencies.

It is a high-level co-ordinating and steering group for ICM. It is chaired by the executive vice-mayor, and includes four other vice-mayors in charge of fisheries, the ocean, ports and harbours, tourism, industries, science and technology and city planning and construction. Concerned agencies and local government are represented. To execute the task force's decisions, the government created the Marine Management and Co-ordination Office (MMCO). Like the PG-ENRO of Batangas Bay, it is directly under the local government.

Institutional arrangements and administrative mechanisms

Batangas Bay

Government personnel lack the experience and know-how to map out an integrated management plan. The numerous environmental and fisheries laws are not enforced or implemented. Local government units and DENR field offices insufficiently monitor firms' compliance with environmental standards. The result is polluter firms' continued non-compliance with environmental standards.

Several government agencies are mandated to manage Batangas Bay. Unfortunately, they exercise their mandates independently of each other, duplicating their work and wasting government resources. Five municipalities (Batangas City, Bauan, Mabini, San Pascual and Tingloy) are located along Batangas Bay, each with its own political territory. Their municipal waters overlap, making it difficult to delineate power among them.

The BBREPC has the necessary powers and functions to ensure the sustainable development in the area. It has the power to develop policies and programmes in the region; undertake information and education activities to encourage involvement by all sectors; co-ordinate with national agencies and local governments to ensure the consistency of their plans and programmes; and perform such other functions as may be necessary to promote development and conservation in Batangas Bay. The PG-ENRO serves as its technical secretariat.

The PG-ENRO performs the devolved functions of the DENR. It takes the lead in implementing environmental management programmes in the province; developing operational plans and strategies for environment and natural resources programmes and projects; enforcing pollution control and environmental protection laws, rules and regulations; co-ordinating ICM programmes; co-ordinating the SEMP; and engaging the participation of the appropriate sectors in managing Batangas Bay.

Xiamen

The MMCO is the operational arm of the Interagency Task Force/Committee on Marine Management and Co-ordination. It executes the decisions of the task force on the planning, development and management of all marine-related activities. It is directly under the local government and was built upon the existing Marine Management Division. It is responsible for implementing Xiamen's ICM programme.

The creation of the MMCO resolved conflicts among agencies responsible for fisheries and shipping safety, clarified regulations and resolved conflicts over sea-space utilisation between shipyard operators and fish farmers.

Preparing and implementing plans

Batangas Bay

Among the programmes adopted in Batangas Bay pursuant to BBREPC's objectives are the development of an integrated land-use and water-use plan and an integrated waste management plan, and the application of market-based instruments in combination with command-and-control measures. The BBREPC programme also incorporates EIA.

A zoning ordinance implements the land-use and water-use plan, which considers the best way to use land and marine resources. It defines the region's development pattern and is consistent with the municipal and regional socioeconomic development objectives.

As regards EIA, the BBREPC is considering developing a technical committee to process and evaluate initial environmental examination (IEE) and environmental impact statement (EIS) submissions for projects in the region, and actively participating in the review of such projects. The EIS system is being institutionalised as a precondition to the grant of local permits.

Xiamen

Zoning is determined through a technical procedure that considers the various functions of a particular sea area. Xiamen has declared nature conservation zones and identified marine protection areas for endangered species, such as the egret, lancelet and Chinese white dolphin. The municipal government has designated 5,500 hectares as a core protected area and established special regulations to protect the dolphin.

Monitoring and assessment

Batangas Bay

Baseline water quality information on Batangas Bay is extremely limited simply because the area has not been monitored consistently. The establishment of the BBREPC changed the situation. The council provides a forum for dialogue between and among various levels of government, government agencies and private industry on the need for and utilisation of monitoring information. It put up a multisectoral monitoring programme that includes local and national government agencies, private companies operating around the bay, academic institutions and NGOs.

The members agreed that the programme should initially focus on environmental monitoring rather than on compliance monitoring.

Monitoring and evaluation of the strategic environmental plan is the responsibility of the PG-ENRO, which focuses on the conversion of inputs into desired outputs. A reporting system will be instituted whereby all participants shall submit reports to the PG-ENRO, which will then consolidate and submit them to the BBREPC.

Xiamen

Xiamen set up a multisectoral monitoring programme that emphasises the use of pollution monitoring information to strengthen management of the environment. The monitoring programme is now carried out by five government institutions engaged in pollution monitoring and a state university. Under the new arrangement, they integrate their marine environment monitoring activities, inter-calibrate participating laboratories, train personnel, share equipment and monitor the data exchanged. Under the ICM framework, they have rationalised their activities so that they complement rather than duplicate each other.

Capacity building

Capability-building programmes are being conducted in Xiamen and Batangas Bay demonstration sites for the key actors in ICM, whose management and monitoring skills are being enhanced through on-the-job training. The GEF/UNDP/IMO sponsors some of the programmes.

Stakeholder participation

Batangas Bay

The BBREPC outlined the roles and responsibilities of participating groups and organisations, which defined and mutually agreed upon their areas of accountability. Its participation matrix, which describes the members' roles and their interrelationships, paved the way for a system of recording the members' level of participation. Members' roles are formalised through memoranda of agreement.

The majority of stakeholders must endorse and/or concur with proposed laws and ordinances before these are enacted. During consultations, stakeholders are given options to consider so that they fully appreciate the proposals' implications and can therefore make informed decisions.

Xiamen

The Constitution, laws and regulations encourage the public to participate in environmental protection. "The People's Government," it is commonly said, "encourages and rewards units and individuals who have made remarkable contributions to protect and improve the environment."

However, the contribution of NGOs and the private sector to marine environmental protection, including ICM, remains minimal,

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as the public still believes environmental protection is the government's job.

Sustainable financing

Batangas Bay

The BBREPC is exploring innovative financing mechanisms to help sustain ICM since the government has limited funds. It is considering privatisation schemes, build-operate-transfer schemes and a trust fund mechanism to collect pollution charges and environmental fees.

The Batangas Coastal Resource Management Foundation was established in 1991 by five companies and the Batangas governor. It now has 11 members. The ICM programme gave it an opportunity to pursue its objective of sustainable development for Batangas. It plays a major role in the region's Integrated Waste Management Action Plan. Signatories are now implementing their voluntary agreements on waste reduction.

Batangas Bay encourages private investment. An integrated waste facility is currently being developed through a public-private partnership project.

Xiamen

Fees collected based on Xiamen's waste disposal fee system are pooled into a special fund managed by the Environmental Protection Department. The funds are used in major pollution treatment projects and are loaned out to waste-producing firms to improve their waste reduction facilities. A percentage of the fees collected is used to buy monitoring equipment.

Xiamen needs funding to sustain its ICM programme. Its Strategic Management Plan, drawn up in 1996, considered adopting elements of the market economy, applying appropriate economic instruments, creating new funding mechanisms and diversifying funding sources for environmental protection and management. It proposed adopting regulations and policies to encourage enterprises, co-operatives, individuals and stockholders to build, establish and operate environmental industries such as waste treatment facilities for both effluents and solids, and environmental engineering design firms, among others. It sees as a possible solution to its funding problems a foundation for environmental protection, construction and management.

GUIDELINES FOR DEVELOPING A NATIONAL COASTAL POLICY[2]

An outline guide for developing national coastal policies follows. It employs ICM as its framework and was developed using Thailand, the ROK, the Philippines and China as models.

Assessment of Existing Resources and Policies

- Most countries have policies, laws and regulations that govern activities in their coastal areas or provide management plans for coastal resources and environments. An assessment of existing policies, laws and regulations is the starting point of any attempt to formulate a national policy.
- Existing policies need not be incorporated into the new coastal policy. The purpose of assessment is to determine which policies to retain, which to incorporate into the new policy, which to repeal and, most important, the effect of the new policy on the retained policies.

<u>Coastal environmental profile</u>

- Assessment of existing coastal resources and the status of coastal environments must be done quickly, otherwise policy-making will bog down. Data can be fine-tuned later (during the monitoring phase, for instance).
- Data need not be accurate or complete but should be sufficient to guide environmental managers and policy makers. Secondary information is sufficient if based on fairly recent studies that cover a representative area. Primary data should be gathered only to fill in wide data gaps or to validate existing data.
- The following socioeconomic data must be gathered:
    - population, employment, income, growth rates and trends;
    - an inventory of all activities in the coastal areas; and
    - identification of high-impact activities, such as fishing, mining, shipping and ports development, tourism, coastal agriculture and commercial and industrial development.

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[2] This section is excerpted from MPP-EAS, 1999a.

Guidelines for Developing a National Coastal Policy

Legal and institutional aspects

- The laws define the rights and obligations of stakeholders. They also delineate the roles of the various government agencies managing the coastal zone. Laws, especially fundamental laws such as the Constitution, provide the legal basis for particular aspects of management (e.g., classification/zoning, prohibitions, preferential rights).
- In many cases, the laws do not cover all aspects of coastal management, or are inconsistent with one another. It is therefore necessary to identify the gaps, overlaps, vague provisions and the general interrelationship or hierarchy of laws.
- Attention should be given to definitions (e.g., coastal zone), limitations on coverage (e.g., law on marine pollution), jurisdiction of concerned agencies (e.g., ports authority), devolution of powers (local government vs. national agencies), rights (e.g., ownership of land, preferential rights to fishing), prohibited acts and penalties.
- A management system consistent with traditional or customary norms and practices, and thus supported by stakeholders, is more likely to succeed than one that is not.

Setting Policy and Management Objectives

- The national coastal policy must be clear, comprehensive and realistic. It is easy to write policy that contains all the "right" principles, plans and actions. But if it cannot be implemented, it will remain a mere piece of paper, an unrealised dream.
- Objectives cannot be achieved overnight. Policy must direct the phasing in of management interventions, especially those that depart radically from existing practices. It must also direct the phasing out of incompatible activities.
- Policy objectives should strike a balance between development and conservation.

Integration into national planning

- The policy should integrate coastal resources and environment management into the government's regular planning and management processes.

Guidelines for Developing a National Coastal Policy

Setting limits

- The policy should clearly define the physical boundaries of the coastal zone. They can extend as far out to sea as the EEZ and as far inland to all areas that have a direct or indirect impact on the sea. Although ecologically ideal, these limits may not be easy to implement or enforce. A coastal zone may be narrower, as long as it contains three geographical components: a stretch of coastal waters; the coastline; and a band of coastlands. The limits need not be uniform nation-wide. The policy can provide criteria for determining limits for each specific site.
- The policy should identify major issues and set priority issues (e.g., marine pollution, waste disposal, conflicts among stakeholders, habitat/wildlife protection, institutional concerns). The priority issues are likely to be site-specific. The policy should identify the mechanism by which the implementing agencies can fine-tune management actions to respond to the particular concerns of each site.
- The policy should clearly identify what activities are covered (allowed, regulated, prohibited) and not covered (addressed in other policies).
- The policy should guide management strategies (e.g., integration/co-ordination among agencies, devolution of powers, merging and centralisation of functions, etc.).

Setting up the institutional arrangements

- A single agency or different agencies must perform a hierarchy of functions:
  - Policy formulation, which is often the function of high-level bodies such as the cabinet.
  - The lead agency function, which is assigned to an agency which oversees the day-to-day implementation of the management actions.
  - Co-operating agency functions, such as technical assistance, enforcement assistance or help in the monitoring of activities, compliance with regulations, etc.
  - Apprehension, prosecution and penalising functions, which are necessary to deal with violators.

Guidelines for Developing a National Coastal Policy

- The national coastal policy can define the agencies' roles and direction, which can then be mandated in subsequent implementing laws.

Options on institutional arrangements

- A super-agency can be given all the powers and functions to manage the marine and coastal environment. It may have a policy-making governing board, planning and implementing arms, and enforcement (police) units. The obvious advantages of this option are its simplicity and full control over all aspects of coastal management. The disadvantage is that it can be unwieldy, considering the breadth of functions needed to manage the coastal zone. It can even conceivably cover the functions of the entire government. Other government agencies that may be deprived of some of their functions may resent the formation of a super-agency.
- A common option is to retain specific separate agency functions and create a co-ordination body composed of representatives of the various environmental agencies to discuss, co-ordinate and integrate their functions or activities. Its advantage is that it will not disrupt the existing set-up. Its disadvantage is that the body is only advisory and must rely heavily on the co-operation and action of its member agencies for implementation.
- Another option is to devolve all environmental management functions to a local government. Its advantage is that plans can be fine-tuned to meet local requirements. Its disadvantages include the following:
    - Ecological boundaries seldom coincide with local political boundaries.
    - Local objectives may be parochial.
    - Local governments may easily bow to pressure to forego long-term conservation goals in favour of short-term economic gains.
- A combination of approaches may profit from the strengths of various options. A high-level policy-making body (e.g., cabinet level) may be given full control of general coastal management policy directions, plans and actions. Local governments may be tasked to lead in implementing general

policy. They may formulate policies and regulations and take action to suit their sites' requirements. National agencies may then provide technical, financial and enforcement assistance to local governments.

- The choice of option depends on traditional practice and whether it has been successful; the community's openness to change; technical, managerial and financial capability to set up a new system; and political considerations.

Preparing Management Actions

- Action plans must address the previously identified priority issues. They should have a deadline and designate the responsible agencies. They must be realistic and list only the actions that are doable within a reasonable period considering the existing capabilities.
- Action plans must be consistent with a general management plan, including an integrated zoning plan that will guide regulations governing the coastal land, shoreline and coastal waters.
- In a region beset by crisis, countries are tempted to forego environmental conservation, which is expensive, and to allow development projects to proceed unencumbered. Action plans should adhere to long-term goals.
- Regulations must be clear, and regularly and uniformly enforced. New regulations should be well studied and pilot-tested before full implementation.
- Incentives, such as alternative livelihood for fisherfolk to ease fishing pressure, should be provided to reinforce desirable behaviour.

Monitoring and Assessment

- The effectiveness and socioeconomic impacts of the policy and its implementing laws and regulations should be monitored and honestly assessed to enable the proper agency to modify management interventions that do not work.
- The environment should also be monitored as it is the ultimate gauge of the effectiveness of all policies and plans.

Guidelines for Developing a National Coastal Policy

Capacity Building

- The policy should provide for a programme to develop the managerial, technical, enforcement and prosecution skills of the implementing agencies.
- The phasing in of management interventions should consider the existing capabilities. For example, sophisticated management tools (e.g., tradable pollution quotas) can be used only by sufficiently trained implementors.

Stakeholder Participation

- The spectrum of public participation in management is wide. At one end, it may consist of keeping communities informed of the management plans and actions and soliciting their comments. At the other end, communities may make management decisions themselves. The most common form of public participation is a consultation or public hearing where the affected groups express their opinions about an issue. The public may also participate at different stages of development of an activity, policy or law.
- The policy should define the level and stage at which the public, especially the affected communities, can participate in management. Communities may elect representatives to sit on recommendatory or even decision-making bodies. They can be consulted directly through public hearings.
- The public can participate meaningfully only if it is properly informed. The policy should guarantee the public's access to information needed to make an informed decision. It should also provide for a programme to raise the public's awareness of management issues.
- Particular sectors (industry, fishing, tourism, etc.) must be consulted on matters that affect them. Incentives should be provided to encourage private initiatives compatible with government policies.

Sustainable Financing

- The policy should declare that coastal resources cannot be used for free. The price should internalise environmental costs.

Guidelines for Developing a National Coastal Policy

- Any financial burden should be distributed equitably. Waste disposal charges, for example, should be proportionate to the amount and type of wastes generated.
- Private sector initiatives should be encouraged, especially into investments in environmental services, environmental safety and preparedness and cleaner technology.

Development Cycle

- The first attempt to develop a national coastal policy will probably not cover all issues that need to be addressed. But conditions change over time, and what may be the major issue now may not be the most pressing issue tomorrow. Current capabilities and financial resources may not allow the government to focus on all problems with equal attention.
- Policies and their implementing laws and regulations should be assessed regularly to see if they need to be modified in the light of new developments. Regular assessment will ensure that the policy remains dynamic and responsive.

Developing National Marine Pollution Legislation

Introduction

Countries in East Asia have responded to threats to the marine environment by ratifying essential international conventions and by enacting national laws. However, their responses are not comprehensive, and a number of countries still have to ratify or implement important conventions such as the MARPOL and London Convention.

The objective of this section is to apprise users of the technical and legal considerations that will be encountered by governments in the formulation of an orderly and up-to-date body of legislation to protect the marine environment from pollution, based on the existing body of international conventions.

This section is divided into two parts. The first consists of a brief introduction describing the basic principles concerning en-

[3] This section is excerpted from MPP-EAS, 1999b.

vironmental and marine environmental protection in national legal and non-legal instruments such as the Constitution and general state policy in East Asian countries. The format and structure of the instruments are discussed next, followed by a section that highlights the general and basic provisions and principles of law that must be incorporated into legislation on marine environmental protection.

The second part deals with specific requirements and obligations of states under international conventions that must be addressed by national legislation. Incorporated are discussions on various approaches for co-operation in formulating national legislation on marine pollution prevention and management.

National Policy Instruments on Marine Environmental Protection

<u>State practice</u>

Forms of national policy instruments

The basic principles for state actions on marine environmental protection affairs are commonly embodied in national policy codes, which may either be legal or non-legal instruments, related general national policies or national development plans.

A) Constitution

The basic provisions concerning marine environmental protection in many East Asian countries are embodied in their fundamental legal document, the Constitution. Such is the case in Cambodia, China, Indonesia, the Philippines, Thailand and Vietnam.

Some Constitutions provide a direct definition of "marine environmental protection." For instance, a provision of the 1987 Constitution of the Philippines reads as follows: "The State shall protect the nation's marine wealth in its archipelagic waters, territorial sea, and the exclusive economic zone, and reserve its use and enjoyment exclusively to Filipino citizens" (Article XII, Section 2). The 1991 Constitution of Thailand, however, defines protection of the environment more broadly, whereby the state is to "maintain the environment and protect against pollution" (Section 74, Chapter 5 on State Policy).

Developing National Marine Pollution Legislation

Other Constitutions provide an even broader perspective. Most commonly, marine environmental protection is encompassed in the principle of protection and proper utilisation of natural resources as a whole. For instance, the Constitution of Cambodia provides: "The State protects the environment and balances of abundant natural resources and establishes a precise plan of management of land, water, x x x, and aquatic resources" (Article 59).

B) State policy

Marine environmental protection is viewed as one of the integral components of the principle of sustainable development. It is necessary for a state to adopt a national policy on marine environmental protection or sustainable development.

Vietnam adopted a detailed environmental framework and action plan in 1991—the National Plan for Environment and Sustainable Development. China established the conservation and sustainable development of ocean resources as one of the major program areas of its Agenda 21. Pursuant to this, China Ocean Agenda 21, the policy guideline for the sustainable development and utilisation of the seas and natural resources within its jurisdiction, was passed in 1996.

The Philippines' national policy for environmental protection, which covers marine environmental protection, is embodied in several laws such as Presidential Decree No. 1151 (1977), otherwise known as the Philippine Environmental Policy, and the Philippine Strategy for Sustainable Development, Cabinet Resolution No. 37, 1989. The environmental protection policies contained in these laws are the promotion of sustainable development and the strengthening of environmental impact assessment. The National Marine Policy of the Philippines states that the Philippines "must ensure that its marine and coastal resources are properly managed and that its environment is protected against threats of possible pollution from both marine and land-based sources."

C) National medium-term plans

Some East Asian countries utilise national five-year plans that integrate the principle of sustainable development besides the abovementioned basic policy instruments.

Developing National Marine Pollution Legislation

The National Development Policy Plan and the Sixth Malaysia Plan provided the institutional bases for a framework of policies for sustainable development, with the philosophy of one single law dealing with a comprehensive range of issues, such as air, water, noise and land pollution, in addition to approaches for uniformity in strategies and implementation to address different types of pollution and environmental problems by one agency.

The GBHNs (Guidelines of State Policy) 1993-1998, issued by the People's Consultative Assembly of Indonesia, provided sustainable development principles, which were translated into implementation policies by Repelitas (five-year development plans). China likewise has a year-2000 plan.

The content of national policy instruments

National policy codes of East Asian countries concerning the protection of marine environment and natural resources emphasise two important aspects of national policy: the state's duty and people's obligation to protect the marine environment.

A) Duty of the state

The duty of the state to protect the marine environment and its resources for the benefit of its people is affirmed in the Constitutions of East Asian countries such as Cambodia, Indonesia, Philippines, Thailand and Vietnam. The state has the duty to ensure the balance of the environment, including the marine environment and the natural resources therein, for the greatest welfare of its people. While the duty of the state is expressed differently among various national policy instruments, the essence and principle of the state being responsible for protecting the environment is the same.

B) Duty of the people

While people are expected to abide by rules and regulations concerning marine environmental protection, some Constitutions have express provisions on the responsibilities of the people.

Chapter 4 of the Constitution of Thailand provides that the people must "conserve natural resources and the environment as prescribed by law." In turn, they have the right to information and compensation for "dangers" from contamination or spread of pollution caused by state-supported activities or projects.

The 1992 Constitution of Vietnam declares that state organs, units of the armed forces, economic and social bodies, and all individuals have the obligation to obey laws and regulations on the rational use of natural wealth and on environmental protection.

Summary

In accordance with current state practices and relevant obligations under international conventions, the framework for a national basic policy instrument on marine environmental protection in East Asian countries must do the following:

a) establish a legal foundation and guiding principles for the overall protection of marine environment and rational use of natural resources within;
b) affirm marine environmental protection as the duty of the state and the obligation of its people and all other entities and bodies;
c) uphold the principle of simultaneously developing the economy and protecting the marine environment;
d) integrate the objectives and policies for the protection of the marine environment into action instruments such as the national medium-term plan in order to maintain integrated development in both land and coastal areas; and
e) strengthen the principle of environmental and natural resource use consistent with the carrying capacity of the marine resources and environment in order to achieve the sustainable utilisation of the ocean.

National Marine Pollution Legislation

The structure of national marine pollution legislation

The enactment of national legislation is a major step towards the implementation of international conventions. Considering East Asian state practices in implementing international conventions, a state may enact national legislation on marine pollution taking either the framework law approach or the spe-

Developing National Marine Pollution Legislation

cial law approach. Under the framework law approach, legislation is laid down at several levels but under one basic law. Under the special law approach, pieces of legislation on different topics are enacted separately and independently of each other.

The framework law approach

Under the framework law approach, a basic policy, which may or may not be in the form of a statute, forms the foundation of all national legislation on marine pollution. All statutes, decrees, rules and regulations, orders and other issuances on marine pollution emanate from the basic policy and are treated as one unit in the national legislation system. Different facets of marine environmental protection (including the prevention and management of marine pollution) are addressed at different levels of governance, depending on the level of operationalisation.

With this approach, it is an effective practice to refer in the law or other instrument to the enabling or authorising legislation at the preceding level (see Figure 1).

First level: national policy instruments

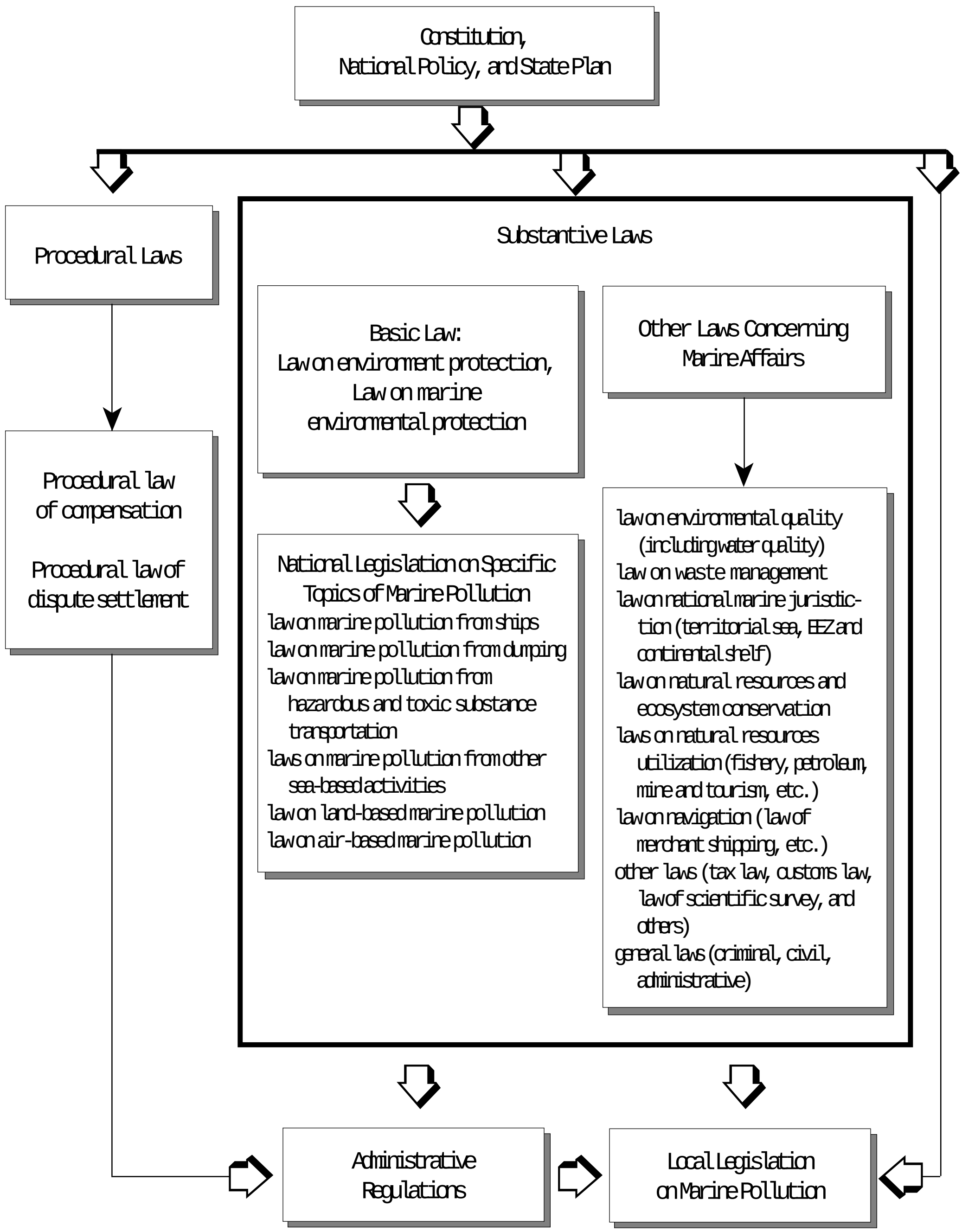
General principles relating to environmental protection are found in state policy instruments such as the Constitution, national policy and state plan, which define and set forth the guidelines for each individual strategy, including the creation of national legislation on marine pollution.

Second level: basic laws concerning marine environmental protection

This level consists of three kinds of laws promulgated by the national legislature or law-making body:

i) Substantive law. The most important is the basic law on environmental or marine environmental protection. It states the policy of the state to protect and preserve the marine environment, or to prevent and manage marine pollution; defines the framework and general principles for marine environmental protection; and indicates the importance of management and prevention of marine pollution. In some countries, it is found in the Navigation or Maritime Transport Code. It also establishes the government agencies responsible for marine environmental protection. It may be incorporated in the general

Figure 1. Framework Law Approach



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environmental law or the general law on ocean management. Laws that establish rights and obligations (public or private) and regulate activities are part of substantive law.

ii) Procedural law. Laws that prescribe particular methods for enforcing or redressing the invasion of rights established by substantive law are part of procedural law. Examples are dispute settlement and compensation for damage from marine pollution. The specific details of procedures may or may not be in the basic law. It is possible to have a general legal procedure for dealing with both civil and administrative disputes.

Third level: special legislation on marine pollution

Like the second level of laws, this level is promulgated by the national law-making body. However, each law at this level deals with a specific set of activities that threaten, or protect, the marine environment. The necessity of laws at this level depends on the adequacy of laws at the preceding level. Some codes or basic laws are so comprehensive that the need for special laws is limited. Other basic laws, however, are too general and need to be amplified in special laws.

National legislation at this level could be organised the same way as international conventions: that is, by source of pollution. While this approach simplifies conforming to international standards, it is not appropriate for all countries.

National legislation on marine pollution would be most effective if drafted in conformity with a number of globally accepted universal principles and standards. In this way, a country's particular situation and circumstances relating to marine pollution, as well as the international community's, are taken into consideration.

Fourth level: administrative rules and regulations implementing related laws

This level is composed of regulations and rules issued by administrative regulatory agencies to implement national laws. The regulations set forth specific mechanisms, standards and procedures necessary to operationalise national laws. As regulations need to be changed according to existing conditions, the instruments at this level should have a greater degree of flexibility than legislation in the preceding levels.

Fifth level: local legislation

Strictly speaking, local legislation is not always at the bottom rung of the framework. In some countries, local governments have the power to legislate on substantive and procedural matters that are not necessarily subservient to administrative regulations. However, the limitation is that local laws have effect only within the territorial jurisdiction of the local government. Local standards usually may be more stringent than national laws.

The special statute approach

Under the special statute approach, laws on the prevention and management of marine pollution are enacted distinctly and independently of each other. The only link among them is that they comply with the primary policy instruments such as the Constitution, and that they address different aspects of marine pollution. The laws are not integrated into a common system, but may be integrated in implementation (see Figure 2).

Main and subsidiary legislation

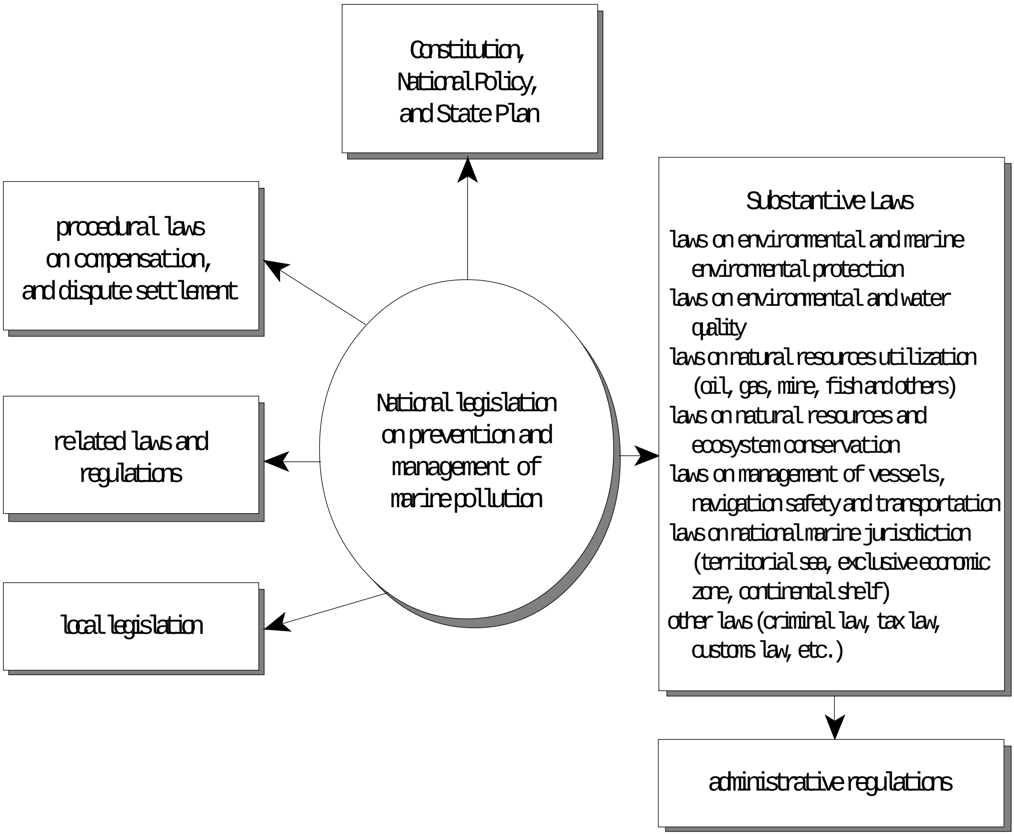
Under the special statute approach as well as the framework law approach, subsidiary legislation in the form of administrative regulations issued under authority of the main legislation (the special statute) is required. For our purposes, the second and third levels in the framework law approach are the "main legislation," while the fourth level is the "subsidiary legislation".

Modes of adopting international conventions into national legislation

The countries of East Asia have utilised two different approaches to adopt international conventions in national legislation.

In the first approach, the state takes no other action after the act of ratification or accession. The convention is then assumed to become part of the law of the state. A variation of this approach is the issuance of a declaration, either by statute or executive order, that the convention is now part of the legal system of the state. This may also be the same instrument of

Figure 2. Special Law Approach



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ratification or accession. Elements of the convention may or may not be found in the national legislation. If found, the provisions may be in different formats or use different terminology. Laws would have to be interpreted in the light of relevant conventions or vice versa.

The second approach is the opposite of the first. A law is adopted in which each provision of the convention is restated in a manner adapted to national conditions. There is no need to refer to the convention (except when questions of interpretation arise) as all the details are in the law.

A third approach, which is used by countries in other regions but is not common in East Asia, is an intermediate one. The legislation declares the effectivity of specific provisions of the convention and has additional provisions to “fill in” elements that are left by the convention to the country to specify, such as the implementing agency, the court having jurisdiction over relevant disputes, and the sanctions for violation. This approach makes it necessary to refer to the convention together with the law.

The best approach is obviously the second one, as it makes clear to everyone how they are expected to comply. The first approach is the most difficult to implement because it leaves everything to the implementing agency. The implementing agency may not have the authority to make the necessary prescriptions or might not be capable of doing so, leaving affected persons without guidance and creating the risk that courts or other dispute-settling authorities may incorrectly interpret actions taken to implement the convention.

However, it is up to each country to adopt what is best for it. If the country is not ready to pass a detailed law, rather than taking the first approach, it may take the third, which would provide the elements that need specific stipulation by the implementing country.

General considerations of national marine pollution legislation

General considerations of structure

Generally, the structure of a law on marine pollution is the same as that of other laws. The common component provisions of the law are the objective, definition, scope of application and implementing clauses. The following provisions of law are essential for special statutes on marine pollution control:

A) Objective

The objective sets out the rationale behind the passage of the law, the issues that it seeks to address and the purpose for which it was enacted.

B) Definition of terms

To avoid different interpretations of the law, it is necessary to define terms that may have meanings other than those intended by the legislation, and terms that are technical, new or uncommon. A technical term may have various meanings and interpretations depending on the field or the

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context in which it is used. It is essential that the subject pollutant be defined as well. Other terms common to the subject matter that will probably need definition are the facilities required, vessel type, waste, etc. Special topics will also have terms that need definition.

C) Scope of application

The scope of application of a law is generally composed of three essential elements that must answer the following questions:

Where shall a law be applicable? This refers to the geographical scope of the law's application and is usually limited to the state's jurisdiction. However, due to special jurisdictions existing under the Law of the Sea and other conventions, and the jurisdiction exercised by the state over ships flying its flag beyond its territory, the geographical or jurisdictional scope of a law shall be specifically defined as it varies depending on the emphasis of the law. For instance, there is a difference between the scope of jurisdiction in implementing the MARPOL and the Intervention Convention.

To *whom* shall the law be applicable? This concerns those entities required to obey and comply with the law. Laws are, in general, applicable to the state's nationals and to foreigners who are situated within the state's territory. However, because of the special nature of maritime jurisdiction, it is important to be specific in national legislation on marine pollution. The scope of application is not only limited to persons but also covers different vessel types and some kinds of facilities such as offshore platforms.

What does the law create? This element involves the legal relationships governed by the law — the particular rights and liabilities established by the law. Different international conventions on marine pollution focus on different aspects of marine pollution management and specify the rights and liabilities of the concerned parties.

D) Exemptions

Most of the conventions exempt warships, naval auxiliary ships and other ships on government non-commercial service from their provisions. A state may opt not to exempt its own warships and similar ships or to make special provisions for them, but it is traditional international law to observe the immunity of such ships of other countries.

E) Designation of implementing agency

The failure to clearly designate an implementing agency or to clearly delineate functions among more than one implementing agency invariably leads to overlapping and conflict of or gaps in their functions and powers. This is one of the major causes of weak law enforcement. Activities in the marine environment are by nature intersectoral, and their regulation to prevent and manage pollution will involve various agencies in most countries. An aspect of the designation of agencies is the provision for co-ordination among them and/or with other agencies with related functions. Lastly, care must be taken not to leave any gaps in enforcement responsibilities.

In identifying the agency, its authority should also be clearly enunciated. It is also important to empower the agency by providing for the resources (human, financial, etc.) it will need to carry out its duties. In some countries, it is important to include a provision on budget allocation in the law. An alternative in some countries is to create a fund for implementing the law, contributed to by budget allocation, fines and other penalties, compensation for response and cleanup measures, or fees. Each alternative must be considered and studied carefully before being written into the law.

Lack of resources, however, should not be seen as an obstacle to enactment of the law.

F) Enforcement

Most of the conventions have developed mechanisms that encourage compliance and discourage non-compliance. The MARPOL, for example, establishes a system of reporting and co-operation that makes it easy to spot offenders and motivates governments to impose the called-for conditions.

A good system of enforcement that has been developed internationally and is now in place in many countries is the regionally implemented system of port state control.

While the laws should have punitive measures, these should be considered as the last in the line of disincentives.

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The worst mistake would be to consider them as the only means of law enforcement.

G) Sanctions

The law shall provide for sanctions, although these should not be considered as the only deterrent to violation of the law. The most effective sanctions include civil, administrative and criminal liability. In light of the new approach of requiring ship owners to actively ensure their ships' compliance as a means to effectively enforce regulations, the drafters of the law should seriously consider including criminal, not just civil and administrative, liability of the ship owner for violations.

H) Procedure for settlement of disputes

A number of international conventions have provisions for conciliation and arbitration when states disagree on their application. Such international dispute settlement procedures must be allowed under the law, whether the law specifies it or not.

General considerations of content

A) Principles for general legislation on marine pollution

Some important principles of environmental protection that need to be included in the legislation on marine pollution are the following:

i) an explanation of the importance and necessity of prevention and management of marine pollution;
ii) the application of key principles of protection of the marine environment, such as the precautionary principle and the polluter-pays principle, among others; and
iii) the encouragement of public and private sector partnership.

B) Reference to international laws on marine pollution

In drafting the implementing law, care must be taken not to ignore important elements embodied in international conventions and regional agreements, and the particular objectives and requisites established under the national legal system.

Many international conventions establish mechanisms in pursuit of their objectives. An implementing law would therefore incorporate these mechanisms as well. Examples would be a licensing or permit system, reporting system, and so on.

The international conventions on marine pollution are evolving to keep up with new information and technology. Mechanisms to cope with this constant change have been developed at the international level through protocols and amendments. With regard to IMO conventions, a system of "tacit approval" ensures automatic application to member states. At the national level, it must be ensured that legislation is flexible enough to accommodate these changes without detracting from the effectiveness of the law.

Basic elements of laws implementing individual conventions on marine pollution

This part provides the essential elements of national legislation implementing particular international conventions. The instruments are grouped into those dealing with prevention by source of pollution, and those dealing with activities following marine pollution incidents.

Depending on the state, it is possible to put two or more of these together in a law. For example, the MARPOL and London Convention may be implemented through one law as they both prohibit indiscriminate discharge of wastes into the sea. The London Convention and Basel Convention are both easily integrated into laws on management of land-based wastes.

Integration is useful in waste management, which is needed (if not required) for the proper implementation of all the conventions. For example, the MARPOL, while requiring the provision of reception facilities, does not require proper treatment and disposal of the waste. An integrated approach might call for the integrated management of ship-source wastes and land-based wastes for proper treatment and disposal. Essential to the implementation of the OPRC is the proper disposal of oil recovered during pollution response activities. This may be reflected in the national legislation.

On the other hand, technical considerations might provide an argument for implementing the conventions through separate laws. For example, the MARPOL is a detailed and technical document dealing solely with waste produced by the normal

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operations of ships. Mixing MARPOL systems with other conventions' systems could complicate, if not confuse, matters for the implementing agencies as well as the affected sectors. However, on the matter of dealing with waste received, recovered, produced or transported, as the case may be under the different conventions, a common ground for one piece of national legislation may be found.

Laws on Marine Pollution from Ships

The objective of the MARPOL is to preserve the seas and coastal environment from pollution by ensuring the complete elimination of intentional pollution and minimisation of accidental discharges from ships. Therefore, any national legislation on the prevention and management of marine pollution from ships shall refer to the standards provided in the convention.

The MARPOL annexes should be implemented by way of subsidiary legislation, which is easier to amend than main legislation, as they contain technical details that are subject to constant change.

The following are the main components of a law concerning marine pollution from ships:

A) Key definitions for the purpose of the law

Some essential definitions, such as "ship," "discharge," "oil," etc., shall be clearly defined by the law, consistent with that of the MARPOL.

B) The designation of an agency

The law shall designate an appropriate government agency to implement the MARPOL, in accordance and consistent with the existing legal system of the state.

C) Scope of application of the law

i) *Geographical scope of law.* The law is applicable to waters under the jurisdiction of a state, namely its internal waters, archipelagic waters, territorial sea and EEZ.

ii) *Vessels covered by the law.* All types of ships, both those bearing the state's flag wherever they may be and foreign ships within territorial waters, are covered by the law. However, naval vessels, warships or other government craft used for non-commercial purposes are

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excluded. The scope of application with respect to the vessel depends on the size of the ship based on the standards set in the MARPOL. Attention shall be given to subsequent developments of the MARPOL, whose standards have been changed several times through protocols and amendments.

iii) *Polluting substances subject of the law.* Generally, among the polluting substances covered are oil, noxious substances in bulk, harmful substances in packages or other receptacles, sewage, garbage and air pollutants. However, reference to the list and standards established under the MARPOL annexes and amendments shall be made.

iv) *Activities dealing with pollutants covered by the law.* The law shall govern all aspects of operational discharges and some aspects of incidental operational pollution from vessels. However, some kinds of discharge from particular sources are excluded by the law, such as dumping and the release of harmful substances for offshore mining and scientific research. Other exceptions are dumping or discharge that is undertaken to save the vessel or lives or is due to accidental damage to the vessels, and discharge that is approved by the authorities for combating pollution incidents.

D) Systems of certification, survey and inspection

A system of certification as a means to prevent marine pollution from ships shall be set up in the law pursuant to the MARPOL. Detailed regulations on the certification of ships are provided in the six MARPOL annexes. The law shall require vessels to carry on board an emergency plan and a record of all relevant details in their oil, cargo and garbage record books, which, together with the certificates shall be presented for inspection to the authorities.

The provisions of the law may, through detailed rules and regulations, stipulate the design, construction, equipment of appropriate reception facilities, procedures of maintenance and operation of vessels.

A series of surveys conducted at given periods to ensure compliance of the ships with MARPOL requirements shall be established.

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E) Systems of monitoring, detection and investigation

A system for monitoring, detection and investigation shall be established by the law. In addition, the law shall clearly establish the authority responsible for this task. The detailed procedures and measures in carrying out the inspections may be contained in the subsidiary legislation.

F) Requirements for reception facilities

The law shall require adequate reception facilities at ports to receive slops, sludgy sewage, garbage and other residues from ships. The IMO has drawn up guidelines on the capacity and form of facilities to be provided in ports, oil terminals, ship repair yards and other places where ships need to offload their cargo and wastes.

G) Regime of reporting incidents and violations of regulations

The duty of reporting incidents shall be a significant part of the law. Any incident of actual or probable discharge of a harmful substance or effluent containing such substances must be reported immediately by the master or any person having charge of the vessel to the nearest coastal state. This forms an important part of the monitoring and detection system for pollution and is essential for prevention, containment and mitigation efforts.

H) Undue delay

The convention provides that authorities are not to unduly delay or detain ships without just cause. Otherwise, any loss or damages arising from such delay or detention shall entitle owners of vessels to compensation. The law drafters shall take this and other forms of control into consideration to ensure compliance with this provision. Guidelines for detention might be considered under subsidiary legislation.

Laws on marine pollution from dumping

The objective of the London Convention is to prevent the use of the ocean as a dumping ground or disposal area for waste.

National legislation on marine pollution from dumping at sea may be divided into main legislation and subsidiary legislation. The annexes of the London Convention may be implemented by way of subsidiary legislation, which is more easily amended than

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main legislation, as they contain technical details that may frequently be subject to change.

The state may impose more stringent conditions than those specified in the London Convention to prevent marine pollution due to dumping at sea. Even if a state has ratified only the 1972 Convention, there is nothing to prevent it from adopting the updated standards under the convention's 1996 Protocol. However, for purposes of clarity, this section will treat the two instruments separately.

Laws implementing the provisions of the London Convention

The following are the essential points of the law in compliance with the convention:

A) Definition

Important basic concepts, such as "dumping," "waste" and "other matter," shall be precise and consistent with the definitions in the London Convention.

B) Authority

The law shall designate the appropriate authority to issue special and general permits, to keep records and to monitor the marine environment for compliance.

C) Scope of application

i) *Geographical coverage.* The law on marine pollution from dumping at sea may apply in the state territorial sea, EEZ and continental shelf, including the seabed thereof.

ii) *Vessel types covered.* The law shall cover any vessel, aircraft, offshore platform or other man-made structures, and their disposal into the sea.

iii) *Polluting substances covered.* All wastes and other substances except those produced incidentally from the operation of ships and the exploration and exploitation of the seabed shall be subject to the provisions of the law.

D) System of licensing/permits

In general, the law shall embody the general prohibition on the dumping of substances into the sea without a permit or a license obtained prior thereto. If the wastes to be disposed of fall under the first type (the "Black List" or Annex I

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wastes), no permit shall be issued, as they are absolutely prohibited from being dumped. The next type (the "Grey List" or Annex II wastes) may be dumped after a special permit has been issued to the entity disposing of it. All other substances may be disposed of with a general permit. The law shall establish the system and procedures for the application and approval of permits and specify the factors that must be considered in the issuance of permits, as provided in Annex III.

The law shall allow for the exceptions provided in the convention when dumping may be carried out without a permit. Such situations are restricted to instances of *force majeure*.

The law shall prohibit incineration at sea of industrial wastes and sewage sludge. Incineration of other wastes shall be subject to the requirements for special permits and special rules issued from time to time as amendments under the convention are passed.

E) Communication with the IMO

The law shall authorise the implementing agency to notify the IMO on the following matters as required by the convention:

i) any additional substances prohibited under national legislation;
ii) substances which may be dumped under exceptional circumstances as provided under national legislation;
iii) all substances which may be dumped under national legislation; and
iv) the results of the monitoring undertaken.

The reports and notifications shall be done in such format, manner and procedure established by the Consultative Meetings of the Contracting Parties to the Convention, and may be set up in subsidiary legislation.

Laws implementing the provisions of the 1996 Protocol

The protocol was adopted in November 1996 and will, when it comes into force, replace the London Convention, its annexes and all of its amendments. At the level of national legislation,

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the new set of requirements created by the protocol must be noted and incorporated accordingly:

A) Definition

Some definitions in the London Convention have been modified by the 1996 Protocol, such as those of "dumping" and "sea," which were broadened.

B) Authority

The law shall designate the appropriate authority to issue special and general permits, keep records and monitor the marine environment for compliance.

C) The scope of application of the law

The state may at its discretion extend the geographical application of the law to its internal waters. The state may also decide to apply different but equivalent measures to the internal waters.

Unlike in the 1972 convention, "dumping" now applies to the storage of wastes or other matter in the seabed and the subsoil and to the abandonment or toppling at site of platforms or other man-made structures at sea for deliberate disposal.

D) Approaches

The law shall adopt two major environmental approaches to the issue of dumping in accordance with the provisions of the 1996 Protocol: the precautionary approach and the polluter-pays approach. The first approach would be most practically applied to adjusting the implementing rules and regulations when there is reason to believe that certain wastes and substances allowed to be dumped will harm the marine environment, even without conclusive evidence.

The polluter-pays principle may be implemented by incorporating fees for the permits and other market-based instruments into the legislation. It must be kept in mind, however, that any market-based instruments must be integrated into the entire waste management system, aim for the elimination or minimisation of waste, and avoid transforming one type of pollution into another, also proscribed by the protocol.

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E) Prohibited activities

The law shall prohibit dumping of all wastes and substances except those listed under Annex I of the protocol, which may be dumped only upon the issuance of a permit. The process of issuing permits must comply with the provisions of Annex II. Annex II includes a Waste Assessment Guide and Dredged Materials Waste Assessment Guide to assist the administration in making decisions relating to permits. The prohibition includes burial or storage of wastes in sub-seabed repositories. A categorical statement to this effect might be preferred by the implementing state.

Incineration of wastes and export of wastes or other matter to other countries for dumping or incineration at sea shall be totally prohibited.

F) Communication with the IMO

The law shall authorise the implementing agency to notify and be notified by the IMO on the following matters as required by the convention:

i) any additional substances prohibited under national legislation;
ii) substances which may be dumped under exceptional circumstances as provided under national legislation;
iii) substances which may be dumped under national legislation; and
iv) results of the monitoring undertaken.

The reports and notifications shall be done in such format, manner and procedure established by the Consultative Meetings of Convention, and may be set up in subsidiary legislation.

G) Technical co-operation

The Protocol requires the provision by member states of technical support and information to other member states who request it. The implementing state may wish to ensure through legislation that its implementing agencies make use of these provisions, particularly in capacity-building efforts.

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Laws on marine pollution from hazardous and toxic substances

The Basel Convention's primary objective is the control of transboundary movements of hazardous and other wastes, which ultimately will lead to the management (collection, transport, disposal and post-disposal care) of hazardous and other wastes.

The following are the essential elements of national legislation on preventing marine pollution from transboundary movement of hazardous and toxic substances.

A) Definitions

The initial element of the national legislation to implement the Basel Convention shall be the definition of "hazardous wastes." This need not be limited to the list under Annexes I and II of the convention. Definitions of other terms may also be needed, such as "transport" and "management," "disposal," "import," "export," carrier" and "generator."

B) Authority

The law shall designate or establish a competent authority to enforce the regulations of the law and other related laws.

C) Scope of application

The geographical coverage of the law shall extend over all areas under the national jurisdiction of the concerned state. This means that the law shall be executed in any land area, marine area or air space where the state exercises administrative and legal responsibility for the protection of the environment and the safeguarding of human health.

D) Prohibited acts

In response to the requirements of the Basel Convention, the law shall prohibit the following:

i) The export of hazardous and other wastes to Basel Convention states parties that prohibit their import or have not given their consent thereto in writing, and to non-party states or to states where there is reason to believe that the wastes will not be managed in an environmentally sound manner.

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ii) The import of hazardous and other wastes from non-party states of the Basel Convention or if there are no facilities to manage the imported wastes in an environmentally sound manner.

iii) The transport or disposal of hazardous and other wastes by any person under its national jurisdiction unless authorised or allowed.

E) Licensing system

The law shall set up a system of licensing for the importation, exportation, transport and disposal of hazardous and toxic waste and other matter. The law shall require that hazardous and other wastes be accompanied by a movement document duly signed by all concerned, from commencement to termination of the transboundary movement. The procedural details may be provided in subsidiary legislation.

F) Provisions on management

The law shall require the following:

i) Notification and documentation. Transboundary movement of hazardous and other wastes cannot commence without the required notification. The process of notification may be set forth in the administrative regulations in compliance with the Basel Convention. The law shall require that hazardous and other wastes be accompanied by a movement document from the point at which a transboundary movement commences to the point of disposal.

ii) Measures to ensure that the hazardous and other wastes are managed (i.e., properly packaged, labelled and transported) in an environmentally sound manner and in conformity with the generally accepted and recognised international rules and standards.

iii) Measures to ensure that the generation of hazardous and other wastes is reduced to a minimum, taking into account social, technological and economic factors.

iv) Adequate disposal facilities. As with the licensing system, the details may be provided by administrative regulations.

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G) Provisions on liability

The liability and compensation for damages caused by the transboundary movement of hazardous wastes and their disposal are essential parts of the law.

Laws on responding to marine pollution incidents

There are at least three international conventions on actions relating to environmental protection following marine pollution incidents at sea: the OPRC, Intervention Convention and Salvage Convention. As the laws are compatible with each other, it is possible to implement all three in one piece of legislation and through one authority.

The basic provision of the laws to implement the OPRC

The OPRC provides the standards for countries' preparedness to respond to an actual or imminent oil pollution incident at the earliest possible time so as to prevent or minimise damage therefrom.

A) Definitions

Some important words, such as "vessels," "oil" and "oil pollution incident," shall be defined in the law.

B) Authority

It is important to designate in the law the authority responsible for responding to marine pollution from casualties and incidents.

C) Scope of application

The geographical coverage of the law shall extend over all areas under the national jurisdiction of the state.

D) Reporting system

The responsibility for reporting incidents of oil discharge shall be stipulated in the related laws. The operators of ships, offshore units, aircraft, seaports and oil-handling facilities shall immediately report any incident of oil pollution to the nearest coastal state or competent national authority, advise neighbouring states at risk as appropriate and advise the IMO through the authority.

E) National contingency plan

The law shall provide for the adoption of a national plan for an effective response to oil spill incidents and the establishment of a National Oil Pollution Contingency Plan. It is not necessary for the plan to be in the law—what is important is for the law to provide for its establishment. The requirements for the plan are contained in Article 6 of the OPRC; they include identification of the operational focal points responsible for oil pollution preparedness and response, reporting and handling of requests for assistance, and provision for the minimum requirements for equipment. Co-operation and co-ordination with neighbouring countries must be included as well.

F) Emergency plans

The laws shall require ships to keep an oil pollution emergency plan. Similarly, offshore units, ports and oil terminals shall also draw up emergency plans in compliance with the national contingency plan. The detailed standards and context of the emergency plan shall be derived from the provisions of the OPRC.

Basic provisions of laws to implement the Intervention Convention

The state may take the necessary measures to prevent, mitigate or eliminate grave and imminent danger to its interests from oil pollution, following upon a maritime casualty or acts related to such a casualty, which may reasonably be expected to result in major harmful consequences. The state shall set up a national structure that can appropriately respond to a major incident or threat of marine pollution, and provide a mechanism for co-operation in related laws. It may be the same system for responding to oil pollution incidents in the implementation of the OPRC.

A) Definitions

Some important definitions in the implementation of the Intervention Convention include "maritime casualty" and "related interests."

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B) Authority

The authority in charge of implementing the convention may be the same entity enforcing other international conventions concerning marine incidents.

C) Scope of application

The convention is a special one in the sense that it authorises a state party to take action in areas beyond its national jurisdiction in order to protect its coastline and related interests from pollution consequences of an actual or threatened marine casualty. However, implementing legislation must take into account the limitations on these actions, as specified by the convention.

D) Limitations on the measures to be undertaken

National legislation shall provide for the observation of the "proportionality principle" in undertaking intervention measures on the high seas. The intervention measures shall not be in excess of what is reasonably necessary to prevent, mitigate or eliminate the danger.

E) Systems of consultation and notification

The convention provides for a procedure to be followed before undertaking the intervention measures. It involves consultation with other affected states, notification of affected persons and, possibly, consultation with independent experts from a list maintained by the IMO. However, intervention measures are allowed without such consultation and notification under certain conditions. The law shall clearly set forth the requirements, process and procedures of consultation and notification regarding the intervention measures to be taken. Although not provided in the convention, it must be noted that such a process must be conducted with dispatch.

F) System of compensation

As the convention provides for payment of compensation for damage caused by excessive measures, the law should provide for a procedure for payment of such damages.

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G) Procedure for settlement of disputes

The convention provides for conciliation and arbitration in cases where disagreement arises between states regarding the reasonableness of the intervention measures taken or on the issue of damages to be paid. It must be ensured that the law allows for the resort to such international dispute settlement procedures.

The basic provisions of laws to implement the Salvage Convention

The Salvage Convention is a codification of rules governing all aspects of salvage. It introduces the concept of "special compensation" as a reward to salvors for measures taken to protect the environment. The objective is to create incentives for salvors to save the environment in addition to saving the vessel and other property. Pursuant to this, legislation on marine pollution should therefore ensure that salvors receive a reasonable reward and special compensation for their skill and efforts in preventing or minimising damage to the environment arising from marine incidents.

A) Definitions

The term "damage to the environment" has a special definition in the convention. National legislation may refer to that definition when it uses the term in the law. Moreover, the definitions of "ships" and "salvage operation" are used in a different context as far as the convention is concerned.

B) Authority

An authority to implement the convention should be specified in the legislation.

C) Scope of application

The national law shall govern salvage operations that may take place, as provided by the convention, "in navigable waters or in any other water whatsoever." The law should therefore apply to salvage operations taking place within the state's jurisdiction, as well as to its flag ships.

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D) Due care to the environment

The convention requires that due care be taken during salvage operations to prevent or minimise damage to the environment. The skill and efforts of the salvor in preventing or minimising damage to the environment shall be among the criteria in fixing the reward for salvage, and special compensation shall be paid for salvage operations where the vessel or its cargo posed a threat to the environment.

Laws on compensation for damages arising from marine pollution

The provisions of national legislation on compensation for damages arising from marine pollution shall comply with the International Convention on Civil Liability for Oil Pollution Damage (CLC) and the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (FUND). The International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (HNS) is not yet in force; however, it is included here in anticipation that it eventually will be.

Laws on compensation for oil pollution damage

The CLC establishes the principle of strict liability for ship owners and creates a system of compulsory liability insurance. The FUND supplements the CLC, whereby the International Oil Pollution Compensation (IOPC) Fund covers the difference when the compensation to victims under the CLC is inadequate. The following are the basic provisions of law that must be considered in implementing the CLC, FUND and their respective protocols:

A) Definitions

The implementing legislation shall define "oil," "oil pollution," "ship," "prevention measures" and "contributing oil," among others, in accordance with the CLC and FUND.

B) Authority

The proper authority to implement the CLC and FUND shall be designated. Its tasks are to issue and inspect insurance certification among ship owners, to ensure contribu-

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tions to the IOPC Fund by oil receivers and to ensure that claims duly granted under the conventions are enforced.

C) Scope of application

The legislation shall cover the territory and EEZ of the state and the state's flag ships. The 1992 Protocols cover ships designed to carry persistent oil in bulk, whether or not they are carrying such oil as cargo during the time of an incident causing oil pollution. The old conventions covered any ship carrying persistent oil at the time of the pollution-causing incident.

D) Strict liability for oil pollution damage

The legislation must provide for the strict liability of the ship owner for any pollution damage caused by oil discharged or escaped from a ship, subject to the limitations provided by the CLC. Any compensation due to victims of the oil pollution damage beyond the limitation of liability of the ship owner shall be paid by the IOPC Fund.

E) System of compulsory insurance and certification

The legislation shall institute a system of compulsory insurance whereby the owner of any ship carrying more than 2,000 tonnes of oil shall be required to maintain insurance or other financial security to cover his liability, against which a claim for pollution damage may directly be brought. The law shall require the ship owner, depending on the tonnage of the ship, to obtain and carry on board the ship an insurance certification issued by the authority. There shall be measures to inspect such a certificate, and sanctions for violations. For example, the state may refuse entry to violating ships.

F) System of limitation of liability

When an oil pollution incident occurs, the ship owner may limit his liability by establishing a fund to answer for such liability. The ship owner's liability depends upon the tonnage of the ship.

G) Contributions to the IOPC Fund

The law shall require all entities that receive over 150,000 tonnes of contributing oil during a calendar year to contribute to the IOPC Fund. For monitoring purposes, the law shall require all oil receivers to report quantities received annually to the authority. The authority shall notify the IMO of the names and addresses of persons in the state and the quantity of oil received by each entity liable to contribute to the Fund.

H) Action for compensation

The law shall provide for actions for compensation for pollution damage to be brought directly against the ship owner and the IOPC Fund. For this purpose, the law must ensure the competence of courts over such actions. The law should also recognise and enforce a judgement by a competent court of another state against the ship owner and the IOPC Fund.

Laws on compensation for pollution damage
caused by hazardous and noxious substances

A) Definitions

The implementing legislation shall define "noxious and hazardous substances," "receiver," "ship," "damage," "prevention measures" and "contributing cargo," among others, in accordance with the HNS Convention.

B) Authority

Proper authorities to implement the convention shall be designated. Their tasks are to issue and inspect insurance certification among ship owners, to ensure contributions to the fund by receivers and to ensure that claims duly granted under the conventions are enforced.

C) Scope of application

The legislation shall cover the territory and EEZ of the state and the state's flag ships.

D) Strict liability for pollution damage from hazardous and noxious substances

The legislation must provide for the strict liability of the ship owner for pollution damage caused by any hazardous and noxious substances carried on board a ship, subject to the limitations provided by the HNS Convention. Any compensation due to victims of oil pollution damage beyond the

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limitation of liability of the ship owner shall be paid by the HNS Fund.

E) System of compulsory insurance and certification

The legislation shall institute a system of compulsory insurance whereby the owner of any ship carrying any hazardous and noxious substance shall be required to maintain insurance or other financial security to cover his liability, against which a claim for pollution damage may directly be brought. The law shall require the ship owner to obtain and carry on board the ship an insurance certification issued by the authority. There shall be measures to inspect such a certificate, and sanctions for violations. For example, the state may refuse entry to violating ships.

F) System of limitation of liability

When an oil pollution incident occurs, the ship owner may limit his liability by establishing a fund to answer for such liability. The ship owner's liability depends upon the tonnage of the ship.

G) Contributions to the HNS Fund

The law shall require entities receiving qualifying amounts of contributing cargo under the HNS Convention to contribute to the HNS Fund. For monitoring purposes, the law shall require all receivers to report quantities received annually to the authority. The authority shall notify the IMO of the names and addresses of persons in the state and the quantity of cargo received by each entity liable to contribute to the fund.

H) Action for compensation

The law shall provide for actions for compensation for pollution damage to be brought directly against the ship owner and the HNS Fund. For this purpose, the law must ensure the competence of courts over such actions. The law should also recognise and enforce a judgement by a competent court of another state against the ship owner and HNS Fund.

Laws on marine pollution from land-based pollutants

While the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA) is not

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a legally binding instrument, states are obliged by Articles 207 and 213 of the 1982 United Nations Convention on the Law of the Sea (UNCLOS) to protect the marine environment from land-based activities.

The GPA outlines broad and specific national, regional and international activities and actions that should be undertaken to protect the marine environment from land-based activities. It emphasises the need for national action through the preparation or review of a national programme of action (NPA), which should be designed as an adaptive and continuously evolving programme. The six steps for doing so are the following:

a) identification and assessment of problems;
b) establishment of priorities;
c) setting management objectives for priority problems;
d) identification, evaluation and selection of strategies and measures, including management approaches;
e) setting criteria for evaluating the effectiveness of strategies and programmes; and
f) defining programme support elements.

The action plan is designed to address point and non-point sources of pollution listed under nine major categories of threats encompassing pollutants and human activities. These are referred to in the GPA as "source categories." The GPA provides a framework for taking action on each of these source categories.

It is emphasised that the NPA should be sustainable, practical and integrated in nature. The GPA recognises the significant role of integrated coastal zone management in providing an integrated framework for incorporation and operationalisation.

Several of the "source categories" or types of waste dealt with here are the same as those dealt with in the other conventions dealing mostly with "sea-based" sources of pollution. Specific examples are oils, sewage and litter under the MARPOL; all types of waste under the London Convention; and hazardous and other wastes under the Basel Convention. An integrated approach would mean making arrangements for the proper treatment and disposal of the same types of waste whether they come from sea-based or land-based sources.

Most of the activities to be undertaken or to be developed as part of the NPA can be done without necessarily having to promulgate new laws. A legal regime should be considered only

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after steps (a), (b) and (c) have been undertaken. However, the importance of having regulatory measures in ensuring the successful implementation of the NPA should not be understated. In fact, laws are part of the strategies and measures to be incorporated within the NPA and also form part of the programme support elements of the NPA.

Types of legislation on land-based pollution

In drafting national legislation, either of two approaches may be taken:

A) National legislation by land-based activity

One or more special laws categorised by type of activity causing marine pollution may be enacted to address marine pollution from land-based sources. In this approach, land-based activities can be categorised according to their nature or their effects on the marine environment.

B) National legislation by land-based pollutant

In this approach, there may be a special law formulated on the basis of the nature of pollutants. Several special laws may also be enacted to govern different kinds of land-based marine pollutants.

Basic provisions of legislation on land-based pollution

A) Land-based pollutant sources

The source categories or threats to the marine environment from land-based activities that must be addressed are the following:

i) sewage;
ii) persistent organic pollutants;
iii) radioactive substances;
iv) heavy metals;
v) oils (hydrocarbons);
vi) nutrients;
vii) sediment mobilisation;
viii) litter; and
ix) physical alteration, including habitat modification and destruction in areas of concern.

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B) National programme of action

The legislation may include, among others, the basic principles governing the NPA, the designation of an authority or authorities, the establishment of integrated processes and criteria for the management of pollution, and the definition of the rights and obligations of the parties concerned.

C) System of certification and investigation

The legislation shall establish systems of certification for inputs, processes and outputs. Certification of inputs includes identification of the substance as a pollutant type to determine the proper treatment and disposal process. Certification of processes includes the certification of clean technology and of reception facilities. Finally, examples of certification of outputs are the monitoring of effluents, among others. The procedures and criteria for detection measures and investigation of violations shall be provided.

D) Establishment of a financial guarantee or fund

The establishment of a financial guarantee or fund to cover the liability from marine damage caused by land-based sources may be considered in the drafting of legislation. The requirements for contribution and the allowable uses shall be provided.

The GPA identifies possible sources of funding, with an annex identifying various mechanisms to raise national funding to support GPA implementation activities. These may be considered when drafting the national legislation.

E) Regional programmes of action

The GPA requires, at the regional level, the strengthening of existing regional co-operative arrangements and, where needed, the establishment of new co-operative arrangements. This should be a consideration when drafting the national legislation.

Other laws with relevant provisions

Within a national legal system, many provisions concerning marine environmental protection are found in other laws apart from the special laws focused on the prevention and management of marine pollution and covering the utilisation of natural resources, industry, zoning, species and habitat protection, etc. How the laws on marine pollution being drafted shall complement, integrate with, correlate or conform to these other laws must be given more than a little consideration.

Chapter 4: Strategies, Tools and Techniques in Marine Pollution Prevention and Management

Chapter 3 looked at the substantive elements of what could be included in framework policies and laws for marine pollution prevention and management. This chapter focuses on procedural elements: the processes, strategies, tools and techniques that may be useful to countries in implementing policies, laws and international conventions on marine pollution.

As a rule, the strategies, tools and techniques—or at least the principles and premises that underlie them—should be incorporated into national policies and laws. However, governments can use these strategies, tools and techniques independently of the policies and laws.

The following are strategies, tools and techniques for effective marine pollution prevention and management:

- Consensus building, conflict management and appropriate dispute resolution.
- Participation of local governments in marine pollution prevention and management.
- Environmental impact assessment and related environmental instruments.
- Sustainable financing of marine pollution prevention and management.

Consensus Building and Related Skills[1]

In implementing international conventions, decision makers must undertake and institutionalise integrated coastal management (ICM), and develop and implement national coastal action plans

[1] This section is excerpted from DENR/Tanggol Kalikasan/Asia Foundation, 1997.

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and marine pollution legislation. They must have the skill to manage the social and political conflicts that frequently attend these activities, especially in East Asia, where consensus is a preferred value.

Fisheries, coastal resources and coasts are often managed in a context of conflict over the use of marine and coastal space. Coastal resource users compete with each other. Industrial and real estate developers, for example, vie with food producers and conservationists for the most productive or scenic areas of the coastal zone. The tourism industry deprives coastal communities of infrastructure such as roads, water and waste disposal, among others.

Infrastructure construction mars the coasts' beauty. Urbanisation devastates the wetlands and pollutes the waterways, which is disastrous for small-scale municipal fishers. It threatens significant cultural, historic and anthropological sites. Mariculture and aquaculture diminish the high water quality required by agriculture, fisheries, conservation and eco-tourism, among others.

Consensus-building Skills

People skilled in handling conflict:

- understand the nature of conflict;
- can identify options and roles in conflict situations; and
- can facilitate, negotiate and mediate conflict resolution.

<u>Understanding conflict</u>

Conflict in society is not necessarily bad, but it is always double-edged. It can be unproductive, as when it involves stereotyping, poor communication, intense emotions, lack of information and misinformation, which often result in poor decision making. However, it can be productive when it focuses on issues, interests, procedures and understanding values. Such conflict can give decision makers a wide array of options.

Conflict arises when people struggle over values, or compete for status, power and scarce resources. These actions are interrelated, especially in coastal areas. For example, when a government chooses to promote the interests of industry over fisheries or tourism, it does so because it has exercised a value judgement.

Consensus Building and Related Skills

Yet the choice is not even necessary. By understanding and clarifying the conflict and by building consensus, decision makers can identify options that reconcile conflicting demands on the same resource.

Types of conflict

According to their degree of organisation and intensity, conflicts can be latent, emerging or manifest.

- `Latent conflicts` are characterised by underlying tensions that have not fully developed or escalated. The parties are not polarised and may not even be aware that a conflict, even a potential one, exists.
- `Emerging conflicts` are those in which parties are identified and the existence of a dispute is acknowledged. Most issues are clear, but no workable negotiation or problem-solving process has developed.
- `Manifest conflicts` are those in which the parties are actively engaged in a dispute, may have started to negotiate and may have reached an impasse.

Most conflicts have multiple causes; usually a combination of problems leads to manifest conflict. As manifest conflict is often complex, its central critical situation or main issue or causes should be identified by:

- understanding the participants and their relationships;
- identifying data and structural problems; and
- clarifying differences in values and interests.

`Data conflicts` occur when people lack the information to make wise decisions, are misinformed, disagree over what data are relevant, interpret information differently, or have different assessment procedures. Some data conflicts may be unnecessary since they are caused by poor communication between the people in conflict. Other data conflicts may be genuine because the information and/or procedures used by people to collect data are not compatible.

Case. The port authority proposes to expand an existing port. Fisher communities are apprehensive because the expansion may degrade and pollute the waters of the bay. The port authority claims that it will install reception facilities to mitigate this risk

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and even lessen the present load of pollution, but that the facilities cannot be installed without expanding the port.

Analysis. By providing the fisher communities with data—calculations of the present pollution load, estimates of decrease in pollution load, nature and costs of the reception facilities, etc.—the government may solve this conflict.

`Interest conflicts` are caused by competition over perceived or actual incompatible needs. They result when a party believes that in order to satisfy its needs, those of the other side must be sacrificed. They occur over substantive issues (money, physical resources, time, etc.), procedural issues (the manner in which the problem is addressed) or psychological issues (perception of trust, fairness, respect, etc.).

Case. Farmers occupy prime agricultural land that also has rich copper deposits. A mining company wants to develop a mine but the farmers oppose it. The state is inclined to allow the mining company to operate because of the revenue it can collect, but is also concerned about the impact of the project on food security.

Analysis. The farmers and mining company clearly have opposing interests. They can reconcile them by agreeing to a compensation package. If the farmers' interest is not solely economic but also related to lifestyle, then relocation or resettlement, at cost to the company, is an option. However, if the farmers' interest is directly linked to the land, then no solution may be possible and the mining company should reconsider the project. As for the state, it must carefully weigh its own two interests: it could set aside a portion of the mining revenue to enhance agricultural productivity elsewhere, or it could conclude that the mine would seriously harm the nation's food security.

`Relationship conflicts` occur when the parties' relationship is characterised by strong negative emotions, misperceptions or stereotypes, miscommunication or repetitive negative behaviour. Unrealistic or unnecessary conflict may arise even when objective conditions for a conflict, such as limited resources or mutually exclusive goals, are not present. Relationship problems often fuel disputes and lead to unnecessary escalation of conflict.

Case. It is clear that the port's expansion will not further pollute the bay. However, at a meeting where the data are presented, the port authority's manager insults the farmers by calling them ignorant. The farmers walk out and set up barricades around the construction site.

Analysis. The port authority should probably replace its manager or at least designate another person as its representative and spokesperson.

`Value conflicts` are caused by perceived or actual incompatible belief systems. Values are beliefs that people use to give meaning to their lives. They explain what is good or bad, right or wrong, just or unjust. Differing values need not cause conflict. People with quite different value systems can live together in harmony. Value disputes arise only when people attempt to force their values on others or lay claim to exclusive value systems that do not allow for divergent beliefs.

Case. The state approves the mining project after the farmers agree to compensation and resettlement. Before the project proceeds, however, the farmers insist on conducting customary rituals. The mining company, which is from a western country, refuses to allow the rituals on the ground that they are "pagan" activities.

Analysis. The mining company should probably reconsider its stance. Imposing its belief systems on the farmers would be unproductive.

Options in conflict situations

Once a conflict is recognised, the parties have several options to address it. They can ignore it (at their peril), use violence and other pressure tactics, legal or illegal, or resort to formal processes such as litigation or administrative actions.

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Finally, they can opt to use informal processes, such as the following:

- `Arbitration.` A third party hears a dispute and renders a decision that can be binding or nonbinding.
- `Consensus.` A group makes a decision that all members can support without voting and after going through a sequence of problem-solving stages.
- `Convening.` A third party organises disputants for negotiations and helps them decide what processes to use and identify who can assist them.
- `Fact finding.` Often used in technical disputes, a third party with expertise on the contested subject matter may be involved to investigate and determine the facts.
- `Mediation.` An acceptable, impartial and neutral third party with no authoritative decision-making power intervenes in a dispute or negotiation to assist the contending parties to voluntarily reach a mutually acceptable settlement.
- `Negotiation.` Parties voluntarily discuss their differences and attempt to reach a joint decision on their common concerns.

Consensus-building techniques are part of the second-generation set of approaches to environmental management. The first generation dates from the United Nations Conference on the Human Environment in Stockholm in 1972. The Stockholm Conference is generally regarded as the key event in the growth of international awareness regarding the need for systematic management of the environment. The first-generation environmental management emphasised impact identification by means of environmental impact statements and resource management plans, co-ordination of sectoral agency activities, air and water pollution control, and regulation of land and natural resources activities.

Second-generation environmental management combines strict regulation of some activities (e.g., disposal of toxic substances) with incentives (e.g., tradable air quality allotments), intersectoral co-ordination, integrated resource management plans and use of consultative processes such as mediation and facilitation in resource use decision making.

Increased interest in mediation and facilitation is a reaction to the predominance of conflict in environmental management. Conflicts arise over the proposed use of natural resources, such as land, forest, water and mineral resources. They occur over who should benefit from resource use, over loss of resource use to some current or future resource user, and over real and perceived environmental health consequences associated with some resource use (e.g., increased soil and water pollution, soil loss).

There are logical and practical reasons for favouring informal processes—i.e., appropriate dispute resolution processes—over formal processes such as litigation:

- `Economic efficiency`. Informal processes are generally less expensive than formal litigation.
- `Rapid settlement`. Litigation—even just the pre-trial, trial and presentation of evidence—can take years. Appeal takes even longer. Informal processes resolve problems more quickly.
- `Mutually satisfactory outcomes`. Parties are generally more satisfied with solutions mutually agreed upon than with those imposed by a third-party decision maker.
- `Comprehensive solutions`. Informal processes reach settlements that address both legal and non-legal, including emotional, issues. Parties can craft their agreement to fit their particular situation. Court decisions are often limited to the very issue and cannot be expected to cover the likewise important peripheral concerns of the parties.
- `Empowerment of parties`. Informal processes provide a forum where people can discuss issues and learn from one another. It is undoubtedly more empowering for people to negotiate their own settlement than to allow lawyers to solve problems in an arena where ordinary people cannot actively participate.
- `Preservation of relationships`. Informal processes are non-adversarial and no agreement can be reached unless all the parties agree. There are often no losers and nobody comes out of it embittered.

Roles in conflict situations

People play different roles in conflict. They may be stakeholders who have a direct interest in the result of the conflict and are therefore parties to a negotiation, mediation or other dispute processes. Others may be third parties who have no stake but are involved either as a mediator or facilitator, using their procedural skills to help parties process the issues and reach an agreement. Some third parties are called upon to evaluate the problems or issues and to make a decision, which can be binding (as in administrative arbitration) or non-binding (third-party contractual arbitration).

Clarifying and sticking to the functions of the chosen role is important in resolving or processing a conflict. Not only does it ensure orderly processing of issues, it also enhances the chances of arriving at a settlement. It is therefore desirable to define at the earliest time whether a party is a negotiator, mediator, arbitrator, judge or facilitator.

Case. In deciding on the mining project, the state, having diverse interests, may opt to play a number of roles: mediator, interested party with a large stake in the outcome, or simply decision maker.

Analysis. Given the magnitude of its interest, it might not be advisable for the state to be a mediator. While it cannot divest itself of its decision-making authority, the state may avail itself of procedures that will ensure that decision making is transparent, impartial and objective. For example, it may request third-party mediators or convene independent scientific panels to assess the merits of the project and to recommend whether it should proceed.

<u>Ways of handling conflict</u>

Among the many consensus-building skills and techniques, three of the most important and useful are facilitation, negotiation and mediation.

Facilitation

Meetings are crucial in managing and settling conflict. They generally produce good results and good decisions. Sometimes, however, they are ineffective and frustrating and produce no results at all. Effective and productive meetings require good facilitation.

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Facilitators have the following `ethical duties`:

- Explain their role, their sponsorship and what the facilitation process entails.
- Explain or clarify the purpose of the meeting.
- Clarify how any generated information will be used and who owns it.
- Ensure the widest representation and fullest participation of the parties involved.
- Explain or clarify how decisions in the group will be made.
- Subordinate their personal needs, which includes examining their likes, dislikes, predisposition and cultural proclivities and preferences.

Facilitators are responsible for *how* things are accomplished. Their `role` is to accomplish the following:

(1) Keep the group focused by:
- being clear about the group's purpose;
- being clear about the desired outcome;
- reviewing the proposed agenda;
- developing and enforcing ground rules;
- clarifying expectations at the beginning;
- getting agreement on the content focus;
- getting agreement on the process focus;
- reminding participants of the content and process;
- providing positive reinforcement;
- keeping the group on track; and
- making process suggestions.

(2) Create a safe environment by:
- protecting participants from personal attack;
- ensuring that everyone participates; and
- dealing with difficult people.

(3) Close the meeting effectively by:
- developing next steps;
- getting commitments for follow-through;
- summarising accomplishments; and
- evaluating the meeting.

Facilitators have the following `tasks`:

(1) Pre-meeting
- Establish the purpose, outcome and topic with the group leaders.

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- Identify and invite stakeholders.
- Plan the agenda before the meeting.
- Make room arrangements.
- Decide how decisions will be made.

(2) During meeting

- Build agenda (if not done prior to the meeting).
- Describe the purpose of the meeting to the group.
- Review and get agreement on the agenda.
- Suggest ground rules.
- Get permission to enforce ground rules.
- Make process suggestions.
- Focus the group.
- Keep group on track.
- Identify additional information needed.
- Regulate discussion "traffic."
- Ensure participation from everyone.
- Actively listen, clarify and restate matters for the recorder.
- Re-frame polarising or destructive comments.
- Defend people from personal attack.
- Deal with difficult people.
- Remain neutral. Do not contribute or evaluate ideas.
- Set up next step for the group.
- Monitor the time. Start and end on time.

(3) Post-meeting

- Produce group memory for the participants.
- Check on follow-through steps.

Facilitators should adhere to the following rules for holding good meetings:

- Identify the objective(s) of the meeting.
- Choose a "good" venue.
- Invite the "right" participants.
- Start and end on time.
- Have the agenda and rules of the meeting approved and stick to them.
- Explain the role of the facilitator.
- Ensure that all views are heard.

Take breaks to allow for smaller caucuses and informal consultations.

- Summarise the discussion and the decisions made.

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- Document the minutes of the proceedings for later distribution.

Negotiation

Negotiation is a problem-solving process in which people voluntarily discuss their differences and attempt to reach a joint decision on their common concerns. Roger Fisher and William Ury (1991) describe two kinds of bargaining in negotiations:

- `Positional bargaining` is the most common form. Each party takes a position (usually more extreme than it is willing to settle for), expresses that position to the other, then makes small concessions in order to come up with an agreement.
- `Principled negotiation` or interest-based bargaining starts with developing and preserving the relationship. Parties educate each other about their respective needs and then jointly find solutions to meet those needs.

  Principled negotiation or negotiation based on merits, Fisher and Ury write, is anchored on four basic points that define a straightforward method of negotiation that can be used under any circumstance.
- `People.` Separate the people from the problem.

  Negotiators should stick to the problem and attack it, not each other. They should remember that parties are human beings with emotions and different perceptions. Emotions often become entangled with the substantive issues. As a result, parties often come up with irrational solutions or refuse to consider rational ones due to anger, fear, pride or shame.

Case. The company representatives' cultural insensitivity in calling the customary rituals "pagan" angers the farmers, who now refuse to talk to them.

Analysis. Apologies are clearly in order. Sending in new representatives might be a good idea in order to "separate" people from the problem.

- `Interest.` Focus on interest, not positions.

  Sometimes parties focus on a stated position and forget the real interest or reason behind it, which may include environmental impacts, health, aesthetics, social impacts and the like. Negotiating based on position often obscures what the parties really want and is not likely to produce an agreement

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that will serve the interest of the parties, which prompted them to take that position in the first place.

Case. The position of the fisherfolk, for example, is to oppose the port expansion, while that of the port authority is to push through with it.

Analysis. The interest of the fisherfolk is that pollution in the bay should not increase. It is actually an interest shared in common with the port authority, which plans to install anti-pollution equipment that will even decrease the level of pollution.

- `Options.` Generate options before deciding what to do.

  Parties tend to come to the negotiation table with proposed solutions. While it is not wrong to do so, sticking to their proposals may limit their creativity in looking for better solutions. It is important to generate a free flow of ideas during negotiations, which requires parties to withhold judgement of ideas as they are offered and to recognise that they are not searching for a single answer or solution but possibly several or a combination of proposed solutions.

Case. The farmers object to the proposed mining project because they will have to give up their farms. The mining company has proposed only one solution: compensation to the farmers. The negotiation is at an impasse because the farmers do not want to change their lifestyle and will not accept compensation.

Analysis. Problem solving requires looking at other options, such as relocating farmers to land of a similar quality as their farms or combining compensation and resettlement.

- `Criteria.` Make sure that the result is based on some objective standard.

  Parties should insist that decisions or the chosen option be based on some fair, objective standard, such as market value, customs, expert opinion, moral standard, equity, efficiency, feasibility, law and others. Then neither party need give in to the other and both can expect a fair solution.

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Case. Both the port authority and the fisher group agree that the port should be expanded only if it does not cause additional pollution of the bay. They disagree, however, on whether or not the project will increase or decrease pollution.

Analysis. The parties must agree on an objective and transparent process to measure existing and projected pollution loads.

The following are steps in conducting principled negotiation or interest-based bargaining:

- Preparation
    - Identify your interests/needs.
    - Speculate on the other party's interests/needs.
    - Know your and the other's best alternative to a negotiated agreement (BATNA).
- Negotiation session
    - Establish rapport and set a positive tone.
    - State the purpose of the negotiation.
    - Begin negotiating by educating each other on your interests. (Disclose and listen.)
    - Frame the problem as a joint task to meet both parties' needs.
    - Look for ways to expand the pie. (Create value before you claim value.)
    - Generate multiple options for settlement. If you get stuck, go back and review what people's interests are.
    - Evaluate the options. (How well do they meet needs?)
    - Select/modify options based on which ones best meet needs.
    - Develop a plan to implement the agreement. (Who, what, where, when, how?)

Mediation: the art of assisted negotiation

Mediation is the intervention into a dispute or negotiation of an acceptable, impartial, neutral third party which has no authoritative decision-making power, to assist contending parties to voluntarily reach a mutually acceptable settlement.

Mediators should strive for at least voluntary decisions that end unproductive conflict and that are as fair, efficient, stable and wise as would occur otherwise. Preferably, the decisions should explicitly clarify the nature of future interactions and help avoid unnecessary entanglements.

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The following are `styles` of mediation:

- `Facilitative.` Emphasises party decision making and strict mediator impartiality. Purist version requires mediators to refrain from offering options or possible solutions.
- `Evaluative.` More arbitral in style although parties still make their own decisions. Mediator provides information, offers advice, makes suggestions, evaluates ideas.
- `Bureaucratic.` What can and cannot be discussed is prescribed by law or rule. Mediator works within a stricter legal or administrative framework.
- `Managerial.` What can or cannot be discussed is prescribed by the organisational culture and by the authority of the mediator. In some versions, the mediator is the supervisor trying to assist employees sort out problems. In other versions, the mediator is a facilitator doing strategic planning, quality management or team building.
- `Activist.` Mediator proactively assumes many of the responsibilities for organising and orchestrating who participates and what is discussed, and for shaping outcomes.
- `Therapeutic.` Strongly emphasises resolving interpersonal schisms and working out emotional "resolution" of differences. Most commonly applied in marriage, child custody and church disputes.
- `Transformative.` Seeks to avoid the "lure" of problem solving and changes the way parties see themselves, each other or the dispute.
- `With muscle.` An authority figure brings clout and influence to the negotiating table.

The `process` of mediation has two general phases: the forum or convening phase and the negotiation phase. The forum phase is divided into two sub-phases called convening and discussing, while the negotiation phase is divided into the narrowing and the deciding phases.

The `convening phase` covers pre-meeting preparation where the issues and the key people needed to resolve the dispute are identified, the process described and roles clarified. The parties meet and the role of the mediator is explained to them, ground rules are established and confidentiality arrangements reviewed. The following are the `activities in the convening phase` and the `tasks of the mediator`:

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1. `Assessment`
   - Appraise the conflict to determine if mediated information exchange and/or problem solving is appropriate.
   - Gather the information needed to prepare an appropriate intervention.
   - Build credibility and political will for the process.
   - Test the interest and commitment to go forward.
2. `Design`
   - Develop a preliminary (and tentative) definition of the problem.
   - Identify external driving and constraining forces.
   - Find or create a venue.
   - Identify key stakeholder groups. The "voices" that are vital to a resolution must be heard.
   - Convert stakeholder groups into meaningful representation.
   - Prepare a proposed "mission" statement.
3. `Convening proper`
   - Agree on the general scope of the issues to be discussed.
   - Agree on the ground rules, both the larger procedural protocols as well as expected "table manners."
   - Improve the definition of the issues, narrow the agenda and agree on a uniform starting point.

The `discussion phase` includes clarification of the problem and identification of interest based on the disputants' statement. Information is gathered, options collected and criteria for acceptable solutions established. Opportunities for settlement are likely to come up during this stage.

The mediator has the following `tasks`:

- Create and alter the discussion agenda to enhance understanding and problem solving.
- Reframe intractable issues into problem statements.
- Assist the parties in understanding each other's positions and interest.
- Broker cultural and ideological understanding.
- Identify missing information, clarify competitive information and bring common information to bear on the discussion.
- Manage scientific uncertainty.

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- Develop criteria against which to weigh alternative decisions.
- Generate alternatives and options.

In the `narrowing phase`, the problems identified are revisited and the relevant information sorted out and classified. Options for settlement are listed and the participants combine and negotiate the options with the help of the mediator. The goal of this phase is to build agreement.

The mediator has the following `tasks`:
- Weigh, scale and judge the cost, risk and efficiencies of the different alternatives.
- Explore possible solutions by testing and bundling proposals.
- Examine the cost of conflict and advantages of settlement.

The `decision phase` is the last stage of the mediation process. Parties meet to summarise their progress and to confirm areas of agreement either orally or in writing.

The mediator has the following `tasks`:
- Break impasses, identify trades, save face.
- Develop proposals for compliance, enforcement and contingencies.
- Develop agreements in principle or propose agreements.
- Craft language with avenues for future communication "fail safes."
- Assure ratification of agreement in detail.
- Celebrate agreement.

Participation of Local Governments

The support and collaboration of local authorities is necessary to implement international conventions on marine pollution, national coastal action plans and marine pollution laws. The participation of local governments is indispensable to implement ICM programs. Partnership between national agencies and local government units is essential to prevent and manage marine pollution, as shown by the GEF/UNDP/IMO Regional Programme for the Prevention and Management of Marine Pollution in the

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East Asian Seas (MPP-EAS) demonstration sites in Xiamen, China, and Batangas Bay, Philippines.

Local governments must participate in decision making because of the nature of environmental problems and because affected communities see local governments as responsible for solving such problems. Governments and peoples, as the maxim goes, must "think global, act local" because most ecologically injurious activities begin as specific acts in particular communities within specific political boundaries. When these activities result in damage affecting hundreds or thousands of people, the first recourse for relief as well as the most convenient scapegoat is frequently the local authorities.

Recognizing the imperative of local governmental participation does not mean believing that local government always promotes sustainable development. It does not mean turning a blind eye to the role of local politicians or leaders in creating the country's environmental problems. It would be naïve to grant local government all power over the environment and natural resources. National authority and local empowerment must balance each other.

Local governments must have a larger role in marine pollution prevention and management for the following reasons:

- They are in a better position to know the issues and problems in their areas.
- The communities they serve have the greatest stake in the conservation and proper use of natural and environmental resources.
- Implementation of international norms and national laws and policies have serious impacts on local economies.
- Local leaders are frequently held responsible and accountable for environmental emergencies and disasters.
- Although local agencies and institutions usually lack technical and financial resources, they are effectively present in their areas of jurisdiction.
- Collaboration and partnership with local authorities result in better implementation of conventions, laws and policies.

Local governments may do the following to prevent and manage marine pollution:

- Regulate land use by developing and adopting land-use plans.

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- Implement ICM programs.
- Enact local ordinances on the utilisation of coastal and marine resources, including rules regulating pollution discharges.
- Impose user fees and penalties for violations of local environmental rules.
- Encourage and provide incentives for ecologically friendly activities.
- Establish local environmental offices and agencies.

Devolution of powers to local authorities must be predicated on an overall framework of increasing their self-reliance and independence in determining local policy. It should be calibrated and continued until the local authorities are able to use and treat the environment as development infrastructure.

Local governments must expand and stretch the limits of their present roles and functions and continually engage the national agencies and other relevant participants in the process of environmental decision making. To do this, they must first build their capacity to intervene in the process and to insist on their right to participate.

In particular, local governments can use their authority to regulate land use within their boundaries to ensure that development is sustainable. They are also in the best position to implement ICM programs. They should institutionalise environmental concerns in all their legislative and executive decisions and generate funds for environmental projects by, for example, imposing user fees and penalties for violations of local environmental ordinances. Local laws can also be enacted to encourage ecologically friendly activities.

Local governments must work with the national agencies and the private sector to build an integrated institutional and organisational framework for bay management that is anchored on local government initiative and leadership. They must, therefore, establish and institutionalise local environmental offices or agencies.

However, national government, agencies and institutions should continue to play a principal role in environmental management even at the local level. Local governments frequently lack the financial and technical resources to deal with marine pollution and other environmental challenges. At the national level, the overall planning and co-ordination of management and

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conservation of the environment and natural resources should remain with the national government. Local policies should be based and premised on such national plans and policies.

Batangas Bay, Philippines

Implementing the Local Government Code

The environmental management powers of local government units (LGUs) were expanded following the enactment and implementation of the Local Government Code of 1991. The code mandates the mayors and governors and their respective councils to protect the environment within their territorial jurisdiction. Municipal and city mayors are required to adopt measures to safeguard and conserve land, mineral, marine, forest and other resources. Provincial governors must do the same in co-ordination with the mayors.

The local government councils are required to protect the environment and impose appropriate penalties for acts that endanger the environment, such as dynamite fishing, illegal logging, smuggling of logs and endangered species of flora and fauna, slash-and-burn farming, and polluting activities.

The code also provides that national government agencies must consult LGUs before they implement any project or program, especially those that have significant environmental impacts, and secure the approval of the *sanggunian* (local legislature) concerned.

The Local Government Code, Section 26, provides:

> Duty of National Government Agencies in the Maintenance of Ecological Balance.—It shall be the duty of every national agency or government-owned or controlled corporation authorized or involved in the planning and implementation of any project or program that may cause pollution, climatic change, depletion of non-renewable resources, loss of cropland, rangeland, or forest cover, and extinction of animal or plant species, to consult with the local government units, non-governmental organizations and other sectors concerned and explain the goals and objectives of the project or program, its impact upon the people and the community in terms of environmental or ecological balance, and the measures that will be undertaken to prevent or minimize the adverse effects thereof.

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Environmental management in Batangas Bay

Environmental management programs, to be effective, must manage whole ecosystems that seldom correspond to political boundaries. Local governments must join forces to manage common resources. Programs must be forward-looking and consider the natural advantages afforded by the available resources, the goals of LGUs involved and the practicability of implementing the program. In other words, strategic planning is essential to optimise the use of resources in line with the development strategy of the local governments and their role in national development strategy.

Each municipality can theoretically opt to initiate programs only within its jurisdiction. However, Section 33 of the Local Government Code allows municipalities, by memoranda of agreement, to consolidate efforts, services and resources for "purposes commonly beneficial to them." In the Batangas Bay region, it was determined that the common interests, particularly the potential of the bay as an international port, called for a coordinated approach. The benefits of having a port would redound to the whole region, but only if development plans are integrated and supported by all local governments having jurisdiction over the shared resource.

A program that extends over several local boundaries must be implemented by an institution that transcends local management systems. The Local Government Code makes this a little complicated. Under the code, municipalities control fishery resources in municipal waters; provinces control quarrying and pollution control. Both LGUs have forestry-related functions.

Ideally, the province can initiate and implement an integrated program because its territorial jurisdiction adequately covers whole ecosystems. However, while it has general supervisory powers over municipalities, the real powers are often exercised by the municipalities. For example, the province cannot devise an integrated fisheries program. The problem is complicated further when the resource is shared by a highly urbanised city that is independent of the province. When no local management institution can implement an integrated program, a multilateral body has to be created with representatives from the local governments.

A responsive multilateral body should be multisectoral, including not only representatives of local government but of key

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stakeholders. It should serve as the policy-making forum where all stakeholders can participate and present their concerns.

Policy makers determined that the most feasible organisational structure for Batangas Bay would be a council created through a provincial ordinance with participation of local governments, private sector stakeholders, and national government agencies, in order to ensure that local efforts would harmonise with national plans and programmes (MPP-EAS, 1996a:38).

The planned council would not carry out programmes but only guide or set policy direction. Day-to-day activities would be delegated to the council's full-time implementing arm and secretariat, the Provincial Government-Environment and Natural Resources Office (PG-ENRO) (MPP-EAS, 1996a:35).

The creation of a multisectoral council and its implementing arm as well as the translation of policies into action plans need legislation in order to be implemented. Participating local governments and other government agencies are required to allot resources for implementing policies. The Local Government Code (Section 33) provides that resources must be contributed through appropriate ordinances following requisite public hearings.

The Batangas Bay Region Environmental Protection Council

One of the key components of the Strategic Environmental Management Plan (SEMP) for the Batangas Bay region is the legal and institutional mechanism by which integrated environmental management programmes are planned and implemented (MPP-EAS, 1996a:35).

The Batangas Bay Region Environmental Protection Council (BBREPC) was created to (i) deal with industrialisation's significant environmental consequences, (ii) maintain the region's viability and (iii) protect the ecological balance of the bay and its environs.

It was created pursuant to Provincial Ordinance No. 001, Series of 1996 via Resolution No. 276, 1996, of the Sangguniang Panlalawigan (Provincial Legislature). The five municipalities (Batangas City, Bauan, San Pascual, Mabini and Tingloy) around the bay have expressed their collective concern for the region. Various organisations have expressed their willingness to join in the efforts to preserve the region's environment.

The council is chaired by the governor of Batangas. Its members are (i) the vice-governor of Batangas; (ii) the mayors

Participation of Local Governments

of the five municipalities; (iii) the chairman of the Committee on Environmental Protection, Sangguniang Panlalawigan ng Batangas; (iv) the local officer of the Department of Environment and Natural Resources (DENR); (v) a representative from the print and broadcast mass media; and (vi) representatives from the Philippine Coast Guard, the Philippine Ports Authority, and Maritime Industry Authority. From the private sector are (i) the chairman of the Batangas Coastal Resource Management Foundation (an industry organisation) and (ii) the Small-scale Fishermen of Batangas Bay Region.

However, the council's main functions—to reduce and control pollution—overlook the need to develop an optimum environmental management system. The council would do well to take a precautionary and anticipatory approach and to add to and strengthen its powers in order to become more responsive to the region's environmental concerns. It must emphasise resource development and management.

The council has a mandate to do the following:

- Delineate policies regarding the protection and preservation of the ecological balance of the Batangas Bay Region;
- Co-ordinate with government, non-governmental organisations and the private sector regarding issues on environmental protection within the Batangas Bay Region;
- Initiate legislation that seeks to minimize the risks of pollution in the Batangas Bay Region;
- Monitor compliance of national and local laws pertaining to pollution control;
- Promote public awareness on and participation in abatement of pollution in the Batangas Bay Region;
- Undertake projects that will encourage marine pollution reduction, prevention and risk management.

The council's secretariat is the PG-ENRO. LGUs may or may not create an ENRO. The Batangas provincial government created one primarily to exercise the devolved functions of the DENR and to co-ordinate the implementation of the SEMP. However, the environment encompasses so many broad areas of concern that it may be necessary to create a technical committee for each area.

Participation of Local Governments

The Xiamen Experience

Developments similar to those in Batangas Bay are happening in Xiamen, another MPP-EAS demonstration site. Like Batangas Bay, Xiamen's management system used to suffer from multiple-use conflicts, a single-sector-oriented policy and weak co-ordination among agencies. Twelve sectors from the central, provincial and local governments are engaged in coastal management. They used to carry out their respective functions without integrated planning and co-ordination, which resulted in fragmented policymaking and sometimes coastal-use conflicts.

It was recognised that efforts to strengthen ICM legislation must be guided by the principle that the coastal zone is an ecosystem and a resource system and that the development and use of coastal resources should go hand in hand with environmental protection. Local laws should therefore address actual coastal issues and provide for integrated management of resource use and protection, including enforcement that complements national laws.

The Strategic Management Plan for Marine Pollution Prevention and Management recognised the need to establish an ICM mechanism for Xiamen. It recommended that the mechanism be headed by a municipal government leader and have an office that would serve as an operational arm to guide and co-ordinate the development, management and protection of coastal resources as well as the prevention and management of marine pollution (MPP-EAS, 1996b:25).

The Steering Group for Integrated Coastal Management, a high-level ICM co-ordinating and steering group, was established, chaired by the mayor or executive deputy mayor and vice-chaired by several deputy mayors.

The steering group has the following responsibilities:

- Review the medium- and long-term plans on coastal development, infrastructure development and protection;
- Review coastal functional zonation scheme;
- Co-ordinate the formulation of local regulations, rules and standards concerning ICM;
- Organise and co-ordinate various concerned sectors in discharging their respective mandates and law enforcement relating to ICM;

Participation of Local Governments

- Decide on the major issues pertaining to coastal development, infrastructure and management; and
- Undertake other tasks assigned by the leaders at the higher level (MPP-EAS, 1996b:25).

The Office of the Steering Group for Integrated Coastal Management in Xiamen Municipality is the municipal government's functional sector. It manages overall coastal affairs and co-ordinates with the General Administration Office. It handles routine activities in the planning, development, construction and management of the coastal zone and organises and co-ordinates the various sectors that administer and manage the sea. It will set up three divisions to take care of general administration, coastal and marine affairs and legal co-ordination.

It has the following responsibilities:

- Develop medium- and long-term plans on coastal development, infrastructure and protection for Xiamen Municipality;
- Develop coastal functional zonation;
- Organise and co-ordinate the formulation of local regulations, rules and guidelines concerning ICM;
- Supervise and co-ordinate various management sectors to conduct administration and strict enforcement of laws in accordance with their respective legal mandates;
- Organise coastal monitoring, surveillance, information management and the review of coastal development projects;
- Endorse coastal development project proposals;
- Organise public awareness activities for ICM;
- Provide guidance on ICM to countries and districts under the jurisdiction of the Xiamen Municipality; and
- Execute other tasks assigned by the Steering Group (MPP-EAS, 1996b:25).

The Consultative Committee for Integrated Coastal Management, to be composed mainly of experts who provide advice as well as scientific and technological services to aid decision making, was also proposed by the Strategic Management Plan.

ENVIRONMENTAL IMPACT ASSESSMENT

Definition

Environmental impact assessment (EIA) is essentially an instrument for integrated project planning which demands participation by government and private individuals or interests. It is a process that consists of:

- identifying and predicting the impacts of proposed projects and programmes on the bio-geophysical environment and on human health and well-being; and
- interpreting and communicating information about such impacts in a manner that can be utilised by planners and decision makers.

Objective

The objective of the EIA is to ensure that potential problems are foreseen and confronted at the earliest stage possible. The system was introduced to correct the tendency of traditional decision-making processes to sacrifice long-term liabilities for short-term gains and to consider primarily economic reasons even when the environmental consequences were unacceptable. Laws requiring EIA demand that development plans maximise resource use but at the same time minimise the adverse impacts of human actions on the environment.

The international community recognises that EIA and review must be integrated into planning. Principle 17 of the Rio Declaration on Environment and Development states:

> Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority.

Functions

EIA is concerned with evaluating, estimating and predicting:

- the effects of structures, processes and systems upon the environment; and
- the effects of environmental changes on human populations.

Environmental Impact Assessment

An EIA exercise:

- seeks to determine the environmental, ecological and social consequences of proposed development activities; and
- provides a procedure whereby the public can raise environmental and other concerns regarding the impact of development activities.

EIA provides policy makers with the best available information that will help them minimise costs and maximise benefits of a proposed project. In some countries, EIA is done to determine whether or not the proposed activity is to be allowed. In others, it is principally a pre-condition for implementing a project and not part of the permitting process.

Steps

EIA has nine steps:

- `Description of the proposed action` provides the information needed to conduct an adequate, independent assessment and review.
- `Screening` determines whether a full-blown EIA is needed. Sometimes additional information is required.
- `Scoping` establishes the parameters for the EIA and should overcome an inherent pitfall in EIA—the tendency to identify all potential impacts without regard to what is important for decision making. It identifies the most likely and severe impacts of a proposed project. Good scoping involves all the stakeholders and prevents the expensive gathering of irrelevant or unimportant information.
- `Identification and selection of alternatives` allow assessors to examine the proposed project's assumptions, goals and needs. Decision makers should know each option's relative costs and benefits. In assessing the alternatives, they should ask the following questions:
  - How should alternatives be identified?
  - What is the reasonable range of alternatives?
  - What level of examination should be applied to each alternative?
- `Estimation` of each impact is done after scoping has determined the significant impacts. A quantitative or even a

Environmental Impact Assessment

qualitative estimation of impact usually requires data and the use of one or more estimation methods.

- `Evaluation and presentation` of the estimated impacts must be done in terms understood both by potentially affected parties and the decision makers. Decision making involves determining the significance and socioeconomic consequences of estimated impacts, bearing in mind that the objective of EIA is to ensure that decision makers foresee and directly address environmental and socioeconomic problems.
- `Review and comment` are similar to scoping. Since impacts are multidisciplinary in nature, expertise must often be sought outside the lead agency. Good EIA systems usually require independent and transparent review, which may, however, be time-consuming and costly. But by delaying the project's implementation of a project, inefficient review can also be very expensive.
- The `decision` may come in the following forms:
    - approval of the proposed project without conditions;
    - approval of the proposed project with conditions;
    - denial without prejudice to reapplication; or
    - denial with finality (which rarely happens since, theoretically, a project may be revised and redesigned).
- `Auditing` usually refers to monitoring the project's actual impacts and its compliance with EIA conditions. EIA agencies should establish mechanisms to ensure that their decisions are carried out and to determine the actual impacts of the action. Multi-stakeholder monitoring mechanisms can ensure that auditing is done properly.

Socioeconomic Considerations and Public Participation

In recent years, the scope of EIA has broadened from its initial focus on the physical environment to include socioeconomic factors. EIA is now often dominated by a consideration of socioeconomic factors, including land tenure issues, labour and employment concerns, rights of indigenous peoples, gender issues and concerns, etc. Good EIA considers these concerns without losing sight of its original purpose and objective.

It has been repeatedly demonstrated that public involvement can produce acceptable terms of reference for the assessment

Environmental Impact Assessment

and reduce the likelihood of controversy arising after assessment. Most countries accept and acknowledge in varying degrees the right of their citizens—especially those to be directly affected by a project—to participate in EIA. Participation can include public hearings, public consultations, individual and group dialogues, presentation of position papers and membership in stakeholder committees. The conditions precedent for effective public participation in EIA are:

- disclosure of information through publication and posting of a description of the project or
- the undertaking of information and educational campaigns.

Steps to ensure public participation in EIA

The government should do the following to ensure that the public participates in EIA:

- Encourage public participation at all stages of the process, from scoping, screening, review and comment, to monitoring.
- Ensure that all stakeholders, in particular local governments and local committees, know about the proposed development.
- Disclose all material and relevant information or require the project proponent to disclose such information.
- Meet with the stakeholders individually and in groups to determine their concerns and to agree on a public process.
- Call a public hearing when required by law or by the situation (if a project is controversial, for example).
- Listen to the concerns of the public and consider them adequately before making a decision.
- Create multi-stakeholder mechanisms when appropriate (for monitoring, for example).

Sustainable Financing Mechanisms

Sustainable financing of marine pollution management in the East Asian Seas is a shared responsibility. It requires financial and human resource commitments by governments, international agencies, national and multilateral financial institutions, the private sector and industry, NGOs and the general public. However, it also urgently needs innovative and practical approaches to

Sustainable Financing Mechanisms

provide governments and all stakeholders with the capacity and resources to plan, develop, implement and sustain pollution prevention and management.

While direct funding by government, bilateral and multilateral agencies continues to be necessary, more and more people realise that a partnership between the public and private sectors is a cost-effective and efficient application of sectoral skills, resources and mandates within a co-operative framework. They are appropriate sustainable financing mechanisms for addressing, among others, two distinct but related management initiatives:

- prevention and management of land-based pollution of marine and coastal areas through the application of ICM; and
- environmental management of sub-regional sea areas and straits used for navigation.

Partnerships between the public and private sectors are especially important to ICM programmes and local governments, which normally do not have the money or know-how required to shoulder large marine pollution projects. Many East Asian countries' legal systems give local authorities little or no power to generate income for such projects. Partnerships with the private sector to raise funds for them thus promise to be effective and practical. The private sector's dynamism, technical expertise, financial resources and entrepreneurial spirit ensure that services and facilities will be cost-effective and sustainable (Ross et al., 1997).

Government Initiatives to Ensure Sustainable Financing

Governments may do the following to ensure sustainable financing:

- Establish new financing initiatives to support marine environmental and pollution policies and programmes on a long-term and self-reliant basis.
- Identify and evaluate the social and economic benefits of marine pollution prevention and management measures and reflect, through natural resource and environmental accounting, the true costs of coastal resource use and pollution management facilities and services at the local level.

Sustainable Financing Mechanisms

- Develop and apply new and innovative economic instruments, including the user-pays and polluter-pays schemes, to generate revenue and modify the behaviour of users and polluters. Combine them with effective monitoring and enforcement of regulations and controls.
- Provide the legal framework to enable and accelerate partnerships with the private sector by motivating the private sector, sharing derived benefits and revenues and linking marine and coastal resource management with economic development.
- Develop technical assistance and financial incentive programmes to establish a sustainable national and regional environmental industry, focusing on the advancement of small- and medium-sized enterprises (Ross et al., 1997).

Sustainable Public-Private Financing Mechanisms

These may include the following:

- voluntary agreement by industry;
- build-operate-transfer scheme;
- establishment of an environmental trust fund; and
- user fees and pollution charges (Ross et al., 1997).

Voluntary agreement by industry

This is effective and the least costly of the mechanisms. Transaction costs are at a minimum because the mechanism is not based on regulatory action but on industry's voluntary participation. If designed properly, it can even result in additional profit for industry. After all, pollution is nothing but a wasted resource, which can be reused, redirected and put to good use.

A voluntary agreement requires strong commitment from both government agencies and the private sector. The government must move away, at least initially, from command and control strategies. It will probably have to provide information and technological assistance to the private sector. It must also monitor parties' compliance with the voluntary agreement. The private sector must have a basic awareness of the pollution generated by industry. It must disclose information regarding raw materials and processes used. It must spend to upgrade equipment

Sustainable Financing Mechanisms

and processes, including pollution prevention facilities (Ross et al., 1997).

Build-operate-transfer scheme

Build-operate-transfer (BOT) is among the most successful forms of partnership between the public and private sectors, particularly in the area of infrastructure. It is a contractual arrangement entered into by a private sector proponent with the government to construct, finance, operate and maintain an infrastructure facility for a fixed period, after which it will transfer the facility to the government. Governments resort to it when they have difficulty meeting their country's capital investment requirements to sustain economic growth. In some countries, the swift implementation of BOT projects attests to the scheme's success in providing the infrastructure requirements of an economy.

The following are similar schemes: (i) build-transfer (BT); (ii) build-lease-transfer (BLT); (iii) develop-own-transfer (DOT); (iv) rehabilitate-operate-transfer (ROT); (v) build-own-operate (BOO); (vi) rehabilitate-own-operate (ROO); (vii) rehabilitate-lease-operate (RLO); (viii) rehabilitate-own-manage (ROM); and (ix) contract-add-operate.

Governments resort to BOT usually for major infrastructure projects, such as roads, dams, power plants, etc. However, it can be easily extended to cover environmental projects, particularly those that require large amounts of capital and have a significant return of investment, such as water and sewerage projects, reception facilities, river and marine rehabilitation, and solid, hazardous and toxic waste disposal (Ross et al., 1997).

Establishment of environmental trust funds

Trust funds are also popular sustainable financing mechanisms. They are typically independent of government and run by an autonomous board. They are usually created through endowments provided by philanthropic foundations and by bilateral or multilateral institutions. Interest and gains from investments of the endowment are used to fund environmental projects implemented by communities and NGOs.

Sustainable Financing Mechanisms

An environmental trust fund may also be established by operation of law. The Philippine government, for example, requires polluting industries to set up environmental monitoring and guarantee funds.

Environmental monitoring fund

The concept of an environmental monitoring fund (EMF) was first used in the Philippines when the government implemented the environmental impact statement (EIS) system. Project proponents, who are required or opt to submit an EIS, must establish an EMF when the DENR issues them an environmental compliance certificate (ECC). The fund supports the activities of the multipartite monitoring team.

The DENR does not fix the amount of the EMF, but it does provide that the estimated cost of approved post-assessment monitoring and environmental information shall be the basis for determining the amount (MPP-EAS, 1998).

Environmental guarantee fund

EIA rules provide that projects posing significant public risk or requiring rehabilitation or restoration must establish an environmental guarantee fund (EGF) which will answer for damages to life, health, property and the environment, as well as the cost of such rehabilitation or restoration.

`Public risk` is the exposure of humans or the environment to toxic substances, hazardous or organic wastes, extraction of natural resources, or activities or structures that could endanger life, health, property or the environment.

While the DENR is tasked to finally determine whether a project poses significant public risk or requires rehabilitation or restoration, the rules create a presumption of public risk. The DENR presumes that there is public risk if any of the following conditions exist in a project:

- presence of toxic chemicals and hazardous wastes as defined by law;
- natural resource extraction that requires rehabilitation or restoration;
- presence of structures that could endanger life, property, and the environment in case of failure; or
- presence of processes that may cause pollution as defined by law (MPP-EAS, 1998).

Sustainable Financing Mechanisms

The EGF is not limited to answering for damages and for rehabilitation or restoration activities. It can also cover the following:

- just compensation to communities;
- implementation of community-based environment-related projects; and
- contingency cleanup activities.

The EGF has two major components:

- A `trust fund`, which is a guarantee instrument intended to compensate aggrieved parties for any damages to life or property caused by a project, and to finance restoration and rehabilitation of environmental quality. It may be in the form of insurance, surety bond, letter of credit, self-insurance, financial mechanism and other similar guarantee instruments. It can be accessed only after the environmental guarantee cash fund (see below) has been depleted or has become insufficient for the intended claims.
- An `environmental guarantee cash fund` which is earmarked for community-based environmental training and programmes, information campaigns and environmental research. It may be placed by the proponent in an interest-bearing account and such interest shall accrue to the cash fund. The funds shall be replenished when they reach a certain level agreed upon by the committee. Money from the EGF may be claimed or withdrawn depending on the cause, either as emergency, compensatory or training claims (MPP-EAS, 1998).

The `advantages` of EMF and EGF are the following:

- They give the government the opportunity to build partnerships and linkages with the stakeholders, allowing it to perform its mandate despite limited resources and capacities.
- Although they add to the cost of the project, they are readily available in case of a contingent event. This benefit far outweighs the cost of not having such a fund. The huge investment in monitoring and warranty of environmental safety compels proponents to exercise caution in implementing their projects.
- The fund mechanisms and committees give stakeholders, such as the host communities, a venue to participate in moni-

toring activities and assure them of protection through the payment of compensation and/or damages in proper cases.

- Because an independent, neutral third party or the proponent (in the case of the EMF) holds the fund in trust or as a deposit, all the parties can immediately address issues and respond to urgent cases without going through the labyrinth of the government's appropriations process (MPP-EAS, 1998).

User fees and pollution charges

The user fees and/or pollution charges imposed on users of environmental resources and on polluters should reflect the true costs of resource utilisation and resource damages resulting from misuse or overexploitation (MPP-EAS, 1998).

Regional Initiatives and Mechanisms

Conventions within the UNEP Regional Seas Programme

- Convention on the Protection of the Black Sea against Pollution, Bucharest, 1992;
- Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region, Cartagena de Indias, 1983;
- Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region, Nairobi, 1985;
- Kuwait Regional Convention for Co-operation on the Protection of the Marine Environment from Pollution, Kuwait, 1978;
- Convention for the Protection and Development of the Marine Environment and Coastal Region of the Mediterranean Sea, Barcelona, 1976 (Barcelona Convention);
- Regional Convention for the Conservation of the Red Sea and the Gulf of Aden Environment, Jeddah, 1982;
- Convention for the Protection of the Natural Resources and Environment of the South Pacific Region, Noumea, 1986;
- Convention for the Protection of the Marine Environment and Coastal Area of the South-East Pacific, Lima, 1981;
- Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region, Abidjan, 1981.

Other Regional Conventions

- Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircraft, Oslo, 1972 (Oslo Convention);
- Convention for the Prevention of Marine Pollution from Land-based Sources, Paris, 1974 (Paris Convention);
- Convention for the Protection of the Marine Environment of the North-East Atlantic, Paris, 1992 (OSPAR Convention);
- Convention on the Protection of the Marine Environment of the Baltic Sea Area, Helsinki, 1974 (1974 Helsinki Convention);
- Convention on the Protection of the Marine Environment of the Baltic Sea Area, Helsinki, 1992 (1992 Helsinki Convention).

Regional Initiatives and Mechanisms

Example of a Regional Convention:
The 1992 Helsinki Convention

Objective

- To take all appropriate measures, individually or by regional co-operation, to prevent and eliminate pollution in order to promote the ecological restoration of the Baltic Sea area and the preservation of its ecological balance.

Scope

- `Legal scope.` Restricted to the European Community and the states that participated in the 1992 Helsinki Conference. Others upon invitation by all the contracting parties.
- `Geographic scope.` Regional. Covers the Baltic Sea and the entrance to the Baltic Sea bounded by the parallel of the Skaw in the Skagerrak at 57° 44.43´N. Internal waters included.

Entry into force

Not yet in force. Enters into force two months after the deposit of the last instrument of ratification or approval by all signatory states bordering the Baltic and by the European Community.

Status of participation

Ratified by nine states and the European Community as of 31 July 1999.

Transnational Issues in the Region

Co-operation among East Asian countries is especially important as they share resources. The fact that they are adjacent to a semi-enclosed sea over which they extend jurisdiction dictates that some coastal resources management issues, and their resolution, are transnational in nature. These issues include the following:

- transboundary pollution effects from land-based sources;
- spills from oil wells and oil;
- hazardous cargo spills from vessels;
- siting of sea lanes;

- boundary disputes;
- transboundary fisheries management of shared stocks and migratory species;
- joint management of marine protected areas and marine ecosystems where jurisdiction is shared by one or more states.

Regional Co-operation in Environmental Management

The dearth of regional conventions on the protection of the marine environment should not be taken to mean that countries in the region do not co-operate. Governments, however, prefer guidelines of action instead of mandatory obligations imposed by conventional law as these are less intrusive on the countries' sovereignty and more compatible with their cultural preference for subtlety. Their diversity also makes them reluctant to adopt a model statute on the marine environment.

Major Regional Initiatives in Environment

The Association of Southeast Asian Nations (ASEAN) recognises that resources are being depleted or degraded through misuse and indiscriminate exploitation, primarily caused by socioeconomic pressures, such as population increase and rapid industrialisation. It knows that the region needs an integrated and co-ordinated program that will rationalise the use and management of the environment in order to achieve ecological security, technological security and sanitary security.

Of the various initiatives undertaken in East Asia, some are purely regional while others are joint undertakings between the region and another country, or between the region and an international organisation. They include the following:

- ASEAN Environment Program (ASEP);
- ASEAN Agreement on the Conservation of Nature and Natural Resources;
- The Kuala Lumpur Declaration on Environment and Development;
- Asia Pacific Economic Cooperation (APEC) Environmental Initiative; and
- ASEAN Senior Officials in the Environment (ASOEN).

Regional Co-operation in Environmental Management

The ASEAN Environment Program

The ASEP had three five-year phases beginning in 1978 and ending in 1992. It had the following objectives:

- To achieve ecological, technological and sanitary security.
- To promote sustainable development by approaching the ecological system holistically and comprehensively rather than treating resources as separate and distinct from each other.

As early as 1981, ASEAN—then composed of Indonesia, Malaysia, Singapore, Thailand, Brunei and the Philippines—identified a number of priority actions to be implemented under the ASEP:

- A sub-programme for sustained development and protection of marine environment and coastal area, involving the following:
  - pollution control, resource management, institutional management, information exchange and training;
  - integration of environmental management with development planning using environmental impact assessment (EIA); and
  - nature conservation and protection of the natural resources, with emphasis on the tropical forest ecosystem, genetic resource conservation and protection, and regulation of international trade in endangered species.
- Pollution control and waste management with emphasis on waste recycling or reuse.
- Environmental education, training and public awareness programmes.
- Regional information dissemination, including publication of the *ASEAN Environment Newsletter*.

The Kuala Lumpur Declaration on Environment and Development

In 1990, the fourth ASEAN Ministerial Meeting on the environment was held in Malaysia. Among the major decisions of this meeting were the launching of the ASOEN, the adoption of the Kuala Lumpur Declaration and the adoption of a common stand on global environmental issues.

Regional Co-operation in Environmental Management

In the Kuala Lumpur Declaration, the environment ministers agreed to begin to undertake environmental management. Some of the declaration's points follow:

- Initiation of efforts leading towards concrete steps pertaining to environmental management including:
  (a) the formulation of an ASEAN strategy for sustainable development and a corresponding action program;
  (b) the harmonisation of environmental quality standards; and
  (c) the harmonisation of transboundary pollution prevention and abatement practices.
- Initiation of efforts leading towards concrete steps pertaining to natural resource management, including:
  (a) the harmonisation of approaches in natural resource assessment; and
  (b) the development of joint natural resource management programmes.

<u>Other undertakings</u>

In 1985, ASEAN adopted the `Agreement on the Conservation of Nature and Natural Resources`, which provides a framework for the protection of the environment as well as specific obligations, such as the prohibition against the taking of enumerated endangered species. The agreement provides specific guidelines for the establishment and regulation of protected areas.

In 1990, the ministers who participated in the `APEC Environmental Initiative` committed themselves to do the following:

- To adopt an integrated approach to environment and development.
- Wherever possible and in accordance with the countries' priorities and capabilities, to incorporate environmental considerations into economic planning in order to co-ordinate the development of the region's economies and efforts to protect the environment.

The countries affected by the ongoing territorial disputes in the region created the `South China Sea Workshop on Conflict Resolution`. The workshop is divided into four technical working groups: (i) legal; (ii) safety of navigation; (iii) marine research study; and (iv) marine environmental protection. While the workshop was initially seen as a mechanism to settle territorial issues, its scope of concern has widened to include areas of co-operation in marine environmental protection. For example, it is proposing to monitor the region's ecosystem.

Regional Initiatives in Marine Pollution

Marine pollution initiatives include:

- Asia-Pacific Memorandum of Understanding on Port State Control;
- GEF/UNDP/IMO Regional Programme for the Prevention and Management of Marine Pollution in the East Asian Seas (MPP-EAS);
- Coordinating Body of the Seas of East Asia (COBSEA), set up by the UNEP Regional Seas Programme to develop pollution prevention programmes;
- ASEAN Oil Spill Response Action Plan (OSRAP), to enhance the ability of a country to respond to oil spills;
- ASEAN Committee on Science and Technology (COST) with Canada, the US, EU, Japan, etc., to develop a programme to manage pollution in the region. The ASEAN Expert Group on Environment has projects dealing with oil pollution and health. The group initiated an oil spill contingency plan as early as 1970;
- ASEAN-Australia Marine Science Project, to deal with ocean dynamics and living resources;
- ASEAN-Canada Marine Pollution Project, to determine the criteria for protecting marine resources and monitoring pollution;
- ASEAN-US Coastal Resources Management Project, to develop a multidisciplinary coastal area management plan;
- ASEAN Council on Petroleum (ASCOPE), to address environmental issues related to oil and natural-gas exploration; and
- Oil Spill Response Plan (OSPAR), initiated with Japan to provide technical assistance and equipment to ASEAN to combat oil spills.

Regional Initiatives in Marine Pollution

Asia-Pacific Memorandum of Understanding on Port State Control

In 1993, the memorandum of understanding (MOU) was signed by 18 states in Tokyo. It set up a system to ensure that foreign ships comply with the regulations of the MARPOL; the International Convention on Standards of Training, Certification, and Watchkeeping for Seafarers, 1978 (STCW); the Convention on International Regulations for Preventing Collisions at Sea, 1972 (COLREG); and the ILO Minimum Standards for Merchant Ships Convention, 1976. The MOU also created a Traffic Separation Scheme (TSS) in the Straits of Malacca and Singapore to reduce accidents. The MOU is not legally binding and thus may not need legislation to be implemented in member states. However, members are expected to fulfil their international obligations under it.

Its member states are Australia, Canada, China, Fiji, Hong Kong, Indonesia, Japan, Republic of Korea, Malaysia, New Zealand, Papua New Guinea, the Philippines, Russian Federation, Singapore, Thailand, Vanuatu and Vietnam.

Objectives

- To set up standardised procedures and work methods, coordinate better the implementation of port state control and ensure more effective implementation of port state control on all vessels calling at the region as a whole, and to facilitate exchange of inspection information and the establishment of training programmes.

The GEF/UNDP/IMO Regional Programme on Building Partnerships in Environmental Protection and Management for the East Asian Seas

The Regional Programme is participated in by 11 countries. The Regional Programme's focus is to build partnerships within and among governments of the region, as well as across public and private sectors of the economy, in order to reduce or remove barriers to effective environmental management, including inadequate or inappropriate policies, disparate institutional

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