MPP-EAS/Info/99/202

Framework and Guidelines for National Marine Pollution Legislation in East Asia

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FRAMEWORK AND GUIDELINES FOR NATIONAL MARINE POLLUTION LEGISLATION IN EAST ASIA

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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

A GEF Project Implemented by UNDP

MPP-EAS/Info/99/202




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.

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

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ACKNOWLEDGMENTS

The Framework for National Legislation on Marine Pollution Prevention and Management in the East Asian Seas was first prepared in co-operation with the Maritime Institute of Malaysia (MIMA) under a Memorandum of Agreement with the GEF/UNDP/IMO Regional Programme for the Prevention and Management of Marine Pollution in the East Asian Seas. Updating of the Framework and completion of the Guidelines was undertaken by Dr. Zhang Haiwen of the Institute of Marine Development Strategy, State Oceanic Administration of the People's Republic of China, while on an internship with the Regional Programme.

Technical advice and support was provided by Ms. Stella Regina Bernad of the Regional Programme Office, Manila. Technical assistance and copyediting by Ms. Eunice J. Agsaoay are also acknowledged.

The work represents a project of the International Conventions component of the Regional Programme. The International Conventions component is co-ordinated by Mr. S. Adrian Ross, Senior Programme Officer, Regional Programme.

Executive Summary

This document is composed of two companion papers, the Framework for National Legislation on Marine Pollution Prevention and Management for East Asian Countries, and Guidelines for National Marine Pollution Legislation for East Asian Countries. The Framework provides the users with a description of the features and obligations of the international instruments relating to marine pollution relevant to national legislation. The Guidelines provide the structure for and approach to national legislation. The two documents use the experience and approaches developed by countries in the East Asian region.

It is the objective for these two documents together to provide the tools for the drafting of legislation on marine pollution in countries in the East Asian region.

A number of instruments have been developed internationally to provide a framework for the prevention and management of marine pollution. Recently, some general instruments have been developed which provide a framework and policy guidance. These are the UNCLOS (United Nations Convention on the Law of the Sea), Rio Declaration on Environment and Development, Agenda 21, and the Washington Declaration on the Protection of the Marine Environment from Land-Based Pollution.

The IMO conventions on marine pollution (some of which were initiated much earlier than the policy instruments) and a number of UNEP instruments provide the details for dealing with particular sources of marine pollution. These include those which focus on prevention: MARPOL 73/78, London Convention, and the Basel Convention; those which deal with responses to incidents of pollution in the marine environment: OPRC, Intervention and Salvage; and those which provide a basis for liability and compensation for damages from pollution: CLC and FUND, and HNS Convention.

In particular, these instruments do the following:

MARPOL 73/78 provides the measures for the prevention of pollution by oil, noxious liquid substances in bulk, harmful substances in packaged form, sewage, garbage, and air pollution, all from ships. The London Convention provides for measures to prevent the wanton disposal of wastes generated from land- or sea-based sources The Basel Convention provides for measures to minimise the generation of hazardous wastes and other wastes by controlling their transboundary movement (export, import, transit and disposal), and to ensure that all related operations are done in an environmentally sound manner.

The OPRC provides a framework for national preparedness and international co-operation for response to oil pollution incidents. The Intervention Convention provides a basis for States to take measures on the high seas necessary to prevent, mitigate or eliminate grave and imminent danger to their coastlines or related interests from pollution

or threat of pollution of the sea by oil or other substances, following a maritime casualty. The Salvage Convention provides a greater emphasis on the protection of the environment during salvage operations.

CLC provides for the strict liability of the shipowner to a certain limit for damages from oil pollution. FUND provides for the contribution by oil importers to the International Oil Pollution Compensation Fund, for the purpose of supplementing compensation for oil pollution damages beyond the limits of liability of the shipowner.

The Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (GPA), while not a binding instrument, provides guidance on the management of land-based sources of marine pollution.

A recently-developed tool to assist in the enforcement of marine pollution regulations is port State control. In the East Asian Seas, the governing instrument is the Tokyo Memorandum of Agreement on Port State Control in the Asia-Pacific Region.

In drafting the legislation to implement these conventions, several considerations have to be taken relating to content and structure.

These conventions may be applied in all levels of national legislation, from policy instruments, such as the Constitution, down to the administrative orders. There are two possible approaches: the framework law approach and the special statute approach. Under the first approach, 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 under a basic policy on marine pollution. Under the Special Statute approach, laws on the prevention and management of marine pollution are enacted distinctly from and independently of each other, united only in their general objectives. In either approach, there is usually a hierarchy of legislation, each subservient to the preceding one. Provisions relating to the conventions may belong in different levels subject to certain conditions.

There are three modes of adopting international conventions into national legislation. The first is to simply adopt the convention as part of national legislation, with no other action. The second is to restate every provision of the convention in a detailed law. The third is to adopt the convention in full, but with explanatory or supplementary articles where the convention does not have specific prescriptions.

A law, whether under the framework law approach or special statute approach, should have the following components: objective, definition of terms, scope of application, exemptions, designation of implementing agency, enforcement measures, sanctions and procedure for settlement of disputes. Each of the conventions have their special features that have to be taken into consideration when being implemented by legislation. These are discussed for each of the conventions.

Introduction

The geographical expanse of the East Asian Seas region encompasses a number of regionally and globally important marine water bodies. These include, among others, the Malacca Straits, the South China Sea, the Indian Ocean, the Gulf of Thailand, the Java Sea, and the Pacific Ocean. These seas are endowed with rich living and non-living resources while at the same time providing important routes for international navigation.

Increasingly, however, the seas are being subjected to anthropogenic pressures resulting from resource exploitation and marine pollution from activities on land and at sea. The detrimental effects of these activities on the marine environment are widely recognised. Treaties have been developed calling for international co-operation to address this problem. In 1958, the International Maritime Organization (IMO) was established. Thereafter, numerous instruments were put into place with the IMO playing a key role in their passage and implementation. The period between 1994 and 1996 saw the establishment of a number of treaties and instruments aimed at controlling the impact of human activities on the marine environment (e.g., the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities and the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks; and the pivotal United Nations Convention on the Law of the Sea (UNCLOS) on 16 November 1994). Countries in the region have also responded to these pressures or threats by ratifying key international treaties or conventions and enacting national laws. However, these responses are not comprehensive, and many countries have still to ratify key conventions such as MARPOL 73/78. Although countries in the region have ratified international conventions, few have thoroughly implemented the conventions' requirements and compulsory and optional annexes and protocols. This is due to a number of reasons, among which is the lack of public awareness and technical expertise.

OBJECTIVE

The principal objective is to provide countries in the East Asian Seas region with a readily available and common source of reference for the preparation of an orderly and up-to-date body of legislation concerning marine environmental law based upon internationally accepted legally and non-legally binding instruments, and to apprise users in the countries in the region of the technical and legal considerations that will be encountered by governments in doing so.

INTERNATIONAL AUTHORITY FOR PROTECTION OF THE MARINE ENVIRONMENT

The legal basis for the protection of the marine environment from pollution rests primarily on Part XII of the UNCLOS. Article 192 gives the general obligation for States "to protect and preserve the marine environment." This obligation is further elaborated in the other articles of Part XII, most notably Article 194 on "measures to prevent, reduce and control pollution of the marine environment"; and Section 5 on the International Rules and National Legislation to Prevent, Reduce and Control Pollution of the Marine Environment (Articles 207 -211) of the UNCLOS.

Article 235 of the UNCLOS provides that "States are responsible for the fulfilment of their international obligations concerning the protection and preservation of the marine environment . . . and that they shall be liable in accordance with international law".

State responsibilities are further elaborated in Chapter 17 of Agenda 21: the United Nations programme of action from Rio, specifically Paragraphs 17.24 - 17.34, as well as in the various conventions described in this report.

The legally and non-legally binding instruments on marine pollution are:

(a) Rio Declaration, UNCLOS, Agenda 21, and the Washington Declaration;

(b) International Convention for the Prevention of Pollution from Ships, 1973 and Protocol of 1978 Relating to the Prevention of Pollution from Ships, as amended (MARPOL 73/78);

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

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

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

(f) International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969 and the 1973 Protocol (Intervention);

(g) International Convention on Salvage, 1989 (Salvage)

(h) International Convention on Civil Liability for Oil Pollution Damage, 1969 (CLC) and the 1992 Protocol;

(i) International Convention on the Establishment of an International Fund for Compensation for Oil Pollution, 1971 (FUND) and the 1992 Protocol; and

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

DEFINITION OF TERMS USED

(a) "Legislation" is used in the generic sense, meaning all documents establishing rules having the force of authority by virtue of being promulgated by an official organ of the State, from laws enacted by the highest national legislative and executive authorities to local and administrative issuances.

(b) "Law," "act" or "statute" means a piece of national legislation, but "act" or "statute" usually refers to a specific piece of legislation passed by the national legislative body.

(c) "Instrument" is any document establishing law, policy, guidelines, or rules providing guidance for behaviour at the international, national or local level.

(d) "Convention" means an agreement among States to regulate matters affecting them all.

(e) "Treaty" has the same meaning as "convention."

(f) "Amendment" means an instrument amending certain parts of a convention.

(g) "Protocol" means an instrument which amends an existing convention, usually in a fundamental or comprehensive manner (as opposed to a simple amendment), or supplements a convention on a specific topic.

(h) "Ratification" is used generically to denote a State becoming a party to a convention, including by the process of accession.

(i) "Accession" means the particular method of a State becoming a party to a convention by depositing an instrument with the depositary (e.g., the IMO) after the period when the treaty was open for signature.

(j) "State" and "country" are used interchangeably.

(k) “Administration” is the office or set of people in the government responsible for the execution of public affairs relating to a particular convention.

(l) “Authority” means the government office or official having the power to act on a particular matter.

The “East Asian Seas region” includes five large marine ecosystems or subregional seas: the Yellow Sea, South China Sea, East China Sea, Sulu-Celebes Sea, and the Indonesian Seas; and their subsystems: including the Gulf of Tonkin, Gulf of Thailand, Brunei Bay and Korea Bay; and important waterways: including the Strait of Malacca, Strait of Singapore, and the Lombok-Makassar Straits. “East Asian countries” include Brunei Darussalam, Cambodia, China, Democratic People’s Republic of Korea (DPRK), Indonesia, Malaysia, Philippines, Republic of Korea (ROK), Singapore, Thailand and Vietnam.

Other terms used in the Framework have, in general, the same meanings as those defined in international conventions concerning marine pollution prevention and management, unless expressly provided otherwise.

NATURE OF THE FRAMEWORK AND GUIDELINES

The Framework and Guidelines are non-binding technical documents. They provide information and guidance in aid of formulating national legislation on the prevention and management of marine pollution for East Asian countries. It is to be used as a tool and does not seek to interfere with the national legislation of any country in any way.

Framework for National Legislation on Marine Pollution Prevention and Management for East Asian Countries

By definition, a framework is "a set of principles or ideas used as a basis for one's judgement or decisions." This section provides:

(a) Guiding principles and non-legal elements comprising of the principles embodied in the Rio Declaration on Environment and Development, Agenda 21, United Nations Convention on the Law of the Sea (UNCLOS), and the Washington Declaration on the Protection of the Marine Environment from Land-Based Pollution; and

(b) Legal components comprising of conventions and instruments.

The next section, the Guidelines, provide the set of implementation tools.

This section is organised into six areas covering the guiding principles (UNCLOS, Rio Declaration, Agenda 21, Washington Declaration), actual control and prevention of marine pollution (MARPOL 73/78, London Convention, Basel Convention), after event control and combating of marine pollution (OPRC, Intervention, Salvage), liability and compensation for marine pollution (CLC, FUND), and port State control and prevention and control of pollution from land-based activities (GPA). The structure is intended to reflect the different facets of preventing and managing marine pollution. Each of the above-mentioned conventions are discussed individually. The discussion covers an overview of the convention, its objective, the scope of its application and the elements for its implementation. Finally, state practice in the region relating to the convention and possible national and regional approaches are provided.

GUIDING PRINCIPLES

The guiding principles for the protection of the marine environment are contained in a number of key documents, namely UNCLOS, Rio Declaration on Environment and Development (Rio Declaration), Chapter 17 of Agenda 21, and Washington Declaration on the Protection of the Marine Environment from Land-based Activities (Washington Declaration).

UNCLOS

The UNCLOS provides the legal foundation as well as the guiding principles for the overall protection of the marine environment. The UNCLOS as a whole spells out key environmental protection principles such as co-operation, technology transfer and the application of the precautionary approach in marine pollution prevention.

Article 192 furnishes the legal aegis under which existing marine pollution prevention conventions are placed and implemented, to wit: "States have the obligation to protect and preserve the marine environment." Article 194(1), likewise, sets forth the obligations of States to "take all measures consistent with the UNCLOS which are necessary to prevent, reduce and control pollution of the marine environment from any source, using for this purpose the best practicable means at their disposal and in accordance with their capabilities, and they shall harmonise their policies in this connection."

Rio Declaration

One of the treaties that reiterates and reinforces the principles espoused in the UNCLOS is the Rio Declaration on the Environment and Development. The Rio Declaration comprises 27 principles on environment and development. With regard to the protection of the marine environment from pollution, the salient principles are:

(a) Principle 7 and Principle 27 on international co-operation and “common but differentiated responsibilities”;

(b) Principle 11 which calls for States to enact effective environmental legislation and establish environmental standards, management objectives and priorities according to national conditions;

(c) Principle 13 on the promulgation of national laws to compensate victims of pollution. A similar call is made to the international community urging the further strengthening of liability and compensation regimes;

(d) Principle 14 on non-transfer or relocation of activities or substances which may contribute to environmental degradation or present hazards to the environment;

(e) Principle 15 on the application of the precautionary approach;

(f) Principle 16 on the internalisation of environmental costs and the use of economic instruments, and the application of the polluter pays principle;

(g) Principle 17 on the implementation of environmental impact assessment procedures;

(h) Principle 18 on immediate notification in the event of disasters or emergencies detrimental to the environment;

(i) Principle 19 on prior and timely notification of activities that may have transboundary environmental impacts; and

(j) Principle 26 on peaceful resolution of conflicts.

Agenda 21

Chapter 17 of Agenda 21 on the "protection of the oceans, all kinds of seas, including enclosed and semi-enclosed seas, and coastal areas and the protection, rational use and the development of their living resources" identifies marine environmental protection as one of the seven programme areas which will contribute to the protection of the oceans. Within the environmental protection programme area, specific measures are identified to address marine pollution from land-based as well as vessel-based sources including the wider ratification of relevant shipping conventions and protocols and the development of an instrument for the protection of the marine environment from land-based activities (now established in the form of the GPA).

Within the overall context of Chapter 17, a number of comprehensive actions have been prescribed as necessary for the protection of the oceans. These actions include:

(a) Applying preventive, precautionary and anticipatory approaches to marine environment management;

(b) Ensuring that environmental impact assessments are carried out for projects with possible detrimental impact on the environment;

(c) Integrating marine environmental protection into relevant policies;

(d) Developing economic incentives and instruments such as internalisation of environmental costs and applying the polluter pays principle; and

(e) Improving the living standard of coastal population so as to contribute to marine environment protection.

Washington Declaration

Many of the above-mentioned principles and actions are further reiterated in the Washington Declaration which specifically addresses the problems of marine pollution from land-based activities. In addition, the Washington Declaration also encourages new initiatives in preventing, minimising and eliminating the adverse effects of land-based activities on the marine environment. These initiatives include:

(a) Encouraging public and private sector partnership;

(b) Using innovative managerial and financial techniques to address marine pollution from land-based activities; and

(c) Giving priority to the treatment of industrial effluents and wastewater.

CONTROL AND PREVENTION OF MARINE POLLUTION

The following international conventions take the preventive approach to marine pollution:

International Convention for the Prevention of Pollution from Ships, 1973 and the Protocol of 1978 (MARPOL 73/78)

Background

Vessel-based sources of pollution have been variously estimated to represent between a low of 10% and a high of 45% pollution of the marine environment on a worldwide basis. Oil, chemicals and other hazardous and noxious substances are transported largely by sea in pursuit of international trade, and incidents of vessel casualties have highlighted the serious threat to the marine environment. Generally, sovereign States have the right to take measures to prevent pollution of the marine environment in their territorial waters, exclusive economic zone and continental shelf. This right is part of customary international law which is reflected in various provisions of the Geneva Convention on the Territorial Sea and the Contiguous Zone (1958) and UNCLOS.

States also have an obligation to ensure that vessels registered in the State do not pollute the marine environment. The flag State responsibility includes ensuring that their vessels comply with internationally accepted construction and operational standards such as those stipulated under MARPOL 73/78 and SOLAS (International Convention for the Safety of Life at Sea). SOLAS is regarded as the most important international treaty concerning the safety of ships -- containing comprehensive regulations aimed at ensuring the seaworthiness of ships. MARPOL 73/78 is the primary convention relating to the regulation and control of pollution from ships and was formulated by the International Maritime Organization (IMO). MARPOL 73/78 is to pollution what SOLAS is to safety. It is aimed at the prevention of pollution and, with the exception of dumping, covers all forms of pollution from vessels. MARPOL 73/78 includes both flag and port State control mechanisms.

The Convention has been ratified by over 104 countries, making it one of the most widely accepted conventions. MARPOL 73/78 contains six Annexes and two

Protocols. The two Protocols concern Reports on Incidents of Harmful Substances and Arbitration.

The Convention has six Annexes, each entering into force at different dates: Annex I entered into force on 2 October 1983; Annex II entered into force on 6 April 1987; Annex III entered into force on 1 July 1992; and Annex V entered into force on 31 December 1988. Annex IV has not yet entered into force since less than the required 50% of the world fleet have signified their acceptance thereof. It is currently undergoing revision. Annex VI on Regulations for the Prevention of Air Pollution from Ships was recently adopted through the Protocol of 1997 in a conference held in September 1997 and has not yet entered into force.

Objective

MARPOL 73/78 aims to preserve the seas and coastal environment from pollution by ensuring the minimisation of accidental discharges from ships and the complete elimination of intentional pollution.

Scope of Application

Geographical Coverage/Jurisdiction

All parties to the Convention are obliged to implement the Convention on their flag vessels. Furthermore, a State party may impose port State control on all vessels that enter its ports or offshore terminals whether or not they are registered in other States parties.

Article 9 of MARPOL 73/78 leaves the issue of the extent of a State's coastal jurisdiction to be determined by international law. Obviously, the Convention can be made applicable in the territorial waters of a Convention country where it exercises sovereignty. Under the UNCLOS, the country may also, through appropriate provisions in its legislation, apply similar standards in its exclusive economic zone.

Special geographical areas considered to be ecologically sensitive to pollution have been identified in Annexes I, II and V which refer to certain groups of pollutants. In these special areas, more stringent mandatory rules will apply. These areas include the Mediterranean Sea, the Baltic Sea, the Black Sea, the Red Sea, the Gulfs Area, the Gulf of Aden and the Antarctic Areas and the Northwest European waters[1] for Annex I; the Baltic and the Black Sea areas for Annex II; and, the Mediterranean Sea, the Baltic Sea, the Black Sea, the Red Sea, the Gulfs Area, the North Sea, the Antarctic Area and the Wider Caribbean Region for Annex V.

[1] *The area of Northwest European waters is a special area effective 1 August 1999.*

Vessel Types

The Convention applies to all types of vessels that operate in the marine environment including hydrofoils, air cushion vehicles, submersibles, floating craft and fixed or floating platforms. Although it does not apply to naval vessels, warships or other government craft that are used for non-commercial purposes, such vessels are still expected to be operated in a manner that is not prejudicial to the broad intent and purposes of the Convention. The scope of application may also vary according to the size of vessels.

Annex I applies to all ships carrying oil including mixtures with any oil content and oil fuel. It covers all oil tankers of 150 gross tons and above and other vessels of 400 gross tons and above. Annex II applies to all ships carrying noxious liquid substances in bulk. Annex III applies to all ships carrying harmful substances in packaged form.

Annex IV applies to all new ships of 200 gross tons and above, and new ships of less than 200 gross tons or which do not have a measured tonnage but which can carry more than 10 persons. Existing ships of 200 gross tons and above or of less than 200 gross tons but which can carry more than 10 persons must also comply within 10 years after the Annex has entered into force.

Annex V applies to all ships as well as to fixed or floating offshore platforms.

Polluting Substance

MARPOL 73/78 covers all types of operational discharges and some types of incidental operational pollution by vessels. It does not regulate the deliberate dumping of land-generated wastes into the sea as this is the subject of a separate convention (the London Convention).

Article 2(3)(a) of the Convention defines the term “discharge”, in relation to harmful substances or effluents containing such substances, as any release from a ship. It, however, excludes dumping and the release of harmful substances arising from offshore mining and scientific research. When discharge into the sea of harmful substances is undertaken to save the vessel or lives at sea, when it occurs due to accidental damage to the vessels, or when the discharge is approved by the Administration for combating pollution incidents to minimise damage from pollution, such discharge is exempted from the application of the regulations of the Convention.

MARPOL 73/78 has established discharge standards for six main groups of pollutants contained in the five Annexes as follows:

Annex I - Oil;

Annex II - Noxious liquid substances in bulk;

Annex III - Harmful substances in packages or other receptacles;

Annex IV – Sewage;

Annex V - Garbage; and

Annex VI – Air pollution

In Annex I, "oil" is defined as petroleum in any form including crude oil, fuel oil, sludge, oil refuse and refined products and includes all, but is not limited to, those defined in Appendix 1 of the Annex.

Annex II refers to noxious liquid substances as those substances designated in Appendix II of the Annex, including those not listed in the said Appendix but are provisionally assessed as noxious under the provisions of the Convention. The substances are classified into Categories A to D in the order of their toxicity. Appropriate anti-pollution measures have to be adopted in accordance with the category of substances handled.

Harmful substances under Annex III are those substances identified as marine pollutants in the International Maritime Dangerous Goods Code (IMDG Code). “Packaged form”, on the other hand, is defined as any form of containment specified for harmful substances in the IMDG Code. Empty used packagings are considered as harmful substances unless adequate measures have been taken to ensure that they do not contain residues harmful to the marine environment. This does not apply to the stores and equipment of the ship. Under this Annex, all packages are required to be properly packed, marked, labelled, documented, stowed and handled.

“Sewage” as used in Annex IV includes all wastes from humans, medical facilities, animal spaces and other wastes when mixed with the above.

The “garbage” in Annex V is defined as all kinds of victual, domestic and operational wastes 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 substances which are defined or listed in other Annexes. IMO has developed guidelines for the implementation of Annex V.

Annex VI of the MARPOL limits sulphur oxide and nitrogen oxide emissions from ship exhausts, prohibits deliberate emissions of ozone depleting substances and the incineration on board of certain products such as contaminated packaging materials and polychlorinated biphenyls (PCBs).

Annexes I and II are compulsory, meaning that ratification of the Convention carries the obligation to enforce these Annexes. The other Annexes are optional, meaning that they are each subject to separate ratification.

Prohibited Acts

Annex I prohibits the discharge of any oil or oily mixtures into the sea unless it is undertaken in accordance with Regulations 9 to 11 of the Annex. This applies to all vessels of 400 gross tons and above and every oil tanker. There are strict mandatory rules for the special areas which must be observed. In other areas, vessels may discharge their effluents only if they meet certain conditions such as a particular distance from the coast, a specified rate of discharge which does not exceed the stipulated amounts, the vessel is proceeding en route, and a proper monitoring and control system in operation in the vessel.

Under Annex II, the discharge of any effluent containing substances falling under the Categories A to D is strictly prohibited unless it is done in accordance with the conditions specified for each category, including: a maximum concentration and quantity of substances per tank is discharged into the sea, the discharge is below the waterline, the discharge is entered into the cargo record book, and the ship is running a specific speed, is at a certain distance from the coast and at a specific depth of water during the discharge.

Annex IV prohibits the discharge of sewage into the sea unless the following conditions are observed:

(a) the sewage is comminuted and disinfected;

(b) the ship is proceeding en route at a given speed during the discharge;

(c) the ship is at a specified distance from the coast; and

(d) the ship has on board an appropriate treatment plant in operation.

The disposal of garbage into the sea is subject to strict regulation under Annex V. The disposal of plastics, synthetic ropes, fishing nets and plastic garbage bags is prohibited. Disposal into the special areas is subject to mandatory stringent rules. Some of the conditions under which garbage may be disposed outside the special areas are the observation of an appropriate distance from the nearest land, and the comminution or grinding of the garbage discharged.

Annex VI sets a limitation as to the amount of sulphur oxide and nitrogen oxide emitted from ship and imposes a prohibition on the deliberate emissions of ozone depleting substances, including halons and chlorofluorocarbons (CFCs). The Annex likewise prohibits the incineration on board the ship of certain products like contaminated packaging materials and PCBs. Certain provisions of the Annex allow for special sulphur oxide control areas (the Baltic Sea) where the sulphur content of the emissions from ships must not exceed 1.5% m/m. An additional requirement is that the ships must be equipped with an exhaust gas cleaning system or other technological method to limit sulphur oxide emissions.

Annex III of MARPOL does not prohibit any act. Rather, it sets forth measures to be observed by vessels in packing, marking, labelling and documentation, including stowage and quantity limitations. Accordingly, the packages containing the harmful substances shall be properly marked and labelled as a marine pollutant, together with the correct technical name and other identification such as the relevant United Nations number. The words "Marine Pollutant" shall also be used in all documents relating to the carriage of the substance by sea. A special manifest or list of the harmful substances on board as well as a detailed stowage plan shall be kept on the ship. Limitations as to the quantity of certain harmful substances carried aboard the ship, based on sound technical and scientific reasons, shall be imposed.

Elements of Implementation

MARPOL's six Annexes are aimed at giving effect to and supporting the primary control mechanism under MARPOL 73/78 through tough restrictions on operational discharge by vessels. The Annexes contain detailed regulations pertaining to the measures to be adopted in the form of design, construction, equipment, maintenance and operations of vessels.

1. *Construction and Equipment Standards.* Standards for the construction and equipment of ships carrying oil are stipulated in Annex I so as to prevent and minimise both operational and accidental discharges of oil. The following fittings/provisions shall be made:

(a) Oil filtering equipment on any ship of 400 gross tons and above but less than 10,000 gross tons. Any such ship which carries large quantities of oil fuel shall, in addition, be provided with an alarm for automatically stopping any discharge of oily mixture containing oil exceeding 15 parts per million;

(b) Oil filtering equipment on any ship of 10,000 gross tons and above including an alarm for automatically stopping any discharge of oily mixture containing oil exceeding 15 parts per million;

(c) Suitable tanks to receive sludge from every ship of 400 gross tons and above and slop tank arrangements with capacity to retain slops on all oil tankers;

(d) Segregated ballast tanks (SBT) and crude oil washing (COW) equipment on all new crude oil tankers of 20,000 dwt and above;

(e) SBT on all new product carriers of 30,000 dwt and above;

(f) SBT, COW or clean ballast tanks (CBT) on all existing crude oil tankers of 40,000 dwt and above;

(g) SBT or CBT on all existing product carriers of 40,000 dwt and above; and

(h) Double hull and damage stability requirements for all oil tankers of 600 dwt and above.

Under Annex II, all chemical tankers are required to comply with the specifications provided in the International Bulk Chemical Code adopted by the Marine Environmental Pollution Committee through Resolution MEPC.19(22) and the Bulk Chemical Code adopted by MEPC Resolution MEPC.20(22).

With respect to Annex IV of MARPOL, vessels are required to have appropriate holding tanks, sewage treatment plant and a system to comminute and disinfect the sewage.

2. *Surveys*. As mentioned in the preceding section, compliance with the Convention shall be enforced through a system of surveys of vessels by the flag State administration. The various surveys, which are to be harmonised with the requirements for SOLAS and Loadlines Conventions, are as follows:

(a) an initial comprehensive survey to ensure that the vessel fully complies with the requirements of the Convention prior to the certification of the vessel;

(b) periodical surveys at intervals not exceeding five years to ensure that the vessel complies fully with the certification requirements;

(c) an intermediate survey half-way during the validity of the Certificate, endorsing such survey, to ensure that the equipment, pump and piping systems fully comply with the relevant Annex and are in good working order; and

(d) an annual survey which shall include a general examination of the structure, fittings, arrangements and materials to ensure that they are in a condition fit for the service intended for the vessel. The survey shall, likewise, be endorsed on the certificate.

The determination of the competent authority to carry out the surveys, and the delegation of this task (but not the responsibility) to the classification society in the event that the Administration is unable to cope with the requirements, and costs and fees shall be addressed in the rules.

3. *Certification*. The Administration has to ensure that all ships comply with the relevant technical requirements imposed under Annexes I and II and the other optional Annexes that have been accepted. The Administration or any person or organisation duly authorised by it has the power to issue the following certificates to each vessel which complies with the requirements:

(a) International Oil Pollution Prevention (IOPP) Certificate under Annex I;

(b) International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk (NLS Certificate) under Annex II; and

(c) International Sewage Pollution Prevention (ISPP) Certificate under Annex IV.

The certificates are generally valid for five years provided that the vessels do not undergo significant alterations in the construction, equipment, systems, fittings, arrangements or materials without the sanction of the Administration, or, that intermediate surveys are carried out as specified by the latter. The certificates shall cease to be valid if the vessel changes flag. The administration may, however, allow a transfer of the certificates to the flag of another State. In order to enhance international acceptability and to make enforcement easier, model certificates are attached as appendices to the convention annexes.

4. *Record Books*. Vessels are required to carry on board a record of all relevant details in their Oil Record Books (Annex I), Cargo Record Books (Annex II) and Garbage Record Books (Annex V).

Annex I requires that every ship of 400 gross tons and above shall maintain an Oil Record Book (Machinery Space Operations). Every oil tanker of 150 gross tons and above shall also be provided with an additional Oil Record Book (Cargo/Ballast Operations). These Books shall be in accordance with the form provided in Appendix III of the Annex. Operational details as specified in the Annex are to be entered in the Books including a statement in the event of any discharge of oil or oily mixtures resulting from the incidents exempt from the application of the Convention or from accidents or other exceptional circumstances.

In addition to the Oil Record Book, ships of 400 gross tons and above and every oil tanker of 150 gross tons and above are required to carry on board a shipboard oil pollution emergency plan approved by the Administration which shall be in accordance with the guidelines developed by IMO.

Under Annex II, a Cargo Record Book in a form as specified in Appendix IV of the Annex, is required to be carried by covered vessels. The Book shall be maintained on a tank-to-tank basis and appropriate entries shall be made whenever any operations involving cargo, tank cleaning, ventilation, ballasting or deballasting, disposal of residues to reception facilities or discharge into the sea is carried out.

The record books shall be readily available for inspection and certified copies of the relevant entries may be taken by the authorities and used as evidence of the facts so stated therein in any proceedings against the concerned vessel.

5. *Inspection*. The record books together with the Certificates shall be presented for inspection to the authorities. Valid Certificates are to be accepted at face value and

these affirm that the vessels have complied with the relevant MARPOL 73/78 regulations.

If there are clear grounds to suspect that the condition of the ship does not comply with the requirements of the certification, the authority may deny entry or detain the vessel, and, thereafter, carry out a more thorough inspection and require the owner to take such measures as are deemed necessary to make the ship safe enough for the intended journey without posing a threat to the marine environment. The vessel may, however, be allowed to leave for the nearest yard for repairs.

If entry is denied, the authority must report this action immediately to the consul or diplomatic mission of the flag State. Prior to denying entry or detaining the vessel, the authority may consult the ship's Administration. In carrying out the inspections, the authority shall report any violation of the Convention to the flag State which is obliged to take action against its vessel. The State shall give a report of the action taken to the authority which reported the violation.

In enforcing MARPOL 73/78, authorities shall not unduly delay or detain ships without just cause. Any loss or damage arising from such delay or detention entitles the owner of the vessel concerned to compensation.

6. *Detection, Monitoring and Investigation*. Violations of the Convention by way of illegal discharges shall be detected through the adoption of appropriate measures of detection and environmental monitoring and the use of adequate procedures for reporting and accumulation of evidence. A State party shall furnish all available evidence to the Administration (State of registration) of a ship found to have violated the discharge provisions of the Convention.

Any ship shall be subject to inspection at the ports and offshore terminals of Convention countries for the purpose of verifying that the ship has fully complied with the discharge requirements under MARPOL 73/78. If a violation is found, the authority shall forward a report to the Administration for appropriate action. An authority may also carry out an investigation on a vessel if any Convention country has reported a violation of the Convention and has requested the authority to inspect the vessel. The result of such an investigation shall be forwarded to the flag State and to the party making the request.

The Administration has the power to take appropriate action, including the prosecution of the shipowner, master or crew, as soon as possible and shall inform the authority which reported the incident of the actions taken.

7. *Reporting of Incidents*. Under Protocol I of MARPOL 73/78, any incident of actual or probable discharge of a harmful substance or effluent containing such substances shall be immediately reported by the master or any person having charge of the vessel to the nearest coastal State. The owner, charterer, manager or operator of the ship are obliged to provide the report and such further details as may be relevant in the

event the master is unable to comply with the reporting requirements under Protocol I of the Convention. The report shall contain, at the least, the minimum details pertaining to the identity of the ship, time, type and location of incident, quantity and type of harmful substance involved and assistance and salvage measures obtained. Supplementary information shall be provided when so requested. IMO Resolution A.648(16) provides guidelines for ship reporting systems and requirements and the reporting of incidents involving dangerous goods, harmful substances and/or marine pollutants.

8. *Reception Facilities*. Parties to the Convention shall ensure the provision of adequate reception facilities at ports to receive slops, sludge and other residues and substances listed in the Annexes which are stored in the ships. Specifically, Annexes I, II, IV, and V require reception facilities. Guidelines have been drawn up by the IMO on the capacity and form of facilities to be provided. These facilities shall be available at each cargo loading and unloading port, and at terminals and ship repair ports where ships unload their effluents and residues. Parties shall ensure that arrangements for the stripping of the cargo tanks of ships unloading their cargo are provided.

State Practice

108 States representing 94.07% of the world's tonnage are parties to MARPOL's Annexes I and II as of 6 June 1999.

The mode of adoption into national legislation depends upon the legal framework for the adoption/ratification of international instruments existing in each country. Implementation may be done either by integrating the Convention provisions within the framework of general environmental legislation such as in the Philippines (Presidential Decree 979), by incorporating it within the existing shipping ordinances such as in Indonesia and Malaysia, or by promulgating it as separate legislation such as in Singapore and China. In the latter situation, the legislation may be specific to the implementation of MARPOL 73/78 or it may include the implementation of several international conventions related to the prevention and control of marine pollution such as the Intervention and London Conventions (e.g. Republic of Korea and China). Detailed regulations implementing the technical provisions contained in the various Annexes in MARPOL 73/78 are usually issued in the form of rules, orders, decrees and guidelines.

Modes of Implementation

National Legislation

The legislation may be divided into the main legislation enacted by Parliament and the subsidiary legislation made under the main act. The main act should contain provisions relating to definitions, scope of application, prohibition of the discharge of harmful substances, exemptions, sanction and the power to make rules giving effect to the Annexes under MARPOL. The Act should grant powers to the rule-making body to

implement the optional Annexes as well as Amendments when it is accepted by the country.

Subsidiary legislation may be the means by which the Annexes are implemented insofar as they contain technical details which may be subject to change. Subsidiary legislation would normally be easier to amend to give effect to such changes.

The powers of the Administration in terms of flag State and port State jurisdiction should be clearly spelled out. An authority should be designated to carry out the enforcement with powers to delegate functions to others such as classification societies or the navy. Other matters which should be addressed are rules pertaining to surveys and certifications, inspections, rights and duties of the shipowner/master, detention of vessels and orders to remedy any deficiencies.

The right of States to adopt rules and regulations for the prevention of marine pollution is made subject to a proviso that such laws shall not hamper innocent passage of foreign vessels.

Under Protocol II, disputes which are not amicably settled shall be submitted to the International Court of Justice or to arbitration. This shall be taken into consideration in the implementing legislation.

Regional Co-operation

MARPOL 73/78 is internationally accepted by the shipping community. In this region, most of the countries are parties to it. Implementation of MARPOL 73/78 in accordance with the Convention would lead to standardised practices and norms. Mechanisms for enforcement through networking, intercommunications are built into the Convention. These promote co-ordination between port States and flag States standardisation. Flag State administrations can co-ordinate with each other through an exchange of information in relation to their respective experiences and practices. The following areas of co-operation may also be considered:

Application of MARPOL. Regional members may co-operate in providing assistance to each other in the effective technical implementation of MARPOL 73/78. Those countries which accepted MARPOL 73/78 earlier could assist the new members to the Convention. Other forms of assistance may take the form of setting up the appropriate flag State procedures, documentation and implementation of the Convention. Training and technical assistance on a regional basis can be undertaken as a form of co-operation.

Enforcement. Procedures to deal with contraventions by vessels belonging to countries in the region could be agreed upon for speed and a more effective resolution process. Member countries may consider setting up a mechanism for the reporting of any contraventions by vessels in each other's waters including the manner and procedures for such reporting to be made. The proper collection and collation of evidence could be

sorted out including the type and quality of evidence needed for successful prosecutions to be carried out in each country. Much of this is already in place through the Tokyo Memorandum of Understanding on Port State Control in the Asia-Pacific (Tokyo MOU) signed in 1994, which standardises port State procedures, including inspections, for six conventions including MARPOL.

Equivalent standards. Member countries may wish to consult each other on internationally acceptable standards for equipment and operational procedures in relation to each Administration's efforts to establish such standards. A regional approach could be formulated to discuss such standards with the IMO.

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

Background

In the early 1970s, the widespread practice of using the oceans as an unlimited dumping ground for all forms of wastes aroused international concern. 80 to 90% of the waste materials dumped into the sea included dredged materials, industrial wastes, sewage sludge, and radioactive waste. Further, there was incineration of wastes at sea. It was realised that the oceans do not have an inexhaustible capacity for pollution. The Stockholm Conference on the Human Environment, 1972 recommended that such activities be controlled.

The London Convention, entered into force on 30 August 1975, is the first multilateral convention to address pollution of the marine environment by a wide variety of substances. It prohibited dumping of certain hazardous wastes and it introduced a permitting system for the dumping of other wastes. To date, the contracting parties to the London Convention have made substantial progress in achieving the Convention’s goal of protecting the marine environment from the hazards of dumping.

The Convention has undergone a number of amendments, the most notable of which is the 1996 Protocol. The Protocol was adopted on 7 November 1996 and will come into force thirty days after ratification by 26 States from which 15 must be contracting parties to the London Convention. It is intended to replace the 1972 Convention. It will, upon entry into force, replace the London Convention 1972 as between the parties to this Protocol which are also parties to the Convention. The Protocol introduces substantial changes with respect to the approach in regulating the use of the sea as a depository for waste. A more severe regime for the control of dumping at sea is provided.

Countries who become parties to the Protocol may be granted a five year phase-in period to achieve full compliance with the new system and benefit from the technical assistance/co-operation provisions under the Protocol. As the Protocol is very new, the

reaction of member States to its adoption and implementation will be unclear for some time.

Objective

The principal objective of London Convention is to prevent pollution of the seas by the dumping of wastes and other matter that may harm living resources and marine life, pose a hazard to human health, damage amenities and interfere with other legitimate uses of the sea. Accordingly, administrations are to take appropriate measures, both individually as well as collectively, to prevent and control such dumping.

Scope of Application

Geographical Coverage/Jurisdiction

The original Convention defines "sea" as all marine waters other than the internal waters of a State. This has been interpreted to mean that the Convention applies in the territorial waters, the exclusive economic zone, and the continental shelf through appropriate national legislation. It has also been interpreted to include the seabed thereof. The 1996 Protocol, however, has expanded the definition of “sea” to specifically include the seabed and the subsoil. State parties may apply the Protocol in their internal waters at their discretion or they may adopt other effective national regulations to control dumping in marine internal waters.

Vessel Types

The London Convention applies to any disposal of wastes at sea by any vessel, aircraft, offshore platform or other man-made structures including the disposal of such vessel, aircraft, offshore platform or other man-made structures themselves into the sea. Any form of vessel or aircraft used for marine dumping, whether self-propelled or not, shall be covered by the Convention.

Vessels entitled to sovereign immunity (e.g., warships, naval auxiliary, State-owned and State-operated aircraft used for non-commercial purposes) are not covered by international conventions. However, parties to the Convention shall ensure that such vessels act in a manner consistent with the objectives and purpose of the Convention through appropriate measures.

A State may take action in its territory on flag State vessels/aircraft and any other vessel or aircraft loading wastes at its ports. A State may also, when there is evidence of illegal dumping operations in violation of the Convention, enforce the law on any vessel, aircraft or offshore platforms when these are within its EEZ and continental shelf. Action on infringements committed on the high seas shall be taken on the vessel/aircraft by the flag State. The State of the loading port may take action against these vessels/aircraft if they are found to have contravened the permit. Other States observing any dumping

incident may report it. States shall also apply flag State and port State jurisdictions on all vessels and aircraft loading wastes for dumping. This includes all fixed or floating platforms. The application of this Convention may also be extended to cover all means of transport including road, rail and air so long as such vehicles are loaded with wastes in the country and are destined for dumping at sea.

Polluting Substance

Almost all of the substances covered in the Convention originate from land-based sources which constitute the largest source of marine pollution. Polluting substances are classified into three categories under the Convention as discussed hereunder:

Annex I - The Black List

The Black List is comprised of substances which are completely prohibited from being dumped. These substances are included in the List because they are considered to be highly hazardous and contribute significantly to environmental exposure on a scale far beyond the original location. They also possess a high degree of persistence coupled with the ability to accumulate significant levels of toxicity in humans, marine organisms and domestic animals, are carcinogenic/mutagenic or pose significant interference to fisheries, amenities or other legitimate uses of the sea.

Substances such as organohalogen compounds, mercury and mercury compounds, cadmium and its compounds, persistent plastics and other synthetic materials which may float, crude oil and its wastes, petroleum products, industrial wastes, low level radioactive wastes, high level radioactive matter and biological/chemical warfare products are included in the list. Materials which contain only trace elements of the above substances are not included. Substances which are rapidly rendered harmless through physical, chemical or biological processes in the sea and do not harm human health or edible marine organisms are excluded.

Annex II - The Grey List

The Grey List contains substances that require special care but are not included in the Black List. The List includes substances such as wastes containing significant amounts of arsenic, lead, copper, zinc, organosilicon compounds, cyanides, fluorides and pesticides (those not included in Annex I), large quantities of acids and alkalis containing the earlier mentioned substances as well as beryllium, chromium, nickel, and vanadium and their compounds, bulky materials such as containers which may pose a hazard to fishing or navigation and radioactive wastes or matter not included in Annex I. Substances which, when dumped in large quantities, become harmful or seriously reduce amenities are included in this List.

Under the 1993 Amendments, incineration of industrial wastes and sewage sludge is banned. Incineration of all other substances shall be subject to the requirements for

special permits and shall take into account the Technical Guidelines on the Control of Incineration of Wastes and Other Matter at Sea and the Regulations for the Control of Incineration of Wastes and Other Matter at Sea.

Annex III - The White List

Annex III is not so much a list of substances but a set of conditions to be adhered to prior to the issuance of a general permit.

1996 Protocol

The 1996 Protocol has adopted the "reverse" or "positive" listing approach whereby dumping of all wastes is prohibited except those listed in a new Annex 1. Some of the items on this "reverse" or "positive" list include dredged material, sewage sludge, fish waste, vessels and platforms or other man-made structures at sea, inert/inorganic geological material, organic material of natural origin, and bulky items comprising non-harmful substances. These items, however, are still subject to a system of permits on a case-by-case basis and they have to go through the waste assessment framework under Annex 2 (which replaces Annex III of the London Convention). Incineration of wastes as well as exporting of wastes for purposes of dumping or incineration at sea are totally prohibited.

Prohibited Acts

“Dumping” has been defined as any deliberate disposal of waste into the sea. “Waste” refers to any material and substance of any kind, form or description. It does not, however, include operational waste or waste arising from the exploration, exploitation and processing of seabed minerals. The discharge of wastes arising from the normal operations of vessels, aircraft, platforms or other man-made structures shall not be construed as dumping but the disposal of the vessels and structures themselves is considered dumping.

The disposal of hazardous material, particularly the burying of high level radioactive wastes in the “seabed”, has been interpreted by the Consultative Meeting to be subject to the Convention, and such disposal may only be undertaken after proper technical and environmental studies are conducted to establish its acceptability. Incineration at sea was added to the scope of coverage of the term “dumping” by amendments made in 1978.

In 1993, the Amendments to the London Convention, which was entered into force on 20 February 1994, effectively banned the dumping of low level radioactive wastes, phased out the dumping of industrial wastes and totally prohibited the incineration of industrial wastes at sea.

The 1996 Protocol has adopted two major environmental approaches to the issue of dumping, that is the “precautionary approach” and the “polluter pays” principle.

The definition of "dumping" under the Protocol is broadened to include the storage of wastes and other matter in the seabed and the subsoil from vessels, aircraft, platforms and other man-made structure at sea, and the abandonment or toppling at site of platforms or other man-made structures at sea for deliberate disposal. The usage of substances for a purpose other than disposal such as aquaculture and scientific research is not dumping. Moreover, dumping carried out to secure the safety of life at sea or that of the vessel, aircraft, platform or other structures due to *force majeure* shall be exempted from the coverage of the Convention as long as such dumping is the only way to avert the threat and it is undertaken in such a way as to minimise any threat to human or marine life.

Elements of Implementation

The primary regulatory approach of the Convention is the prohibition of any dumping of wastes provided that certain conditions are satisfied. Dumping is controlled and it may be allowed depending on the type of waste or substance involved and on its compliance with the criteria set forth in the Annexes. These substances are categorised into three Annexes according to the potential damage to the marine environment that they may cause. The inclusion of a particular substance into a specific Annex is based on a risk evaluation of three components namely hazard potential, environmental exposure and potential effects.

1. *Permit for Dumping*. Any vessel or aircraft loading wastes for dumping is subject to the permit system in respect of the matter intended for dumping. If such wastes are being loaded at the port of a non-contracting party, then the flag State shall issue a permit to the vessel/aircraft. Problems may arise, however, if the vessel also belongs to a non-contracting party and the dumping is to be carried out in the seas of a contracting State. Such problems are more particularly addressed by the Basel Convention on the Transboundary Movement of Hazardous Wastes and not in the London Convention. The London Convention, particularly the 1996 Protocol, is consistent with the Basel Convention.

There are two types of permits, namely special and general. Special permits are issued on an application made in advance for substances listed in Annex II and subject to the provisions in Annex III. It is a permit acquired to cover a single instance of dumping. General permits, on the other hand, are issued in advance after all the factors set forth in Annex III are taken into consideration. It is issued to cover a period of time within which dumping operations may be undertaken. Review guidelines to assist Administrations in the application of Annex III have been adopted in Resolution LDC.32(11).

Incineration at sea of any of the waste in the Black List shall be subject to a strict regime of prior special permits in accordance with the Regulations for the Control of Incineration of Wastes and Other Matter at Sea as contained in the Addendum to the Annex. The incineration of industrial wastes is, however, banned.

Dumping of any substances in the Grey and White Lists shall be undertaken only after a permit is obtained. Dumping of substances in the Grey List is allowed provided special permits are obtained. Special permits are issued subject to an application made in advance and after giving due consideration to all factors in Annex III. The system of permits should also stipulate the adoption of procedures and techniques which reduce the impact of such dumping on the ecology of the marine environment. The dumping of these substances in "significant" amounts has been defined and a Draft New Assessment Procedures is adopted. Some of the factors to be considered prior to the issuance of the permit as provided in Annex III are:

(a) the characteristics and composition of the substance -- whether alternatives to dumping at sea are available including treatment to render the matter less harmful for dumping at sea;

(b) the characteristics of the dumping site, taking into account various factors such as ecological impact, collection of scientific data and damage to amenities; and

(c) appropriate disposal methods and monitoring programmes.

States are allowed to apply through their national laws more stringent conditions and measures deemed necessary to prevent dumping at sea other than those stipulated in the Convention. This may include in particular the complete prohibition of dumping of certain substances, the prohibition of substances not mentioned in Annex I of the Convention and the imposition of further conditions when issuing permits under Annex III. The Convention, even though addressed specifically to dumping, does however also require States to collectively and individually promote the effective control of all sources of marine pollution. In this respect the Convention encourages States to take collective measures to implement the Convention on a regional basis.

Exceptional cases

The London Convention allows dumping without permits but such instances are restricted to situations of *force majeure* caused by stress of weather or whenever human life or property is in danger, and the action taken is the only way to avert the threat without which an even greater damage to the environment may occur. In particular, Black List substances may be dumped only in an emergency posing unacceptable risk relating to human health and admitting no other feasible solution, and only after a special permit is obtained. The term "emergency" is rather broad but it has been applied to spoilt cargo for ships, disposal of chemical warfare equipment found in fishing nets, and residues and rubble from the explosion of a chemical plant. The Consultative Committee has drawn up Guidelines by Way of Interim Procedures and Criteria for Determining Emergency Situations. A State, when faced with an emergency posing a serious threat to human health, may issue a special permit for the dumping of any Black List substance provided that other countries which may be affected by this action and the IMO (the Secretariat to

the London Convention) are consulted prior to its issuance. The IMO, on its part, may consult other parties and organisations before giving appropriate advise to the State.

2. *Monitoring*. To assess the impact of dumping and incineration activities on the marine environment, the seas must be monitored. There should be a scientific pre-dumping evaluation of the site as well as post-dumping monitoring. Monitoring of the site must also be undertaken to ensure that the impact of any dumping/incineration activity remains within acceptable limits.

3. *Reporting and Notification*. State parties to the London Convention are required to report and notify the Organization on the following matters:

(a) Nature and quantities of all substances permitted to be dumped and the location, time and method of dumping;

(b) Permits issued for incineration;

(c) Monitoring carried out;

(d) The approval of any marine incineration facility;

(e) Dumping carried out in the event of *force majeure* or an emergency;

(f) Unilateral measures adopted by a State which exceeds the Convention requirements;

(g) The adoption of appropriate measures for vessels/aircraft with sovereign immunity; and

(h) The results of the environmental impact assessment and observations of loading and dumping of radioactive wastes.

The reporting and notifications are to be done in formats and in accordance with procedures established by the Consultative Meetings.

State Practice

As of April 1997, 77 States with 67.12% of the world tonnage are parties to the 1972 London Convention, while 6 countries representing 6% of world tonnage are parties to the 1996 Protocol. The mode of adoption depends upon the legal framework existing in each country. In this region, only the Philippines, Republic of Korea and China have ratified the Convention. In these countries, the London Convention has been adopted as part of general legislation on the prevention and control of marine pollution, and as the subject of a specific regulation. Malaysia, preparing to ratify the Convention, may implement it under the framework of general environmental legislation and not as part of merchant shipping legislation. Other countries in the region, such as Indonesia, Singapore

and Thailand, to varying extents prohibit dumping in their general environmental or shipping laws, but do not utilise the framework of the London Convention.

Modes of Implementation

National Legislation

As seen above, the London Convention is largely enforced through a system of permits. Implementing legislation could be divided into the main legislation enacted by Parliament and subsidiary legislation issued administratively under authority of the main legislation. The main legislation would contain provisions related to definitions, scope of application, exemptions, general prohibition of the dumping of harmful substances except in accordance with the law, system of licensing to permit dumping, designation of the implementing agency, and the power to make rules giving effect to the Annexes of the London Convention.

The Annexes should be implemented by way of subsidiary legislation as they contain technical details which are subject to frequent change. Note that interpretation and application of the London Convention have been expanded by many decisions of the Consultative Meeting of the London Convention. Subsidiary legislation would normally be easier to amend to give effect to such changes.

The powers of the authority in terms of the issuance of permits should be clearly spelled out. It should have powers to appoint or delegate others such as the navy to assist. Other matters which should be addressed are rules pertaining to enforcement, evaluation and monitoring of sites, the acceptance of scientific tests relating to substances, surveys and certifications, inspections, monitoring, rights and duties of the shipowner/master, detention of vessels and orders to remedy any deficiencies.

Due consideration shall be given to the factors listed in Annex III of the Convention which deal with the nature of the waste material, the characteristics of the dumping site, the method of disposal, the possible impact of the substances on the ecology and amenities, and the availability of alternative land-based methods of disposal or treatment to render the substance less harmful for dumping at sea.

The State may, at its discretion, impose more stringent conditions than those specified in the Convention.

Regional Co-operation

London Convention encourages member States to adopt regional agreements consistent with the Convention to assist in its implementation. There are a number of regional agreements on marine pollution, including dumping, in other parts of the world. Examples are the Barcelona Convention (Mediterranean Sea), the Oslo-Paris Convention (North-east Atlantic and North Sea), the Noumea Convention (South Pacific) and the

Helsinki Convention (Baltic Sea). There are no regional agreements in the South East and East Asian regions relating to the London Convention.

The Convention requires member States to take measures to reduce marine pollution from all sources and not just dumping. This could be the basis for a wider scope of co-operation not only within the region but also between regional entities. Regional co-operation is especially vital as the unilateral actions of any one State in the marine environment will have an impact on adjoining States. The dispute mechanisms provided for under the Convention will also work better under a regional framework of co-operation. The following areas of co-operation may be considered:

Application

Regional members may co-operate in providing assistance to each other in the effective technical implementation of the Convention. Those countries which accepted the London Convention earlier could assist the new members to the Convention. Such assistance could take the form of setting up the appropriate licensing systems, evaluation and monitoring methods, reporting procedures both to the IMO as well as within the region, flag State and port State procedures, documentation and implementation of the Convention. Training and technical assistance are also effective areas of regional co-operation.

Enforcement

Member countries may consider setting up a mechanism for reporting permits and other relevant information including the manner and procedures for such reporting to be made. The proper collection, collation and exchange of scientific data could be sorted. Port State mechanisms could be set up to tie in with existing regional memoranda of understanding on port State control. Procedures to deal with contraventions by vessels belonging to regional members could be agreed upon and dealt with speedily and more effectively.

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

Background

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal stemmed from the concerns expressed at the 1981 Montevideo Meeting of Senior Government Officials Expert in Environmental Law. In 1987, the Cairo Guidelines on Environmentally Sound Management of Hazardous Wastes was adopted by the Governing Council of UNEP. Negotiations leading to the Basel Convention was completed in 1989, and the Convention entered into force on 5 May 1992 with the 20th ratification.

The Basel Convention is generally premised on Part XII of the UNCLOS, particularly on Article 195 which provides: "In taking measures to prevent, reduce and control pollution of the marine environment, States shall act so as not to transfer, directly or indirectly, damage or hazards from one area to another or transform one type of pollution into another."

The Convention addresses the problem of and provides the means to reduce and strictly control the movements of hazardous wastes and to ensure that these wastes are disposed of in an environmentally sound manner. It calls for international co-operation among the parties in the management of hazardous wastes as well as the strengthening of national capabilities in the management of the same.

Objective

The primary objective of the Basel Convention is the minimisation of hazardous waste and other waste generation by controlling transboundary movements (export, import, transit and disposal) of hazardous wastes or other wastes, and ensuring that all operations relating to the export, import, transit and disposal of hazardous or other wastes are done in an environmentally sound manner. These are to be achieved by improving national capabilities to manage hazardous waste in an environmentally sound manner, developing a technical and legal infrastructure (including legislation and instruments of enforcement), and establishing international co-operation between parties.

Scope of Application

Geographical Coverage/Jurisdiction

The geographical coverage of the Basel Convention extends over 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.

The Basel Convention covers all entities which have a role in the transboundary movement of wastes. These are:

(a) All persons involved in the generation, carriage, disposal, import and export of Basel Convention wastes;

(b) States which export, import (either for disposal in areas under its jurisdiction or in areas outside the jurisdiction of any State) wastes listed under the Basel Convention;

(c) States through which hazardous and other wastes transit other than the importing or exporting States;

(d) Non-party States involved in importation, exportation and transit of Basel Convention wastes; and

(e) Any political or economic organisations authorised by its member States to sign, ratify, accept, approve, formally confirm or accede to the Basel Convention.

Polluting Substance

Article 1(1-4) of the Basel Convention characterises wastes listed in Annex I as 'hazardous wastes' (unless these wastes do not exhibit any characteristics listed in Annex III) and those listed in Annex II as 'other wastes'. The transboundary movement of these wastes are subject to the application of the Convention. Excluded from the application of the Convention are radioactive wastes and wastes generated by normal ship operations which are covered by other international control systems, namely the Vienna and Paris Conventions and the MARPOL 73/78.

The Meaning of "Transboundary Movement"

"Transboundary movement" is defined in the Convention as the movement of hazardous wastes or other wastes from an area under the national jurisdiction of a 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.

Elements of Implementation

1. *Obligations*. To facilitate the implementation of the Basel Convention at the national level, two primary obligations need to be fulfilled by member countries:

(a) Within six months of becoming a party to the Basel Convention, the member State is required to inform the Secretariat of the wastes it considers hazardous under its national legislation, other than those listed in Annexes I and II, and of any requirement regarding the transboundary movement procedures applicable to such wastes. The information will be disseminated by the Secretariat to all parties. Parties are required to provide the same information to their exporters (Article 3(1)).

(b) The party shall designate or establish competent authority/ies and focal point to implement the Basel Convention. In the case of a 'State of transit', one competent authority shall be designated to receive the notification required under the Convention (Article 5).

The Basel Convention also elaborates on a number of common obligations applicable to States importing and States exporting hazardous wastes and other wastes.

These obligations are outlined in Article 4(7) to Article 4(13), and include prohibition of unauthorised persons from undertaking transboundary movements of hazardous wastes and other wastes, packaging, labelling, transporting, and documentation requirements, and conditions under which transboundary movement of hazardous wastes and other wastes is allowed such as absence of technical capacity, facilities and sites for disposal of hazardous and other wastes.

2. *Rules*. One of the most important rules of the Basel Convention is the regulation of transboundary movement of hazardous wastes and other wastes between member States. This is done through an extensive process of notification, the procedures of which are outlined in Article 6(1-11). The underlying provisions of this arrangement is the provision of information specified in Annex V-A of the Convention. The State of export or the generator or exporter of hazardous wastes or other wastes is required to notify in writing the 'State concerned' of any proposed transboundary movement of hazardous wastes and other wastes. In return, the State of import is required to respond in writing, indicating its consent to or denial of the movement, or requesting additional information thereto. In other words, transboundary movement of wastes cannot commence without notification.

In the case of a State of transit, the response shall be given within 60 days from the receipt the notification. Additionally, the State of transit is required to promptly acknowledge the receipt of notification (Article 4).

3. *Importation of Wastes*. In cases where wastes are being imported, the competent or regulating authority may choose to completely prohibit the importation of hazardous wastes or other wastes. Alternatively, the regulating authority may consent to the importation of hazardous wastes or other wastes subject to specific conditions (e.g., that the exporting State is also party to the Basel Convention; requiring that the exporter provide the regulatory authority with all the information specified in Annex V-A of the Basel Convention).

4. *Export of Wastes*. The regulatory authority in the State of export has the responsibility to prohibit the export of hazardous wastes or other wastes under the following circumstances:

(a) Where the State of import prohibits the importation of the hazardous wastes and other wastes as defined in Annex I and II of the Basel Convention, and as defined under the national definition of hazardous wastes;

(b) Where no written consent has been received from the State of import;

(c) Where the wastes are to be exported to States which are not party to the Basel Convention; and

(d) Where the wastes are to be exported to areas south of 60 degrees South latitude, under any circumstance.

5. *Transboundary Movement of Wastes Passing Non-Party States*. The transboundary movement of wastes or other wastes from a party through a State or States which are not parties is governed by Article 6(2) which requires the non-party to respond in writing stating therein its consent or denial of the movement or requesting additional information. Said article applies *mutatis mutandis* to non-party States.

6. *Duty to Re-Import*. If the export of wastes could not be completed in accordance with the agreed terms and conditions of the contract between the exporter and disposer, and no environmentally sound alternative for its disposal can be found, the State of export has a responsibility to ensure that the wastes concerned are taken back to the State of export within 90 days from the notification by the State of import or such other period of time agreed upon by the States concerned.

7. *Illegal Traffi*c. The Basel Convention enumerates instances where transboundary movement of hazardous wastes or other wastes is illegal. These are as follows:

(a) Absence of notification as required by the Basel Convention;

(b) Absence of consent from the States concerned;

(c) When consent from the States concerned is obtained by fraudulent means;

(d) When the hazardous waste or other waste involved in the transboundary movement does not conform in a material way with the documents; and

(e) When the transboundary movement of hazardous wastes or other wastes results in the deliberate disposal of wastes is in violation of the Basel Convention and of general principles of international law.

The obligations of States concerned in the event of illegal traffic is spelled out in Article 9(2-5). It should be noted that in 1995, the Conference of Parties adopted a decision to ban the export of hazardous wastes by Organisation for Economic Co-operation and Development (OECD) countries to non-OECD countries.

8. *Management*. Management required by the Convention can be divided into four elements namely:

(a) the definition of management;

(b) management and permit system;

(c) responsibility; and

(d) reduction/elimination of the generation of hazardous wastes and other wastes.

The Convention stipulates the definition of both "management" and "environmentally sound management of hazardous wastes and other wastes" in Article 1. "Management" refers to the collection, transport and disposal of hazardous wastes or other wastes, including after-care of disposal sites. "Environmentally sound management of hazardous wastes and other wastes" is defined as taking all practicable measures to ensure that hazardous wastes or other wastes are managed in a manner which will protect human health and the environment against the adverse effects which may result from such wastes. The environmentally sound management of hazardous waste is considered to be one of the cornerstones of the Basel Convention and parties are asked to take appropriate measures to achieve it (Article 4).

State Practice

As of 1 March 1997, seven countries in the East Asian Seas region have acceded to or ratified the Basel Convention. These countries are China, Indonesia, Malaysia, Philippines, Republic of Korea, Singapore and Vietnam. Thailand signed the Basel Convention but has not ratified.

There is no uniform practice for the implementation of the Basel Convention in the region. The Basel Convention has been implemented both in the form of a 'stand-alone' act (in the case of Indonesia and China) or as part of a broader act dealing with other aspects of the environment (as in the case of Singapore and Malaysia). Over the world, however, there is a very clear trend that national legislation on management of transboundary movement of hazardous wastes is established into a separate regulation affirmed by the Secretariat of the Basel Convention.

Modes of Implementation

National Legislation

Every party shall take appropriate legal, administrative and other measures to implement and enforce the provisions of the Convention, including measures to prevent and punish conduct in contravention of the Convention (Article 4, paragraph 4).

The initial component of the national legislation implementing the Basel Convention shall be the definition of hazardous wastes which is not limited to those listed in the Annexes of the Convention. Parties shall, within six months of becoming a party to the Convention, inform the Secretariat of the Convention of its definition as well as of any requirements concerning transboundary movement procedures applicable to such wastes.

Existing States' practices show that one of the legal measures applied in the management and minimisation of hazardous wastes is the license system. The liability

and compensation for damages caused by movement of hazardous wastes and their disposal are essential components of the national legislation on management of the transboundary movement of the hazardous wastes.

Regional Co-operation

Parties to the Basel Convention are encouraged to co-operate with each other in the area of hazardous waste and other waste management. This includes co-operation in terms of information sharing, transfer and development of technologies, monitoring activities, and building the capacities of developing States in environmentally sound management of hazardous and other wastes.

Member States are encouraged to establish bilateral, multilateral and regional agreements to govern transboundary movement of hazardous wastes and other wastes provided that these agreements do not compromise the environmentally sound management of hazardous wastes and other wastes as required by the Basel Convention. The Secretariat of the Basel Convention shall be informed of the decision to establish such agreements.

AFTER EVENT CONTROL AND COMBATING OF MARINE POLLUTION

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

Background

The *Exxon Valdez* incident brought about the realisation of the need for prompt and effective action in order to curb the impact of an oil spill. Thus, the IMO adopted the Oil Pollution Preparedness, Response and Co-operation (OPRC) in 1989. While most of the other conventions were preventive in nature, this Convention was devoted to providing measures to combat oil spills. A measure to expand its scope to include spills involving hazardous and noxious substances is being considered at the IMO. The *Exxon Valdez* disaster and other incidents of similar nature highlighted, among others, the need for effective national preparedness and response to a major oil spill. It also recognised the need for effective international co-operation and the crucial role that a well-structured institutionalised framework could play in co-ordinating and mobilising such co-operation in an emergency. This was proven in the Persian Gulf incident in 1990 where IMO played a critical role in setting up an international fund, and organised all international efforts through the Co-ordination Centre at the IMO to combat and clean up the spill. On 13 May 1995, the Convention entered into force. As of 1 May 1998, the Convention has been ratified by 39 countries with a tonnage of 42.30% of the world fleet.

Objective

The primary objective of the Convention is to provide an effective international framework for co-operation in responding to a major oil pollution incident or a threat of marine pollution. States participating in this Convention are required to establish national measures to combat marine pollution incidents and to co-operate with other States in the establishment of appropriate measures on a regional and global basis.

Scope of Application

Geographical Coverage/Jurisdiction

The Convention does not specify the geographical scope of implementation by States parties, but only requires that the provisions of the Convention be applied to vessels, ports, oil terminals and offshore units under its jurisdiction. Further, in the event of a major oil spill, the State may request for or provide international assistance to combat the spill regardless of its location. Appropriate measures may have to be taken to allow such assistance to be made available particularly with respect to immigration, customs and health laws.

Vessel Types

The Convention applies to all types of vessels that operate in the marine environment including hydrofoils, air cushion vehicles, submersibles, floating craft and offshore fixed or floating platforms engaged in gas or oil exploration, exploitation or production activities, or loading or unloading of oil. Though it does not apply to naval vessels, warships or to other government craft that are used for non-commercial purposes, such vessels are still expected to be operated in a manner that is not prejudicial to the broad intent and purposes of the Convention. The shipboard emergency plan on commercial vessels will be subject to port State control inspection by Convention States.

Polluting Substance

Under the OPRC, “oil” has been defined to mean petroleum in any form. Oil pollution incident refers to occurrences which result or may result in a discharge of oil or a threat to the marine environment, the coastline or related interests of States, and which requires emergency or immediate response.

Elements of Implementation

1. *Contingency Plan*. The administration shall institute a national contingency plan for the whole country. This plan shall contain the minimum requirements stipulated in the Convention and shall be co-ordinated with the regional plans. All ports and oil terminals in the country shall be required to have a local contingency plan for the area under their jurisdiction and these plans shall be co-ordinated with the national plan.

2. *Emergency plans*. All ships registered in the contracting State shall have a shipboard oil pollution emergency plan. Similarly offshore units shall have a similar plan which shall be co-ordinated with the national plan. Authorities in charge of ports and oil terminals shall also draw up emergency plans.

3. *Pollution Reporting*. Every master of a vessel or offshore unit is required to immediately report any incident of discharge of oil both from their vessels/units or from other vessels/units. Similarly authorities having charge of ports and oil terminals shall report any incident of oil discharge to the Administration. Other States shall be informed of the incident if the interests of those States may be affected. Parties shall likewise inform the IMO, using the oil pollution reporting system developed by the organisation where practicable. Masters of vessels/offshore units or other authorities in charge of oil terminals who fail to report any incident of oil spills without delay should be penalised.

4. *Enforcement Mechanism*. The powers of the administration of States in terms of flag State and port State jurisdiction shall be clearly spelled out. An authority shall be designated to draw up the contingency plans and act as the national centre for operations in the event of an oil spill. It shall have the power to inspect the plans and equipment of the ports, oil terminals and offshore units, and to direct remedial measures to be taken if there are inadequacies.

State Practice

World-wide, there are 45 member States to OPRC, representing 48.74% of world tonnage. Only two of the States in the region are parties to the Convention. These are Malaysia which acceded to it on 30 July 1997, and China which acceded on January 1998. The Convention may be implemented without the need for elaborate legislation. There is an awareness and ongoing co-operation among various parties involved in the oil industry in the form of industry initiatives for oil spill contingencies. There are also inter-government regional agreements, such as the East Asia Response Ltd. based in Singapore and the ASEAN Oil Spill Response Action Plan (OSRAP) among some ASEAN members.

Modes of Implementation

National Legislation

The Convention requires every member country to adopt measures for an effective response to an oil spill incident. The State shall establish a national contingency plan. Further, it shall co-ordinate such plans with regional plans if any. States may incorporate the scope of OPRC into existing legislation such as the Merchant Shipping Act. The Convention does not contain any complex or major issues that necessitate separate legislation.

Regional Co-operation

OPRC encourages member States to adopt regional contingency plans. Furthermore, States are encouraged to provide assistance in the event of not only an oil spill but any other marine contingency which may pose a hazard to human lives, marine organisms, property and amenities. In East Asia, the OSRAP has been adopted by the members of ASEAN. However, its operatonalisation may still have some problems. Co-operation with the and among other East Asian countries is also needed.

Co-operation can be instituted in the following areas:

a) *Application of OPRC*. Regional members may co-operate in providing assistance to each other in the effective technical implementation of the Convention. Such assistance may be in the setting up of the contingency plans, training in oil spill combat methods, joint oil spill exercises, standardised communication and reporting procedures both to the Organization as well as within the region, flag State and port State procedures, documentation and implementation of the Convention. Technical assistance on a regional basis can be mobilised to prevent and control marine pollution in the region.

b) *Enforcement*. Member countries may consider setting up a mechanism for reporting incidents of oil spills and other marine incidents including the manner and procedures for reporting. Port State mechanisms may be set up to tie in with existing regional memoranda of understanding on port State control. Procedures to deal with contraventions by vessels belonging to regional members could be agreed upon and dealt with speedily and more effectively.

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

The International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties was adopted in Brussels on 29 November 1969, and the Protocol Relating to Intervention on the High Seas in Cases of Pollution by Substances Other than Oil 1973 in London on 2 November 1973. The Intervention Convention entered into force on 6 May 1975, and the Protocol entered into force on 30 March 1983.

Subsequent amendments in 1991 and 1993 were made to the Convention, but these merely revise the list of substances contained in the Protocol.

Article 221 of the UNCLOS refers to the Intervention Convention when it provides for the right of States pursuant to international law to take and enforce measures beyond the territorial sea proportionate to the actual or threatened damage to protect their

coastline or related interests from pollution following a maritime casualty, which may reasonably be expected to result in major harmful consequences.

Objective

The objective of the Intervention Convention is embodied in its preamble, which cites "the need to protect the interests of their peoples against the grave consequences of a maritime casualty resulting in danger of oil pollution of sea and coastlines" and "that under these circumstances measures of an exceptional character to protect such interests might be necessary on the high seas and that these measures do not affect the principle of freedom of the high seas".

The foregoing manifests that the basis of the Convention is none other than necessity. It reserves the right of coastal States to intervene and to take appropriate and proportionate measures to protect their coastlines or "related interests" from pollution or threat of pollution following a maritime casualty. It will be noted that the article specifically refers to "fishing" as one of the related interests that a coastal State may protect by measures of intervention. The Convention provides an exception to the traditional freedom of the high seas rule.

Scope of Application

Geographical Coverage/Jurisdiction

In 1969, the area beyond the territorial sea was generally agreed to constitute the high seas. Under the UNCLOS, the area beyond the territorial sea and up to 200 nautical miles from the baselines of the coastal State is designated as the "exclusive economic zone" (EEZ), denoting exclusive jurisdiction over the resources therein. However, as regards navigation, the EEZ is the high seas.

The sovereignty of the coastal State, normally limited to the territorial sea, may be implied to extend to the exclusive economic zone and up to the high seas for purposes of the Convention.

Vessel Types

The Intervention Convention applies to all defined therein as any sea-going vessel or any floating craft, but it excludes installations or devices engaged in the exploration and exploitation of the resources of the seabed and the ocean floor and the subsoil thereof (Article II(2)). Warships and government vessels are likewise excluded from intervention measures (Article 1(2)).

Polluting Substance

Under the Convention, “maritime casualty” means 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. A consequence of this damage is the pollution of the sea by oil and substances other than oil.

The original Intervention Convention applies only to pollution “by oil”. The term “oil” is defined to include “crude oil, fuel oil, diesel oil and lubricating oil”. The Protocol expanded the coverage of the Convention to incidents involving “substances other than oil”. “Substances other than oil” are those substances enumerated in a list established by the Marine Environment Protection Committee (MEPC) of the International Maritime Organization (IMO) and annexed to the Protocol to which it is subject.

Elements of Implementation

1. *Limitations*. The Intervention Convention, while recognising the right of coastal States to take such action, places important limitations upon it. One limitation is the requirement that the danger or threat should be grave and imminent and have major harmful consequences. Following the *Amoco Cadiz* incident, some States successfully pressed for a broader scope of the concomitant UNCLOS provision. Thus, it will be noted that Article 221 of the UNCLOS is less stringent, requiring only “actual or threatened damage” which may “reasonably be expected” to result in major harmful consequences.

Article V of the Convention does not specify how the coastal State is to evaluate the risks, the nature of the damage and what measures are "proportionate" to the risk. This is left to the discretion of the coastal State concerned. The Convention, however, provides for a procedure under Article III that the coastal State should follow prior to undertaking the measures. It should first consult with other States affected by the maritime casualty, especially the flag State, entities who have interests that may be affected by the measures to be taken, and independent experts chosen from a list maintained by the IMO. In cases of extreme urgency, notification or consultation may be undertaken simultaneously with or after the measures. “Best endeavours shall be undertaken to avoid risk to human life, and to assist persons in distress, including the repatriation of the ship's crew.” The concerned States and entities, and the IMO, shall be notified of all measures undertaken. The Intervention Convention applies only to maritime casualty (Article II(1)) where material damage or imminent threat thereof results from the incident. These incidents are limited to collision, stranding and other navigational incident, or occurrences on board or external to a ship, thus excluding operational discharge or dumping.

Article V contains the proportionality principle, which states that the measures taken by the State (a) shall not go beyond what is reasonably necessary to achieve the end

mentioned in Article I; (b) shall cease as soon as that end has been achieved; and (c) shall not unnecessarily interfere with the rights and interests of the flag State, third States and of any concerned entities. Proportionality may be determined by taking consideration of the following:

(a) the extent and probability of imminent damage if those measures are not taken;

(b) the likelihood of those measures being effective; and

(c) the extent of the damage which may be caused by such measures.

A study on comparative legislation has shown that without limiting the generality of Article 1, the measures that a State may take on the high seas include issuing directions requiring or prohibiting any of the following actions with respect to the ship or the ship's cargo:

(a) removal of the ship or part of the ship to another place;

(b) removal of cargo from the ship;

(c) salvage of the ship, part of the ship or any of the ship's cargo;

(d) sinking or destruction of the ship or part of the ship;

(e) sinking, destruction or discharge into the sea of any of the ship's cargo; or

(f) takeover of control of the ship or part of the ship.

2. *Compensation*. Article VI provides for compensation in cases where the measures taken exceed those necessary to achieve the ends mentioned in Article 1 of the Convention. Compensation recoverable is based on the extent of the damage caused by the excessive measures . It may be recovered by direct action in the courts.

The Intervention Convention through its Annex sets forth inter-party conciliation and arbitration procedures. These operate only when the State of which the party is a national requests for conciliation to resolve the following issues as provided in Article VIII:

(a) whether the measures taken were in contravention of the Convention provisions;

(b) whether compensation should be paid; and

(c) amount of such compensation.

If conciliation does not succeed, a request for arbitration may be made within a period of 180 days.

State Practice

To date, China is the only country in the East Asian region which has ratified the Intervention Convention. Some other countries in the region have implemented some essential principles of the Intervention Convention in their general environmental legislation. None of these countries, including China, has passed detailed regulations. Globally, there are 73 members of the 1969 Convention, representing 68.75% of world tonnage, and 42 States or 44.91% of world tonnage that are members of the 1973 Protocol.

Modes of Implementation

National Legislation

The Intervention Convention effects a codification of international principles of responsibility for pollution and is a preferred regime. The assurance of the Convention is that both shipowners and governments alike will know where they stand in the event that serious casualty requires serious measures. Thus, a State may incorporate the provisions of the Convention in its National Contingency Plan.

To be fully effective, national legislation should:

(a) Be as effective for potential pollution incidents as for actual ones;

(b) Cover non-oil pollutants to the same extent as oil pollutants; and

(c) Cover dangerous and particularly explosive cargoes.

Regional Co-operation

Considering that the seas of the East Asian region have very busy maritime routes, the risk of pollution is very high for all countries in the region. Regional co-operation on pollution should include a component on intervention in the high seas. In particular, the establishment of the mechanism for notification and consultation with respect to measures for intervention under the Convention could be a focus for regional co-operation. These could be incorporated in regional contingency plans for oil pollution.

International Convention on Salvage, 1989 (Salvage)

Background

The International Convention on Salvage 1989, which entered into force on 14 July 1996, was adopted due to the inadequacies of the previous 1910 Brussels Convention for the Unification of Certain Rules of Law Respecting Assistance and Salvage at Sea. The *Amoco Cadiz* incident which caused extensive damage to the French coast in 1978 exposed the many deficiencies in the 1910 Convention. Further serious marine incidents like the *Exxon Valdez* incident accelerated the approval of the 1989 Convention.

Under the 1910 Convention, there was no incentive for salvors to prevent pollution in their salvage activities. The objective then was merely to save the ship and the property on board. The principle of “no cure, no pay” whereby reward would only be given to the salvor if the operation was successful was strictly adhered to. The scope of the salvage operations under the 1989 Convention, therefore, was broadened to address the concern for environmental protection. Thus, an enhanced salvage award was provided in consideration of the skill and efforts of the salvors in preventing or minimising damage to the environment. Furthermore, a "special compensation" in favour of the salvors is also provided.

The provisions of the Convention mainly deal with private law. Nevertheless there are also provisions that are within the ambit of public law, namely the rights of coastal States (Article 9), co-operation measures (Article 11) and encouragement by State parties of the publication of arbitral awards (Article 27).

Objective

The objective of the Convention is to provide an internationally uniform framework for the salvage regime with a greater emphasis on the protection of the environment.

Scope of Application

<u>Geographical Coverage/Jurisdiction</u>

The Convention applies to all salvage operations wherever they may be carried out.

With respect to actions related to salvage operations, Article 2 provides that the Convention applies to proceedings in a court or an arbitral tribunal brought before a State party, regardless of who the parties involved in the proceedings are. They do not have to be the nationals of the State party. What is required is that the forum in which the

proceedings for claims of “special compensation” take place be under the jurisdiction of a State party to the Convention.

Vessel Types

Under the Salvage Convention, “vessel” means any ship or craft, or any structure capable of navigation. However, Salvage Convention shall not apply to State-owned vessels and fixed or floating platforms or to mobile offshore drilling units when such platform or units are on location engaged in the exploration, exploitation or production of seabed mineral resources.

Polluting Substance

The Convention defines “damage to the environment” as the 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.

Elements of Implementation

1. *Subject of Salvage*. Salvage remuneration may only be awarded for services to vessels and properties that are recognised as “subject of salvage”. Article 1(a) in defining salvage operation refers to “vessel or any other property”. Vessel means any ship or craft or any structure capable of navigation. Property, on the other hand, refers to any property not permanently and intentionally attached to the shoreline.

2. *Authority to Sign on Behalf of the Owner*. Article 6 confers statutory authority on the ship master to sign salvage contracts on behalf of the shipowner. The master or the shipowner has the authority to act on behalf of the owner of the property on board the vessel. However, the contract or its terms may be annulled or modified if they are inequitable or entered into under undue influence, or if the payment for the service is excessive (Article 7). In any case, the existence of a salvage contract shall not affect the duties to prevent or minimise damage to the environment.

3. *Salvage Reward*. Salvage operations as defined in the Convention are acts or activities undertaken to assist a vessel or any other property in danger in navigable waters or in any other waters whatsoever. It may be based on a contract or it may be undertaken voluntarily. The right to a reward arises only whenever the salvage operations yield useful results. However, no payment is due under the provisions of the Convention with respect to services rendered under existing contracts unless the services rendered exceed what is reasonably due under the contract.

The reward shall be paid by all those having interest in the vessel and the property therein in proportion to their respective salved values. The amount of the reward shall not

be more than the salved value of the vessel and the property, and is subject to the following considerations:

(a) the salved value of the vessel and other property;

(b) the skill and efforts of the salvors in preventing or minimising damage to the environment;

(c) the measure of success obtained by the salvor;

(d) the nature and degree of the danger;

(e) the skill and efforts of the salvors in salving the vessel, other property and life;

(f) the time used and expenses and losses incurred by the salvors;

(g) the risk of liability and other risks run by the salvors or their equipment;

(h) the promptness of the services rendered;

(i) the availability and use of vessels or other equipment intended for salvage operations; and

(j) the state of readiness and efficiency of the salvor's equipment and the value thereof.

It is important to note that if no judicial or arbitral proceeding is initiated within a period of two years, action for any payment will be time-barred (Article 23). The calculation for the two-year period starts on the day on which the salvage operation ends.

4. *Special Compensation for the Environment*. In order to give incentive to salvors to protect the environment, in addition to the salvage reward normally assessed under Article 13, salvors are also eligible for "special compensation"(Article 14). Under the arrangement in Article 14(3) salvors may recover out-of-pocket expenses to compensate their expenditure for the duration of the operation once the vessel or its cargo threatens damage to the environment (Article 14(1)).

To avoid excessive and unnecessary claims under Article 14(3), the maximum amount that a salvor can recover is restricted to those of his/her "reasonable expenses". This will include the fair rates for the equipment and personnel actually and reasonably used during the salvage operation. In assessing the fair rate Article 14(3) requires the consideration of the criteria in Article 13 paragraphs 1(h), (i) and (j); namely the promptness of the services rendered, the availability and use of vessels or other equipment, and the state of readiness and efficiency of the salvor's equipment and the value thereof.

Salvors may not only recover their expenses but are also entitled to remuneration or reward under Article 14(2). If the salvors can show that they have prevented or minimised damage to the environment, the amount of special compensation payable to them may be increased up to 100%.

The Convention also aims at avoiding and minimising the chances of negligence. A salvor who negligently failed to prevent or minimise damage to the environment may be penalised by forfeiting the whole or part of the amount of special compensation that is due to him (Article 14(5)).

State Practice

Like the Intervention Convention, only one country in the East Asian region has ratified the Salvage Convention, which is China. Currently, none of the national legislation in the region has provided for special compensation in favour of salvors for the protection of the environment arising from their salvage operations.

Modes of Implementation

National Legislation

A special law to implement the entire Salvage Convention may be adopted. Otherwise, a special provision on a reward to salvors for protecting the environment may be adopted in marine pollution legislation.

Regional Co-operation

In order to facilitate co-operation between States, government agencies, salvors, and other interested parties, States are obliged to take into account the need for co-operation "whenever regulating or deciding upon matters involving salvage operations such as admittance to ports of vessels in distress or the provisions of facilities to salvors". This duty placed on the State party is aimed at ensuring the effectiveness and smoothness of salvage.

LIABILITY AND COMPENSATION

International Convention on Civil Liability for Oil Pollution Damage, 1992 (CLC) and International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1992 (FUND)

Background

Article 235 of the UNCLOS requires States to ensure that recourse is available in accordance with their legal systems for prompt and adequate compensation or other relief

in respect of damage caused by pollution of the marine environment by persons over whom they have jurisdiction. States shall enact national laws to cover incidents within waters under their control and incidents outside their waters caused by ships under their registry. Thus, States are expected to co-operate in the implementation of existing international regime relating to responsibility and liability for the assessment of and compensation for damage.

Compensation for damage caused by oil spills from laden tankers is governed by two international conventions - the 1969 International Convention on Civil Liability for Oil Pollution Damage (CLC) and the 1971 International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (FUND).

The CLC governs the liability of shipowners for oil pollution damage. This Convention lays down the principle of strict liability for shipowners and creates a system of compulsory liability insurance. The shipowner is normally entitled to limit his liability to an amount which is linked to the tonnage of his ship. The Convention entered into force on 19 June 1975.

The FUND which is supplementary to the CLC, establishes a regime for compensating victims when the compensation under the CLC is inadequate. The FUND 1971 came into force on 16 October 1978. Both the CLC and the FUND have been amended by Protocols in 1976, 1984 and 1992.

The 1976 Protocols introduced a new unit of account based on the Special Drawing Rights (SDR) as used by the International Monetary Fund (IMF) superseding the “franc”. The 1984 Protocols amended the Conventions but the Protocols never came into force.

In November 1992, a Diplomatic Conference held in London, under the auspices of IMO, adopted two new protocols amending the Conventions, in order to ensure the viability in the future of the system of compensation established by the two Conventions. The Conference based its activities on two draft Protocols elaborated within the IOPC (International Oil Pollution Control) Fund. The new Protocols retained the substantive provisions of the 1984 protocols but modified the entry into force requirements by reducing from six to four the required number of States owning large tankers. The Protocols entered into force on 30 May 1996. Thereafter, the Civil Liability Convention 1969 and the FUND 1971, as amended by the 1992 Protocols, are now known as the Civil Liability Convention 1992 and the FUND 1992.

Currently, the two Conventions are at a transition stage, where the 1992 Conventions as well as the 1969/1971 Conventions are in force. State parties to the old Conventions are required to denounce them upon ratifying the new ones. It is expected that as more States ratify the new Conventions, the old ones will cease to exist.

Objectives

CLC was formulated with the objective of ensuring that adequate compensation is available to persons who suffer damage caused by pollution resulting from the escape or discharge of oil from ships and provide uniform international rules and procedures for determining questions of liability in such cases.

With respect to the FUND, its primary purpose is to provide supplementary compensation to those who cannot obtain full compensation for oil pollution damage under the CLC.

Scope of Application

Geographical Coverage / Jurisdiction

Under the 1969/71 Conventions, the geographical coverage is limited up to the territorial sea. The 1992 Protocols expanded the geographical scope of the Conventions to include the exclusive economic zones of the contracting States established under the United Nations Convention on the Law of the Sea.

The flag State of the tanker and the nationality of the shipowner are irrelevant in determining the scope of application of the CLC. The essential factor to consider in the application of CLC and FUND is the location where the pollution damage occurred.

Included in the concept of pollution damage are the costs of measures taken to prevent or minimise pollution damage in the territory of a State party to the Convention arising from an incident in which oil has escaped or been discharged. It also includes further loss or damage caused by these preventive measures.

The Fund is also liable to compensate for preventive measures taken to prevent or minimise pollution damage. For the purposes of Article 4, the expenses reasonably incurred by the owner voluntarily to prevent or minimise pollution damage will be considered as pollution damage.

No compensation may be derived from the Fund if the pollution damage occurred as a result of an act of war or was caused by oil discharged from a warship or other vessel operated by a State.

Vessel Types

The 1969/71 Conventions defined “ship” to mean any sea-going vessel and any seaborne craft of any type whatsoever, actually carrying oil in bulk. This definition does not extend to off-shore installations. Ships covered are those ships which actually carry oil in bulk as cargo (laden tankers). Spills from tankers during ballast voyages are, therefore, not covered by the 1969/71 Conventions, nor are spills of bunker oil from ships

other than tankers. However, spills of bunker oil from laden tankers are within the scope of the Convention.

Under the 1992 Protocols, the definition has been extended to include unladen tankers, as damage may still occur from ballast or bilge wastes.

Trading ships owned by a State are likewise covered by the Conventions. These ships are required to make arrangements for covering their liability and shall carry a certificate so stating, otherwise, they shall not be permitted to trade.

Polluting Substance

The focal point of the CLC is "pollution damage" defined to mean "loss or damage caused outside the ship carrying oil by contamination resulting from the escape or discharge of oil from the ship, wherever such escape or discharge may occur, and includes the costs of preventive measures and further loss or damage caused by preventive measures". This forms the basis of the relevant decisions by the IOPC Fund in determining claims on it.

The definition of "pollution damage" was modified by the 1992 Protocols by retaining the basic wording of the earlier definition but it clarified that compensation for environmental damage is limited to costs incurred for reasonable measures undertaken to reinstate the contaminated environment. Expenses incurred for preventive measures are recoverable even when no oil spill occurs, provided that there was a grave and imminent danger of pollution damage.

Under the old conventions, "oil" is defined as any persistent oil such as crude oil, fuel oil, heavy diesel oil, and lubricating oil, whether carried on board a ship as cargo or in the ship's bunkers. Under the 1992 Protocols, the definition was modified to refer to "any persistent hydrocarbon mineral oil". Recent decisions have accepted that "oil" for these purposes would also include asphalt, bitumen and the product known as orimulsion.

Elements of Implementation -- CLC

1. *Liability*. The CLC provides that the owner of a tanker from which oil has escaped or been discharged has strict liability (no fault liability) for the resulting pollution damage. He is exempt from liability under CLC only if he proves that:

(a) the damage resulted from an act of war, hostilities, civil war, insurrection or a natural phenomenon of inevitable nature;

(b) the damage was wholly caused by an act or omission with intent to cause damage by a third party; or,

(c) the damage was wholly caused by the negligence or wrongful act of public authorities responsible for maintaining lights or other navigational aids.

2. *Limitation of Liability*. The 1992 CLC Protocol allows the shipowner to limit his liability in any one incident up to the maximum amount of 59.7 million SDRs[2] (US$81.8 million) (from 14 million SDRs (US$19.2 million) under the 1969 Convention). Depending on the tonnage of the ship, the limitations are as follows: an aggregate amount of 3 million SDRs (US$4.1 million) for a ship with more than 5,000 units of tonnage or in addition to the aforesaid amount, 420 SDRs (US$575) for each unit of tonnage in excess of 5,000.

If it is proven that the pollution damage resulted from the owner's personal act or omission, was committed with intent to cause damage, or recklessly and with knowledge that such damage would probably result, the owner cannot avail of his right to limit his liability.

Regardless of whether or not an action is brought against the owner of a ship responsible for an incident, he is entitled to the benefit of a limitation of his liability only when he sets up a fund equivalent to the limit set forth in the Convention. This fund shall be established with the Court or the competent authority of the member States within whose territory pollution damage was caused. The amount may be deposited or constituted in the form of a guarantee acceptable to the court or competent authority concerned.

Once the fund is established no one with a claim for pollution damage arising out of the incident can exercise any right against any other assets of the owner in respect to the claim. If the owner’s ship or other property has been seized in respect of such a claim, the relevant court or authority must order its release and return any security furnished to avoid seizure. This provision applies only if the claimant has access to the court in charge of the fund and the fund is actually available.

3. *Claims*. There are two prescriptive periods which must concur in bringing actions for compensation under this Convention. A claim for compensation will prosper only when it is brought within three years after the damage arose and within six years after the occurrence of the incident causing such damage.

The fund established by the owner of the ship responsible for the damage will be apportioned accordingly among the claimants in proportion to their established claims (Article V(4)). Any further claims will be paid by the IOPC Fund when applicable. In addition, the right of subrogation exists. Owners, their servants, their agents and their

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[2]*An artificial "basket" currency serving as the IMF's unit of account and as a basis for the unit of account for a number of other international organisations. It is defined in terms of a basket of currencies, consisting of five currencies, which currencies and their respective weight are determined by IMF every five years. Like any currency, the exchange rate varies from day to day. As of 14 September 1999, the exchange rate was 1 SDR to US$1.37070.*

insurers may be subrogated to the rights of the persons whom they compensated before the fund was available. This right of subrogation may also be extended to someone other than shipowner or insurer in respect of compensation already paid or bound to pay where applicable under national law.

4. *Channelling of Liability*. Claims for pollution damage under the CLC can be made only against the registered owner of the tanker concerned. The Convention prohibits claims against the servants or agents of the owner. However, this does not preclude victims from claiming compensation outside this Convention from persons other than the owner. The owner is entitled to take recourse action against third parties in accordance with national law.

5. *Compulsory Insurance / Certification*. The owner of a tanker carrying more than 2,000 tonnes of oil in bulk as cargo is obliged to maintain insurance to cover his potential liability in the sum prescribed in Article V(5) of the CLC. This amount is reserved exclusively for the satisfaction of claims under the Convention.

A certificate attesting to the insurance coverage shall be issued to the ship by the appropriate authority of the State of the ship's registry. Compulsory insurance of ships is extended to ships of non-parties. Any member State may issue a certificate to such ships. Such a certificate is required to be carried on board the ship and a copy to be submitted to the issuing authority.

6. *Competence of Courts*. Primary jurisdiction over actions for compensation under the CLC against the shipowner or his insurer lies with the Courts of the State party to the Convention in whose territory or territorial sea the damage was caused. If the pollution damage occurred in the territory of one or more State parties or when preventive measures were undertaken in such territory, the action may be brought in the courts of any of these State parties. The court with which a fund is constituted shall determine its apportionment and distribution.

The judgement of the Court is enforceable when it becomes final and executory in the State of origin unless it was obtained through fraud, or the defendant was not given reasonable notice of the hearing and a reasonable opportunity to defend his case. A judgement by the competent court is enforceable in each contracting State once the necessary formalities for verification have been complied with. For this purpose, the State party should ensure the competence of its courts.

Elements of Implementation -- FUND

1. *Contributions*. The payments of compensation and indemnification as well as the administrative expenses of the IOPC Fund are financed by contributions levied on any person who has received, in one calendar year, more than 150,000 tonnes of crude oil and heavy fuel oil (contributing oil) by sea in a State party to the FUND.

The levy of contributions is based on reports on oil receipts in respect of individual contributors. Contributing oil is counted for contribution purpose each time it is received into tankage or storage at ports or terminal installations in a fund member State after carriage by sea. The reports are submitted by the governments of the fund member States and contributions are paid by the individual contributors directly to the IOPC Fund.

2. *Admissibility of Claims*. The IOPC Fund can accept only those claims that fall within the definitions of pollution damage and preventive measures laid down in the CLC and the FUND. A claim is admissible only to the extent that the loss or damage is actually demonstrated. Clean-up operations on shore and at sea would in most cases be considered preventive measures.

Claims for clean-up operations may include the cost of personnel and the rent or purchase of equipment and materials; the cost of cleaning and repairing clean-up and replacement materials. Claims will be admissible for cleaning polluted property where the oil may contaminate boats, yachts and fishing gear. Where it is not possible to clean polluted property, the Fund will compensate the cost of replacement with deduction for wear and tear. Claims for consequential loss will also be accepted in cases of loss of earnings suffered by the owners or users of property contaminated as a result of a spill.

Claims may also be made in cases of pure economic loss such as loss of earnings due to the pollution/damage caused by contamination. This includes fishermen, hotelier or restaurateurs who may suffer loss of profit. The claimants in this case will have to prove “reasonable proximity” between the contamination and the loss/damage sustained by the claimant.

Claims for “impairment of the environment” are accepted only if the claimant has sustained an economic loss quantifiable in monetary terms. The measures should be reasonable from an objective point of view.

The Fund shall not be liable to compensate a claimant should it be proven that the pollution damage was a result of the claimant's act or omission done with intent to cause damage.

3. *Limitation of Compensation*. The compensation payable by the IOPC Fund in respect of an accident is limited to an aggregate amount of 135 million SDRs (US$185 million), increased from 60 million SDRs (US$ 82 million) under the 1971 Convention. In the event that the claims are more than the limit provided in the Convention, the amount shall be distributed proportionally among the claimants.

4. *Competence of Courts*. The discussion under CLC applies to FUND.

State Practice

Only Brunei and Malaysia remain as members of the 1969 CLC and 1971 FUND. China, Indonesia, the Philippines, the Republic of Korea and Singapore have ratified the 1992 CLC, and the latter three have ratified the 1992 FUND as well. Malaysia, Thailand and Vietnam are preparing to ratify the 1992 Conventions. With respect to the HNS Convention, no acceptances have been received yet, due basically to the fact that it is a recent development.

The form of existing national legislation on the implementation of the CLC and FUND is different under various legal systems. China implements the CLC in general through the Regulation Concerning the Prevention of Pollution of Sea Areas by Vessels. Article 13 reads that vessels engaged in international trade with a bulk oil carrying capacity of 2,000 tons shall, besides observing these regulations, be bound by the provisions of the CLC 1969. Part 10 of this Regulation specifically focuses on Compensation for Pollution Damage Caused by Vessels. Malaysia has a special law implementing CLC 1969 and FUND 1971, as does Singapore as regards CLC and FUND 1992. Indonesia adopted the entire 1969 and 1971 Conventions as part of its national law through its instrument of ratification. However, in July 1999, Indonesia denounced FUND 1971 without acceding to FUND 1992.

As of 30 June 1999, a total of 46 States had acceded to CLC 1992 (75.53% of world tonnage) and 44 to FUND 1992 (72.1% of world tonnage). There are still 75 remaining members of CLC 1969 (41%) and 50 of FUND 1971 (33.16%).

Modes of Implementation

National Legislation

The importance and the necessity of the general provisions concerning the implementation of the CLC and FUND Convention in the main instrument of national legislation is apparent. The specific legislation in this field is also necessary to complement the national legislation in order to implement the Conventions.

Adopting strict liability and compulsory insurance as obligations of shipowners is essential in national legislation to make effective the CLC, the FUND and the HNS Convention. Likewise, the procedures recommended under the Conventions may be taken into consideration and incorporated accordingly into national legislation.

Regional Co-operation

Within the region, States may implement the Conventions in combination with other international conventions on the prevention and management of marine pollution through an exchange of information concerning national regulations and other

circumstances which have a bearing on the pollution incident and liability as well as the authorities of the respective States to which related information is to be transmitted.

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

Background

The HNS Convention's coverage is broader than the CLC and the FUND in the sense that it includes not only pollution but the risks of fire and explosion arising from the carriage of hazardous and noxious substances by sea. Two levels of liability are established, structured analogously to CLC and FUND. The first level covers the liability of the shipowner while the second level constitutes the HNS Fund which supplements the first. It introduces strict liability for the shipowner at limits higher than those established by other regimes. It also provides for a system of compulsory insurance and insurance certificates. The Convention was adopted in 3 May 1996. To date, no acceptances have been received.

Objective

The Convention seeks to compensate victims of accidents involving hazardous and noxious substances carried by sea.

Scope of Application

Geographical Coverage/Jurisdiction

The scope of application of the Convention is set forth in Article 3:

(a) to any damage caused in the territory, including the territorial sea, of a State party;

(b) to damage by contamination of the environment caused in the exclusive economic zone of a State party, established in accordance with international law, or, if a State party has not established such a zone, in an area beyond and adjacent to the territorial sea of that State determined by that State in accordance with international law and extending not more than 200 nautical miles from the baselines from which the breadth of its territorial sea is measured;

(c) to damage, other than damage by contamination of the environment, caused outside the territory, including the territorial sea, of any State, if this damage has been caused by a substance carried on board a ship registered in a State party or, in the case of an unregistered ship, on board a ship entitled to fly the flag of a State party; and,

(d) to preventive measures, wherever taken.

Vessel Types

The vessels covered by the convention are "ships" defined as any seagoing vessel and seaborne craft, of any type whatsoever which are particularly being used in carrying hazardous and noxious substances. Warships, etc. are not covered, but a State may apply the convention to its own warships and such vessels. The State may exempt the following ships:

(a) which are less than 200 gross tons;

(b) which carry hazardous and noxious substances only in packaged form; and

(c) which are engaged in domestic travel.

Polluting Substances

The polluting substances covered under this Convention are those defined as hazardous and noxious substances in IMO Conventions and Codes such as the MARPOL 73/78, the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk, 1983, the International Maritime Dangerous Goods Code, the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk, 1983, and the Code of Safe Practice for Solid Bulk Cargoes.

Elements of Implementation

1. *Shipowner's liability*. The principles of strict liability and limitation of liability on the part of the shipowner under CLC applies also to HNS, as do the requirements for compulsory insurance. The shipowner may limit his liability to the maximum amounts of 10 million SDRs (US$ 13.7 million) for a ship not exceeding 2,000 gross tons, and for ships exceeding 2,000 gross tons, an additional 1,500 SDRs (US$ 2,056) for each ton from 2,001 to 50,000, and 360 SDRs (US$ 493) for each unit in excess of 50,000 gross tons, but the total should not exceed 100 million SDRs (US$ 137.07 million).

2. *Contributions*. The HNS Fund shall be constituted from the contributions of persons in the contracting States who receive a certain minimum quantity of HNS cargo per year. The HNS Fund consists of one general account and three separate accounts for oil, liquefied natural gas (LNG), and liquefied petroleum gas (LPG). This scheme was formulated to avoid cross-subsidisation between different HNS substances.

3. *Limitation of Compensation*. The damage subject of compensation under the Convention refers to loss of life or personal injury, loss of or damage to property outside the ship, loss or damage by contamination of the environment, the costs of preventive measures and further loss or damage caused by them.

For ships exceeding 100,000 gross tons, the maximum compensation available to cover the liability of shipowners is 100,000 SDRs (US$ 137.07 million). Should this limit be reached, the HNS Fund shall be used to pay for additional compensation up to the maximum amount of 250 million SDRs (US$ 346.67 million).

The HNS Fund supplements the liability of the shipowner for the damage resulting from the carriage of HNS cargo. Compensation from the HNS Fund shall be paid in the following instances:

(a) When the shipowner incurs no liability for the damages (e.g., the shipowner has no knowledge that a shipment contains HNS, or the accident was a result of an act of war);

(b) When the owner is financially incapable of satisfying the obligations under this Convention in full and any financial security provided under the same convention is inadequate to meet the claims for compensation for damage; and

(c) When the damage is more than the owner's liability as stated in the Convention.

State Practice

As this is still a relatively new convention, there are as yet no ratifications of the HNS Convention in the region, or for that matter in the world.

Modes of Implementation

As HNS operates in almost exactly the same way as CLC and FUND, the discussion under CLC and FUND (5.1.7) applies to it. For the same reason, it should not be so difficult for countries to pass implementing legislation for HNS.

PORT STATE CONTROL OF FOREIGN SHIPS

Background

In view of the freedom of navigation, and on the basis of the principles of sovereignty and sovereign equality, each State is accorded the right to sail ships bearing its own flag. This inherent power to confer upon a ship to fly its flag bears with it the power of the State to have supreme command over the ship and the events occurring therein. It is solely the laws of the State of the ship's registry which govern the ship and its affairs. This is referred to as the flag State control.

Subsequently, there emerged the concept of coastal State control which is based on the geographic reach of the principle of protection by the coastal State jurisdiction

extending to its territorial limits as established by international law. Thus, within its territorial seas, the sovereignty of the coastal State is recognised.

The *Torrey Canyon* disaster of 1967 triggered the need to look into the extent to which a State affected by a casualty occurring outside its territorial sea can be allowed to take measures to protect its coastline, harbours, territorial sea or amenities. At the 1973 IMO Conference on Marine Pollution, the principle of port State control was introduced. The concept of port State control does not involve the extension of a port State's enforcement authority over violations on the high seas or in foreign coastal waters but, rather, the control of ships as they enter the port concerned.

Port State control is an important tool for enforcement of ship standards. The most effective way of determining compliance with convention requirements is by conducting inspections. States have the right to inspect vessels visiting their ports to ensure that they satisfy safety and marine pollution standards set by the IMO. This right is subject to the concurrent jurisdiction of the flag State. Therefore, co-ordination among States is necessary.

The establishment and implementation of standards of safety, design and construction for vessels is the duty of the flag State administration. Such standards have been globally agreed upon at IMO forums and implemented through the various international conventions such as the International Convention for the Safety of Life at Sea (SOLAS), MARPOL, the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), the International Convention for Preventing Collisions at Sea (COLREG), and the International Convention on Loadlines (LL).

The Tokyo MOU, which comprises 18 member States as follows - Australia, Canada, People's Republic of China, Fiji, Hong Kong (now a part of China), Indonesia, Japan, Republic of Korea, Malaysia, New Zealand, Papua New Guinea, Philippines, Russian Federation, Singapore, Thailand, Vanuatu and Vietnam – covers the following conventions:

(a) International Convention on Load Lines 1966 (LOADLINES);

(b) International Convention for the Safety of Life at Sea, 1974 as amended (SOLAS) and Protocol of 1978 relating to the International Convention for the Safety of Life at Sea, 1978;

(c) International Convention for the Prevention of Pollution from Ships 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78);

(d) International Convention on Standards for Training, Certification and Watchkeeping for Seafarers, 1978 (STCW);

(e) Convention on the International Regulations for Preventing Collisions at Sea, 1972 (COLREG); and

(f) Merchant Shipping (Minimum Standards) Convention, 1976 (ILO Convention No. 147).

In 1998, the International Safety Management (ISM) Code was added to the list. The Tokyo MOU has set a target rate for regional inspections of 50% of vessels calling at the region by the year 2000. The MOU is not a legally binding document and as such may not need legislation to be implemented in member States. However members would be expected to fulfil their obligations under the MOU.

Objective

The main objective of the MOU on port State control is to set up standardised procedures and work methods, better co-ordinate 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 facilitate exchange of inspection information and the establishment of training programmes.

Scope of Application

Geographical Coverage/Jurisdiction

Port State control may be exercised by States parties to the conventions only when the ships are in port or at offshore terminals. Inspections may not be conducted when the vessel is in innocent or transit passage through territorial waters or international straits. In exercising port State control, due care should be taken to ensure that the vessel is not unduly delayed or detained, otherwise the issue of compensation for costs and damages will arise. The flag State of the vessel, having concurrent jurisdiction, shall be kept informed of any action taken by the port State.

Vessel Types

Port State control has been introduced by the SOLAS, MARPOL 73/78 and STCW conventions largely through the "no more favourable treatment" clause. All foreign vessels are treated equally and in the same manner as the State’s own vessels when they visit the ports of a contracting State irrespective of whether such vessels belong to a contracting party or not. The ILO Convention No. 147 does not differentiate between foreign and local vessels. A contracting State therefore has the right to ensure that any foreign vessel visiting its ports shall be subject to inspections to verify that the vessel complies with the requirements of the Convention. The State may implement its own national standards on such vessels but such standards should be consistent with internationally accepted standards such as those formulated by IMO or the International Labor Organization (ILO). Furthermore, the manner and method of carrying out port

State control should be in conformity with internationally accepted norms. Discrimination against particular flags should be avoided. Failure to adhere to these principles may invite retaliatory action by other States.

The rights and obligations of the port State and the procedures to be adopted is dealt with by IMO Assembly Resolution No.A.787(19) which could be used as the guidelines to draw up the port State rules. Port States are to monitor not only physical compliance with safety and pollution standards but also the element of crew involved in the maintenance of such standards.

Elements of Implementation

The primary method of regulation is through inspections. Control is then exercised through detention, reporting and rectification. Without the regional mechanism, port State control tends to delay the expeditious carriage of international trade. Such delays may also lead to unfair competition between a port where port State control is exercised and one where it is not. The need for maritime safety and prevention of pollution to the marine environment has to be balanced with the need for expeditious carriage of goods and passengers. Regional MOUs have greatly assisted in ensuring that the same vessel is not subjected to inspection in every port of call. It has also assisted in creating a more level playing field for all ports in the region.

Authorities are empowered to carry out inspections on selected vessels visiting the port. The selection of the vessel is determined not so much by its flag as by its record of past inspections, both in the State as well as by other members of the MOU and the type of vessel. The Tokyo MOU has targeted passenger ships, roll on-roll off (RO-RO), bulk carriers and ships carrying hazardous cargo to be given priority for inspections. Specific ships with a bad record in terms of deficiencies and detentions are also included in the target group. Authorities are empowered to also check on onboard operational requirements related to safety and marine pollution including crew living and working conditions. The inspectors shall check the various certificates and records as issued under the Conventions and required to be presented for inspection. If there are no valid certificates or documents or if there are "clear grounds" for believing that the vessel does not comply with the Conventions, then a more detailed inspection will be carried out. "Clear grounds" should be defined in accordance with the Guidelines issued by IMO and the various MOUs. This will include situations when a report is received from relevant parties on the ship or when there are other indications of serious deficiencies both operational as well as physical. After inspection, a document may be issued to the master of the vessel which details the inspection carried out and the results and details of any action taken if any.

In the event the authority finds deficiencies, it shall endeavour to ensure that such deficiencies are rectified. If these are clearly dangerous to maritime safety and the marine environment, the authority may detain the vessel to ensure that the hazard is removed or rectified before the vessel leaves port. Where the repairs cannot be carried out in the port

for lack of facilities the authority may allow the vessel to proceed to the nearest repair facility under such conditions as the authority may impose to safeguard marine safety and the environment. The authority shall, under both circumstances and as soon as possible, inform the Administration of the actions taken. Where the vessel is allowed to proceed to the nearest repair facility, the authority in charge of the latter facility shall also be informed. Authorities shall avoid unduly delaying or detaining a vessel when carrying out the above-mentioned inspections and actions. Unnecessary delays or detention of a vessel may create a legal obligation to provide compensation for losses or damages that may arise.

State Practice

The effect of the Tokyo MOU has been to hasten implementation and promote ratification of the covered conventions among the member States. This is not a legal instrument in the form of a Convention. Most States which are parties to the major conventions such as MARPOL 73/78 and SOLAS would have provisions in their legislation to undertake both flag State and port State control measures.

Modes of Implementation

National Legislation

National legislation on port State control are basically addressed by the inspection provisions in the legislation implementing the covered conventions. The exercise of port State inspection shall be confined to implementation of internationally recognised standards such as the Conventions mentioned above. The objective of the actions to be taken by a port State shall be merely to ensure that the vessel does not pose a hazard to maritime safety and the marine environment.

Regional Co-operation

Regional co-operation in relation to port State control is manifested in the Tokyo MOU concluded among countries including the countries in the East Asian region.

GLOBAL PROGRAMME OF ACTION FOR THE PROTECTION OF THE MARINE ENVIRONMENT FROM LAND-BASED ACTIVITIES (GPA)

Background

It is widely acknowledged that 70% of all marine pollution originates from land and results from land-based activities. The global concern over the problem was first expressed in the 1982 United Nations Environment Programme (UNEP) report on the health of the ocean which stressed the effects of land-based pollutants on semi-enclosed areas, shelf areas and coastal zones. The second global assessment of the state of the

marine environment amplified these concerns and listed in order of importance the major contaminants. These concerns and the need for action was further articulated in Sections 17.24 to 17.29 of Chapter 17 of Agenda 21 which builds upon the legal obligation of States to protect the marine environment from land-based pollution stipulated in Article 207 (1-5) of UNCLOS, and the Montreal Guidelines for the Protection of the Marine Environment Against Pollution from Land-based Sources (1985).

Taking into account the recommendation made in Section 17.29, the UNEP began a process of consultation on the establishment of an international instrument to combat marine pollution from land-based activities. This effort culminated in the Intergovernmental Conference to Adopt a Global Programme of Action for the Protection of the Marine Environment from Land-based Activities held in Washington D.C. from 23 October to 3 November 1995. The resulting instrument, the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities, outlines broad and specific national, regional and international activities and actions which should be undertaken to protect the marine environment from land-based activities. In the same conference, representatives of Governments also adopted the Washington Declaration on the Protection of the Marine Environment from Land-based Activities.

The Washington Declaration is an affirmation of the global commitments to protect the marine environment from land-based activities through national, regional and global efforts. These commitments are manifested in a series of undertakings to take effective action to address the impacts of land-based activities on the marine environment through a set of actions which include developing and reviewing national action programmes; building capacity and mobilising resources; and regional as well as international co-operation in areas such as transfer of clean technologies, funds and tools for preventing, reducing and eliminating marine pollution from land-based activities.

The Washington Declaration also calls upon agencies within the United Nations system to accord priority to the implementation of the GPA by establishing a clearing-house mechanism for the dissemination of information on technologies, expertise, experience and funding. At the same time, provisions also have to be made for periodic reviews of the GPA.

Emphasis is given in the Washington Declaration to the need to adequately address two major areas relating to the landward disposal of ship-based pollutants. This involves the establishment of sufficient reception, treatment, recycling and disposal facilities; and the treatment of wastewater and industrial effluents.

Objective

The Global Programme of Action aims to provide the guidelines upon which national and/or regional authorities may base their actions in formulating means to prevent, reduce, control and/or eliminate marine degradation from land-based activities with the objective of promoting sustainable development. It encourages the adoption of

new approaches and collaboration among States at all levels, including the application of new financial schemes to acquire resources.

State Practice

Seven East Asian countries participated in the Conference in 1995. However, regulations on prevention and management of land-based pollution were promulgated by most of countries in the region in various national legal instruments before 1995. China issued a special national legislation in 1990, namely, Regulations of the People's Republic of China Concerning Prevention of Pollution Damage to the Marine Environment by Land-based Pollutants covered all the actions/steps required as well as all the source category in GPA. Some national legislation in the region contain general provisions on waste management, such as the Law on Environmental Protection of Cambodia and the Environmental Law of Indonesia. In some countries, such as Vietnam, Malaysia, the Philippines, RO Korea and Thailand, a general provision on the prevention of land-based pollution is provided in their main legal instrument while some specific regulations on pollution from land-based sources are subsequently enacted. Specific regulations seek to address the distinct circumstances and conditions prevailing in each country.

A Framework for Implementation of the GPA

The Legal Basis

While the GPA is a non-legally binding instrument of environmental protection, States are obliged to protect the marine environment from land-based activities based on Articles 207 and 213 of the 1982 UNCLOS. This obligation is further noted in Agenda 21 which states that the relevant provisions in the UNCLOS are "the international legal basis" for the protection of the marine environment from land-based activities. In this sense, the GPA is an elaboration of this obligation and a strengthening of prior instruments such as the Montreal Guidelines, 1985.

Primary Obligation

The most important response required of countries in implementing the GPA is the development or review of national programmes of action (NPA) to protect the marine environment from land-based activities.

These programmes are to be formulated or reviewed in relation to national priorities, policies and resources. In order to ensure the effective development and implementation of the NPA, emphasis is to be given towards the formulation and implementation of programmes of action which are sustainable, practical and integrated in nature (within the context of "integrated environmental management approaches and processes, such as integrated coastal area management, harmonised, as appropriate, with river basin management and land-use plans").

Actions Required

Actions at National Level

The GPA emphasises the need for national action through the preparation or review of national programmes of action (NPA) structured around six main activities or steps. The NPA should be designed as an adaptive and continuously evolving programme supported at the regional and international levels by activities aimed at providing transfer of technologies, experience, expertise and funds. New legislation may or may not be enacted. The action plans formulated through the programme may be integrated into the country's development programmes.

The "six step" action plan involves:

(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) Criteria for evaluating the effectiveness of strategies and programmes; and

(f) 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":

(a) Sewage;

(b) Persistent organic pollutants;

(c) Radioactive substances;

(d) Heavy metals;

(e) Oils (hydrocarbons);

(f) Nutrients;

(g) Sediment mobilisation; and

(h) Litter.

Besides recommending that States adopt marine environmental protection strategies which are adaptive and evolving in nature, the GPA also recognises the significant role of integrated coastal zone management in providing an integrated framework within which the GPA could be incorporated or implemented. This integrated framework is crucial given the wide range of issues to be addressed and activities to be carried out across jurisdictional boundaries of government agencies in addressing the problem of degradation of the marine environment from land-based activities.

Most of the activities to be undertaken or to be developed as part of the NPA could be done without necessarily having to promulgate new laws. In fact, considerations for a legal regime should only come after Steps 1, 2 and 3 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 parts of the programme support elements of the NPA.

A Step-by-Step Approach to Developing or Reviewing a National Programme of Action

Step 1 Identification and Assessment of Problems

This is the first and most critical step in the implementation of the GPA. It is made up of three broad components or elements beginning with an assessment of the nature and severity of impacts of land-based activities on the marine environment. This is to be done within the context of national priorities in ensuring food security and public health, alleviation of poverty, conservation and preservation of marine resources and ecosystems, and protecting the economic and social uses of the sea.

The land-based sources of marine environment degradation and related contaminants could be grouped as a part of a continuum of events having detrimental impacts on the marine environment. These sources and contaminants are listed in Paragraph 21 (b - d) of the GPA.

The third component of this assessment process describes the critical or sensitive marine and coastal areas which could be adversely affected by land-based activities including coral reefs, wetlands, mangroves, seagrass beds, estuaries and marine protected areas.

Step 2 Establishment of priorities

The information obtained from the above should next be used to establish priorities for action which should be integrated in nature and be based on a number of important principles and criteria such as the participation of all stakeholders and major groups (as identified in Agenda 21), application of the precautionary principle and the

principle of intergenerational equity, and implementation of environmental impact assessment procedures.

Step 3 Setting management objectives for priority problems

Once priority problems have been identified, target specific plans (including management objectives) can be prepared and implemented to prevent, mitigate and eliminate particular types of contaminants, address source categories, or protect areas of concern. Malaysia's own experience with the natural rubber and palm oil processing shows that industry specific pollution mitigation plans are viable options. These plans should include punitive regulations as well as subsidies of financial incentives for developing or purchasing waste treatment of recycling technologies. In the case of the palm oil sector, the waste generated was put to use as livestock feed or fuel.

Step 4 Identification, evaluation and selection of strategies and measures

As noted above, industry or area specific plans, strategies or measures should combine both punitive as well as incentive measures to encourage compliance. Added to these, the GPA also recommends additional measures to promote sustainable use of coastal and marine resources and to prevent or reduce degradation of the marine environment (these measures include application of best available techniques and best environmental practices and introduction of clean technology), measures to modify contaminants or other forms of degradation after generation (including waste recovery, recycling and waste treatment), measures to prevent, reduce or ameliorate degradation of affected areas, identification and designation and of institutional arrangements, identification of short-term and long-term data collection and research needs, development of a monitoring and environmental quality reporting system for programme review and adaptation purposes, and identification of funding sources and mechanisms.

Step 5 Establishment of criteria for evaluating the effectiveness of strategies and measures

In order for the NPA to be adaptive and continuously evolving, an evaluation process should be incorporated within its framework to evaluate the effectiveness of measures taken. The GPA recommends that the evaluation encompass parameters such as environmental effectiveness, economic costs and benefits, equity, flexibility in administration, effectiveness in administration, timing, and cross-sectoral benefits.

Step 6 Programme support elements

In order to ensure the success of NPAs, States are encouraged to provide the necessary administrative and managerial support through legal and enforcement tools, financial mechanisms, and contingency planning. This is to be supported by a research and monitoring infrastructure and human resource development and education plans. It is

also critical that the NPA receives public support, thus the call for public participation and awareness building.

Action at Regional and International Levels

In order to support GPA implementation at the national level, and in keeping with Agenda 21's mandate for international and regional co-operation, a number of provisions are built into the GPA to facilitate capacity building through the transfer of technology, experience, expertise and funds. Primary among these is the establishment of a clearinghouse mechanism to organise and improve access to information, practical experience, as well as scientific and technological expertise.

The GPA also identifies possible sources of funding. The bulk of funding will no doubt have to come from national sources, and given the present downward turn in official development assistance (ODA) availability, it is unlikely that substantial external aid will be forthcoming for countries to implement the GPA. The level of ODA funding for the period 1993-1995 was the lowest in 30 years, and only four countries have met the 0.7% goal set at the United Nations Conference on Environment and Development, 1992 (UNCED). Specific reference was made to the Global Environment Facility as a possible funding mechanism. An "Illustrative List of Funding Sources and Mechanisms" was included as an annex to the GPA, identifying various mechanisms to raise national funding to support GPA implementation activities. These options include among others user charges, polluter pays mechanisms, local and national taxes, privatisation and debt for equity swaps.

To further support GPA implementation, agencies in the United Nations system are urged to endorse parts of the GPA most relevant to them, and to implement these parts. The main United Nations agency tasked with the implementation of the GPA is UNEP, which will provide a secretariat to the GPA. UNEP is also tasked with the organisation of periodic reviews of GPA implementation.

At the regional level, the objectives of the GPA are to strengthen existing regional co-operative arrangements, and where needed to establish new co-operative arrangements. States are encouraged to participate in regional/sub-regional co-operative efforts to protect the marine environment from land-based activities and to ensure the success of these arrangements. In the East Asian Seas region, there is ample opportunity for co-operation, and countries should take advantage of existing bilateral and multilateral co-operation throughout the region to enhance their capacity to address pollution of the marine environment from land-based activities. In this instance, UNEP has a major role to play in adapting the East Asian Seas Programme to accommodate GPA implementation.

Regional action is needed to ensure that common marine water bodies (especially enclosed or semi-enclosed seas) are not degraded by land-based activities of bordering States, and are not affected by transboundary pollution. The GPA promotes regional and

sub-regional co-operative arrangements as possible tools to protect regional marine water bodies. The series of actions which need to be undertaken in the development of a regional or sub-regional co-operative arrangement of instrument (in the form of regional conventions and programmes) mirror closely those required for the development or review of the NPA.

At the moment, the East Asian Seas region does not have a regional instrument for the protection of the marine environment from land-based and vessel-based pollution. This has to a certain extent hampered regional efforts to address transboundary marine pollution problems from land and sea. There are now twelve regional agreements addressing land-based sources of marine pollution. Six of these have specific legal instruments on protecting the marine environment from land-based sources. It may now be an opportune time for countries in the region to consider the adoption of a regional instrument to protect the East Asian Seas from land-based or sea-based pollution as recommended in the GPA.

Guidelines for National Marine Pollution Legislation for East Asian Countries

Contents

Guidelines for National Marine Pollution Legislation for East Asian Countries

These Guidelines are divided into two parts. The first part consists of a brief introduction, describing the basic principles concerning environmental 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 national policy codes 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.

1.0 DEVELOPING AND ESTABLISHING MANAGEMENT TOOLS

1.1 Implementation Plan

It must be emphasised that the passing of legislation is only a part of an implementation plan for an international convention. Other actions need to be taken to effectively implement these international conventions. Taking into account local conditions, it is necessary to look into the strengthening and re-organisation of the responsible government agencies, the development of facilities and equipment, the institution of enforcement measures including new approaches such as financial or fiscal incentives and disincentives and industry self-regulation, and the strengthening of public awareness and participation.

1.2 Legal Components

The legal components for marine pollution legislation are described in detail in the following sections. These instruments, described in Table 1, provide the substance and the basis for national laws to be formulated. In summary, these instruments comprise preventive and curative measures for the protection of the marine environment from land-based and vessel-based pollution. At the same time these instruments also provide the basis for punitive actions to be taken against polluters while assisting those affected by pollution through a compensatory regime.

Table 1 The Legal Components of a Framework for the Protection of the Marine Environment.

	MEASURES			
	Preventive	**Curative**	**Punitive**	**Compensatory**
INSTRUMENTS	MARPOL73/78 London Convention Basel Convention Intervention Port State Control MOU GPA	OPRC Salvage GPA	MARPOL73/78 London Convention Basel Convention	CLC FUND

2.0 THE LEGAL BASIS FOR STRENGTHENING NATIONAL LEGISLATION ON MARINE POLLUTION

National legislation on marine pollution is enacted by a State as part of its intrinsic power to govern and under the authority of the international treaties it has joined.

2.1 Exercise of National Jurisdictional Powers

All East Asian countries, except Laos, are coastal States. Some produce and export petroleum, while others import it. The East Asian Seas serve as important routes for international navigation. Pollution from sea-based sources, therefore, is a constant risk, and it is important to define and strengthen national control over both local and other flag ships within the State's marine jurisdiction. Flag State control and port State control are among the means of managing marine pollution from ships.

Roughly 80% of marine pollution, however, is from land-based sources. It is a matter of national interest, therefore, that national legislation addresses marine pollution from all sources.

2.2 Commitments Under International Conventions

A body of international conventions on marine pollution has been developed. The ratification and implementation of these instruments adds global approbation and effectuation to the forces against marine pollution. By ratifying a convention, the State's obligation becomes twofold: to its citizens to protect their health, source of living and heritage; and to the international community to implement the provisions of the convention.

3.0 NATIONAL POLICY INSTRUMENTS ON MARINE ENVIRONMENTAL PROTECTION

3.1 State Practice

3.1.1 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.

3.1.1.1 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, 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).

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).

3.1.1.2 State Policy

Marine environmental protection is treated 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 programme 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 principle of sustainable development and the strengthening of environmental impact assessment. The National Marine Policy of the Philippines, formulated in 1994, 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."

3.1.1.3 National Medium-term Plans

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

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.

3.1.2 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.

3.1.2.1 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.

3.1.2.2 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.

3.2 Summary

In accordance with current State practices and relevant obligations under international conventions, the basic national 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.

4.0 NATIONAL MARINE POLLUTION LEGISLATION

4.1 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 special 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.

4.1.1 The Framework Law Approach

Under the framework law approach (Figure 1), 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 environment 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 a refer in the law or other instrument to the enabling or authorising legislation at the preceding level.

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.

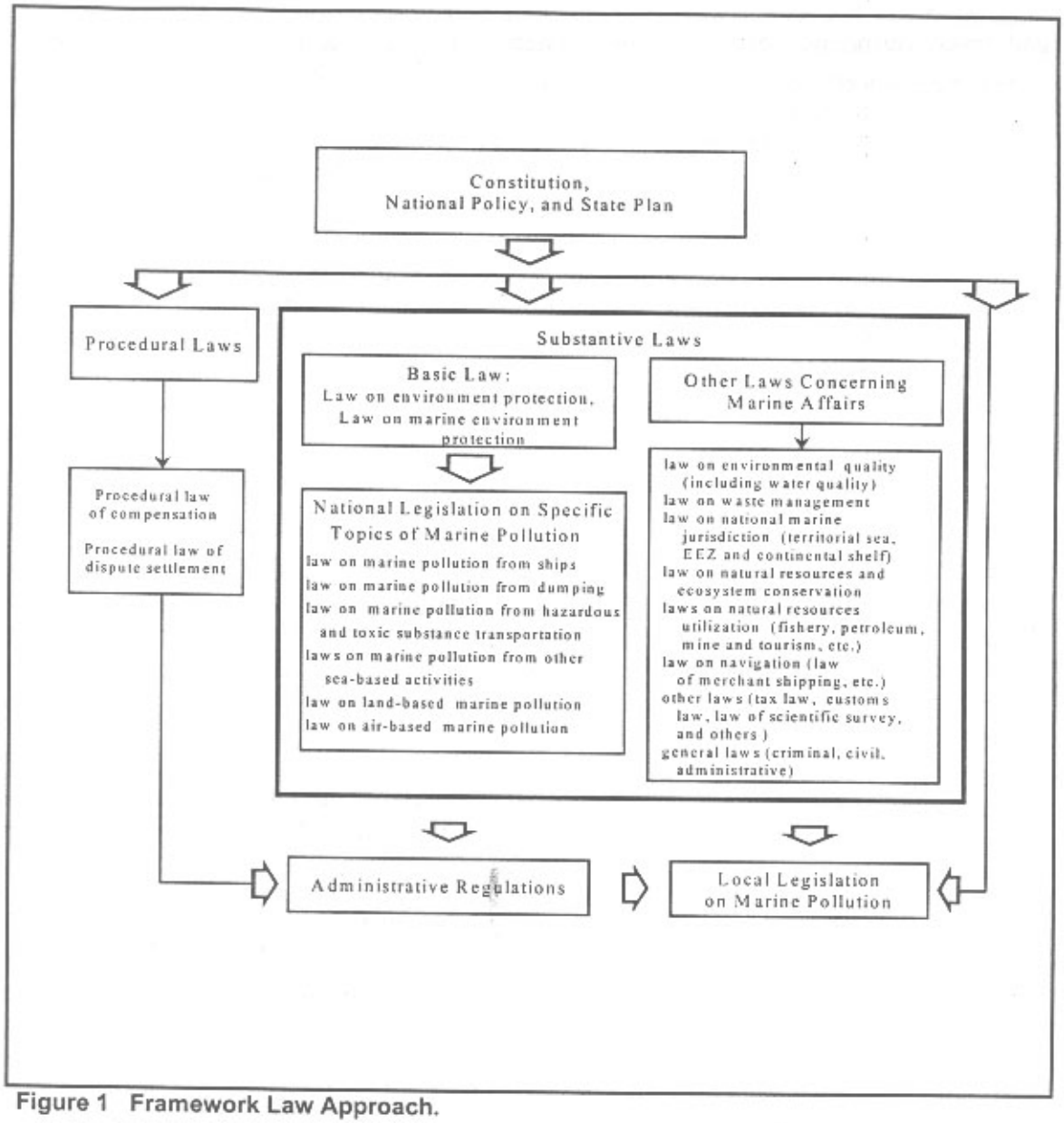

Figure 1 Framework Law Approach.

Second Level: Basic Laws Concerning Marine Environmental Protection

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

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 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.

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. In most countries, local standards are more stringent than national laws.

4.1.2 The Special Statute Approach

Under the special statute approach (Figure 2), laws on the prevention and management of marine pollution are enacted distinctly from 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.

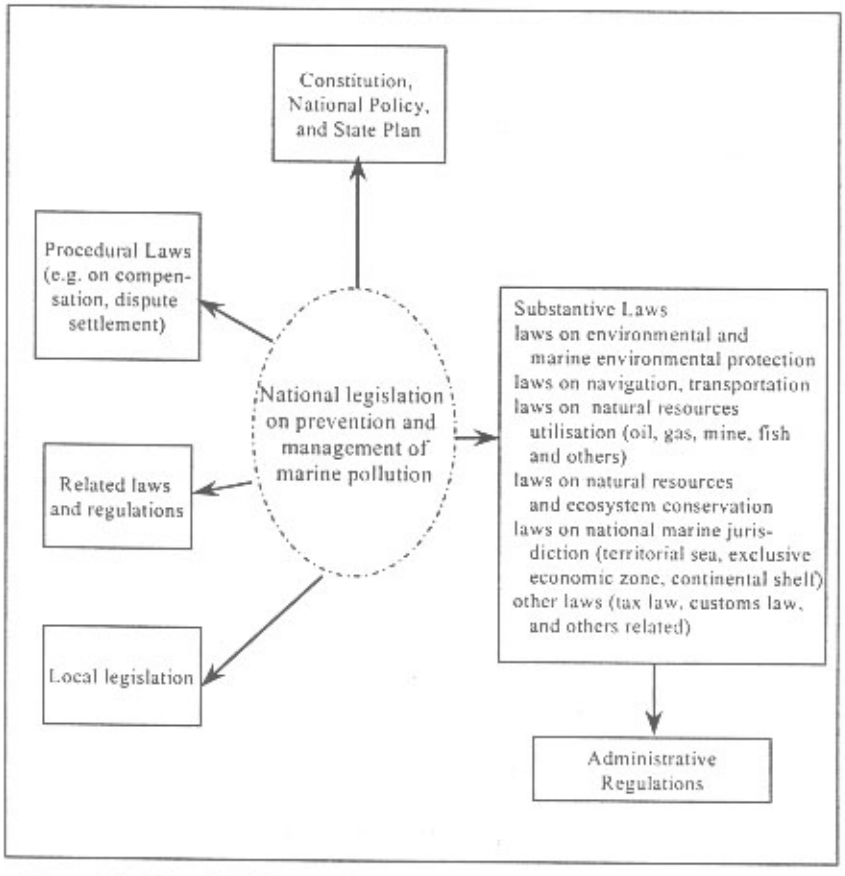

Figure 2 Special Statute Approach.

4.1.3 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".

4.2 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 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.

4.3 General Considerations of National Marine Pollution Legislation

4.3.1 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:

4.3.1.1 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.

4.3.1.2 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 often have various meanings and interpretations depending on the field or the 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.

4.3.1.3 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 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.

4.3.1.4 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.

4.3.1.5 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 their functions and powers. This is one of the major causes of weak law enforcement. If there is to be more than one implementing agency, their functions and powers must be clearly delineated and clarified. 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.

4.3.1.6 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. A State has the right to impose its own standards on foreign ships found within its territory and, subject to the rules of international law, its EEZ. However, it is usual that such violations are reported to the flag State for appropriate action. The flag State is expected to inform the reporting State of the action it has taken on the case.

While the laws should have punitive measures, these should be considered as the last in the line of disincentives. The worst mistake would be to consider them as the only means of law enforcement.

4.3.1.7 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 shipowners 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 shipowner for violations.

4.3.1.8 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.

4.3.2 General Considerations of Content

4.3.2.1 Content of General Legislation Concerning Marine Pollution

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

(a) an explanation of the importance and necessity of prevention and management of marine pollution;

(b) the application of key principles of protection of marine environment, such as the precautionary principle and the polluter-pays principle, among others; and

(c) the encouragement of public and private sector partnership.

4.3.2.2 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 science 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.

4.4 Basic Elements of Laws Implementing Individual Conventions on Marine Pollution

This section 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 on 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 integration of ship-source wastes with 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 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.

4.4.1 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:

1. *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.

2. *Designation of the Authority*. The law shall designate an appropriate government agency to be responsible for the implementation of MARPOL, in accordance and consistent with the existing legal system of the State.

3. *Scope of Application*.

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.

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 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.

Polluting substances subject of the law. Generally, 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.

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.

4. *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 five MARPOL annexes. The law shall require vessels to carry on board an emergency plan and a record of all relevant details in their Oil Record Books, and Cargo 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.

5. *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.

6. *Requirements for Reception Facilities*. The law shall require adequate reception facilities at ports to receive slops, sludgy sewage, garbage and other residues from ship. 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.

7. *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.

8. *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.

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

The State may impose more stringent conditions than that 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.

4.4.2.1 Laws Implementing the Provisions of the London Convention

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

1. *Definition*. Important basic concepts, such as "dumping," "waste" and "other matter," shall be precisely defined consistent with the London Convention.

2. *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.

3. *Scope of Application*.

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.

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

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.

4. *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 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.

5. *Technical Guidelines*. The London Convention Technical Secretariat, under the direction of the Parties to the Convention, has developed a number of Technical Guidelines for use in the implementation of the Convention. Among these are:

(a) Guidelines for the Implementation and Uniform Interpretation of Annex III;

(b) Technical Guidelines on the Control of Incineration of Wastes and Other Matter at Sea and the Regulations for the Control of Incineration of Wastes and Other Matter at Sea;

(c) Guidelines by Way of Interim Procedures and Criteria for Determining Emergency Situations;

(d) Waste Assessment Framework.

These should be consulted for the use they were intended.

6. *Communication with the IMO*. The law shall authorise the implementing agency to notify the IMO on the following matters as required by the convention:

(a) any additional substances prohibited under national legislation;

(b) substances which may be dumped under exceptional circumstances as provided under national legislation;

(c) all substances which may be dumped under national legislation; and

(d) 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 Convention, and may be set up in subsidiary legislation.

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

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

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

3. *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" 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.

4. *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, which is also proscribed by the protocol.

5. *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.

6. *Communication with the IMO*. The law shall authorise the implementing agency to notify the IMO on the following matters as required by the convention:

(a) any additional substances prohibited under national legislation;

(b) substances which may be dumped under exceptional circumstances as provided under national legislation;

(c) substances which may be dumped under national legislation; and

(d) 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.

7. *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.

4.4.3 Laws on Marine Pollution from Hazardous and Toxic Substances

The Basel Convention's primary objective is the control and minimisation 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.

It should be noted that the Basel Convention Secretariat has a Model National Legislation on the Management of Hazardous Wastes and Other Wastes as well as on the Control on the Transboundary Movements of Hazardous Wastes and Other Wastes and Their Disposal. Reference to this document would be very useful. The following are the essential elements of national legislation on preventing marine pollution from transboundary movement of hazardous wastes and toxic substances.

1. *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."

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

3. *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.

4. *Prohibited Acts*. In response to the requirements of the Basel Convention, the law shall prohibit the following:

(a) The export of hazardous wastes 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.

(b) The import of hazardous wastes 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.

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

5. *Licensing System*. The law shall set up a system of licensing for the importation, exportation, transport and disposal of hazardous wastes and other wastes. The law shall require that hazardous wastes 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.

6. *Provisions on Management*. The law shall require the following:

(a) Notification and documentation. Transboundary movement of hazardous wastes 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 wastes and other wastes be accompanied by a movement document from the point at which a transboundary movement commences to the point of disposal.

(b) Measures to ensure that the hazardous wastes 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.

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

(d) Adequate disposal facilities.

As with the licensing system, the details may be provided by administrative regulations.

7. *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.

4.4.4 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.

4.4.4.1 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.

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

2. *Authority*. It is important to designate in the law the authority responsible for responding to marine pollution from casualty and incidents.

3. *Scope of Application.* The geographical coverage of the law shall extend over all areas under the national jurisdiction of the State.

4. *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.

5. *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.

6. *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.

4.4.4.2 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.

1. *Definitions*. Some important definitions in the implementation of the Intervention Convention include “maritime casualty” and “related interests.”

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

3. *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.

4. *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.

5. *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.

6. *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.

7. *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.

4.4.4.3 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.

1. *Definitions*. The term “damage to the environment” has a special definition in the convention. National legislation may refer to such 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.

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

3. *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.

4. *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 salvors 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.

4.4.5 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 Civil Liability Convention (CLC) and International Fund for the Compensation for Oil Pollution Damage Convention (Fund). The Hazardous and Noxious Substances Pollution Damage Compensation Convention (HNS) is not yet in force; however, it is included here in anticipation that it eventually will be.

4.4.5.1 Laws on Compensation for Oil Pollution Damage

The CLC establishes the principle of strict liability for shipowners and creates a system of compulsory liability insurance. The Fund Convention 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 Convention and their respective protocols:

1. *Definitions*. The implementing legislation shall define "oil," "oil pollution," "ship," "prevention measures" and "contributing oil," among others, in accordance with the CLC and Fund Convention.

2. *Authority*. The proper authority to implement the CLC and Fund Convention shall be designated. Its tasks are to issue and inspect insurance certification among shipowners, to ensure contributions to the fund by oil receivers and to ensure that claims duly granted under the conventions are enforced.

3. *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.

4. *Strict Liability for Oil Pollution Damage*. The legislation must provide for the strict liability of the shipowner 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.

5. *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 tons 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 shipowner, 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.

6. *System of Limitation of Liability*.

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

7. *Contributions to the IOPC Fund*. The law shall require all entities that receive over 150,000 tons 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.

8. *Action for Compensation*. The law shall provide for actions for compensation for pollution damage to be brought directly against the shipowner 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 shipowner and the fund.

4.4.5.2 Laws on Compensation for Pollution Damage Caused by Hazardous and Noxious Substances

1. *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.

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

3. *Scope of Application*. The legislation shall cover the territory and EEZ of the State and the State's flag ships.

4. *Strict Liability for Pollution Damage from Hazardous and Noxious Substances*. The legislation must provide for the strict liability of the shipowner 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 limitation of liability of the shipowner shall be paid by the HNS Fund.

5. *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 shipowner 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.

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

7. *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.

8. *Action for Compensation*. The law shall provide for actions for compensation for pollution damage to be brought directly against the shipowner 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 shipowner and HNS Fund.

4.4.6 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 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 category." 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 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.

4.4.6.1 Types of Legislation on Land-based Pollution

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

.1 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.

.2 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.

4.4.6.2 Basic Provisions of Legislation on Land-based Pollution

1. *Land-based Pollutant Sources*. The source categories or threats to the marine environment from land-based activities that must be addressed are the following:

(a) sewage;

(b) persistent organic pollutants;

(c) radioactive substances;

(d) heavy metals;

(e) oils (hydrocarbons);

(f) nutrients;

(g) sediment mobilisation;

(h) litter; and

(i) physical alteration, including habitat modification and destruction in areas of concern.

2. *National Programme of Action*. The legislation shall take into consideration the legislative necessities of the NPA. These may include, among others, 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.

3. *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.

4. *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.

5. *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.

4.4.7 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 correlate, integrate, complement or conform with these other laws must be given more than a little consideration.