1987

Towards the development of the maritime safety administration

Freddy R. Garcia Rodriguez
World Maritime University

WORLD MARITIME UNIVERSITY

WMU

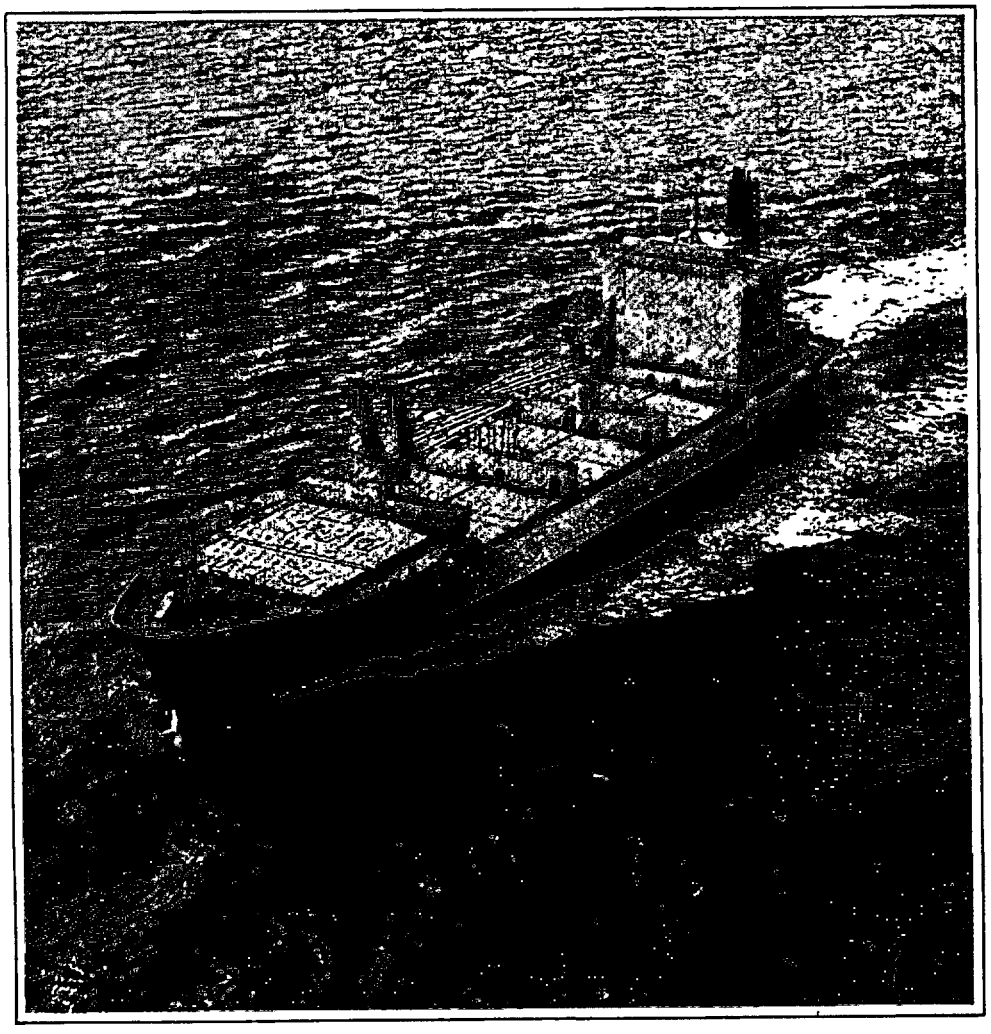
UNIVERSITE MARITIME MONDIALE
UMM

UNIVERSIDAD MARITIMA MUNDIAL
UMM

IMO

Established under the auspices of the International Maritime Organization
a specialized agency of the United Nations

TOWARDS THE DEVELOPMENT OF THE MARITIME SAFETY ADMINISTRATION IN VENEZUELA



FREDDY R. GARCIA RODRIGUEZ

MALMO-SWEDEN

1987

"To my brother

RAUL ENRIQUE

who has always been light of inspiration for my excel.

God permits his soul rests in the peacefulness of the Heaven."

WORLD MARITIME UNIVERSITY
Malmo, SWEDEN

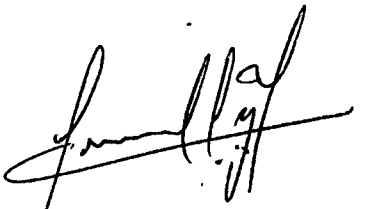
TOWARDS THE DEVELOPMENT OF THE MARITIME SAFETY ADMINISTRATION IN VENEZUELA

by
FREDDY R. GARCIA RODRIGUEZ
VENEZUELA

A paper submitted to the Faculty of the World Maritime University in partial satisfaction of the requirements for the award of a

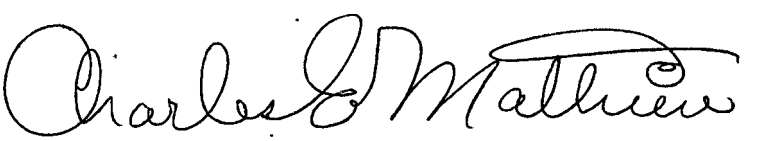
MASTER OF SCIENCE DEGREE
in
MARITIME SAFETY ADMINISTRATION

The contents of this paper reflect my personal views and are not necessarily endorsed by the University.

Signature: 

Date : 30 October 1987

Supervised and assessed by:
Professor Charles Mathieu
World Maritime University



Co-assessed by:
Mr. Per Erickson
World Maritime University

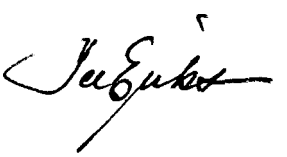


TABLE OF CONTENTS

ACKNOWLEDGEMENTS

With special thanks to:

International Maritime Organization (IMO) for awarding the fellowship to pursue the two years Master Science degree course in the World Maritime University, a unique international Institution.

All distinguished resident and visiting professors for their dedicated lectures and knowledge imparted during the course period.

The Maritime Administrations of Sweden, Danmark, Norway Finland, and Spain for their co-operation and assistance during various field training activities.

My respectful admiration and gratitude to Mr. Charles Mathieu and Mr. Thomas Balmer my course professors for their wise advice and guiding my studies and the writing on this paper.

I would like to express my special gratitude and sincere thanks to Mr. Per Eriksson for his co-assessment of my thesis.

My warmest thanks too, to Mrs María M. de Durán (Merchy). for her assistance in typing this paper.

Finally, I dedicate my thesis to my dear father and mother, brothers and sisters, and my girlfriend Yyray J. Rodriguez Acosta whose prayers and moral supports means so much to me.

LIST OF FIGURES, TABLES AND ANNEXES

Figures

Tables

Annexes

TOWARDS THE DEVELOPMENT OF MARITIME SAFETY ADMINISTRATION IN VENEZUELA

INTRODUCTION

This paper represents the exposition of certain ideas which are a result of the experience acquired by the author during the two year course in Maritime Safety Administration at the World Maritime University. It provides the opportunity to become acquainted with different Maritime Administrations in Scandinavia and in other European countries e.g Spain, during the field trips and the on -the -job-training.

The purpose of this paper is to review the present system of Maritime Safety Administration in Venezuela, its various related functions and how these functions are being carried out in the light of current local and international developments, and to point out the vital need of having a proper Maritime Administration that can achieve and maintain a high standard in all the Maritime activities of the Country.

The only way to develop these maritime activities is to allow the Administration to acquire the capabilities of dealing with these issues.

At the beginning of this paper there is a detailed explanation of the conditions of the different points according to the "List of Points" and subsequently the conclusions and recommendations that in my opinion the Administration needs to consider.

It is important that before the Administration deals with the idea of developing its current situation, it has to identify the following:

a) The principal problems.

b) The various maritime activities which are to be attended to.

c) The proper personnel at all stages.

d) The adequate infrastructure for its purposes.

It is important that the Maritime Administration obtains the knowledge, information and practical guidance to improve itself up to the required level.

The most serious problems that the Venezuelan Administration have to deal with are:

a) Non-involvement in the evolution of international standards.

b) Out-dated Maritime Legislation.

c) Inadequate infrastructure as regards organization and personnel for ensuring proper standards and maritime development in general.

d) An acute shortage of marine officers with the necessary qualifications and experience.

e) Lack of appropiate training facilities for maritime officers and seaman.

Many measures have to be taken to remedy these deficiencies, by the formulation of a national merchant shipping legislation, by specifying the responsibility for all involved in maritime activities by the creation of a modern national institute for the training and certification of seaferers and by employing a number of marine officers in the maritime administration.

The establishment of the World Maritime University under the auspices of the International Maritime Organization (IMO), shall no doubt meet some of the above needs. This institute, which is an international center of excellence for advanced training in various aspects of maritime transport, has been designed primarily for the use of senior personnel from developing countries.

The two year courses in Maritime Safety Administration (nautical and engineering fields) are expected to give the graduates sufficient knowledge and experience which, when combined with existing professional qualifications will enable them to conduct surveys/inspections required by the international Maritime Conventions.

In addition, the graduates will have the ability to fulfil effectively all the national obligations under the safety conventions of IMO. With such training developing countries will become self-reliant in the matters of Maritime Safety Administration.

As part of the academic work in these courses I have undertaken a paper for which I got access to

information, documents, publications so as to make an assessment of the present maritime situation in Venezuela.

In order to meet the aforesaid paper's requirements and to facilitate the collection of the maximun amount of data relating to maritime activities, Professor P.S Vanchiswar, who has high professional qualifications and experience in Maritime Safety Administration, has set out a list of points embodying a large number of maritime activities.

In pursuing the relevant lectures given by professor P.S. Vanchiswar, I have understood that there are many recommendations to be made as regards the maritime matters concerned in order to put into effect the highest practicable standards.

Accordingly, In the second phase of this work, I would like to elaborate upon the relevant approaches given during these two years particularly the updating of the national merchant shipping legislation and related maritime safety activities since it is expected to be of value to my country.

A BRIEF INTRODUCTION TO THE REPUBLIC OF VENEZUELA

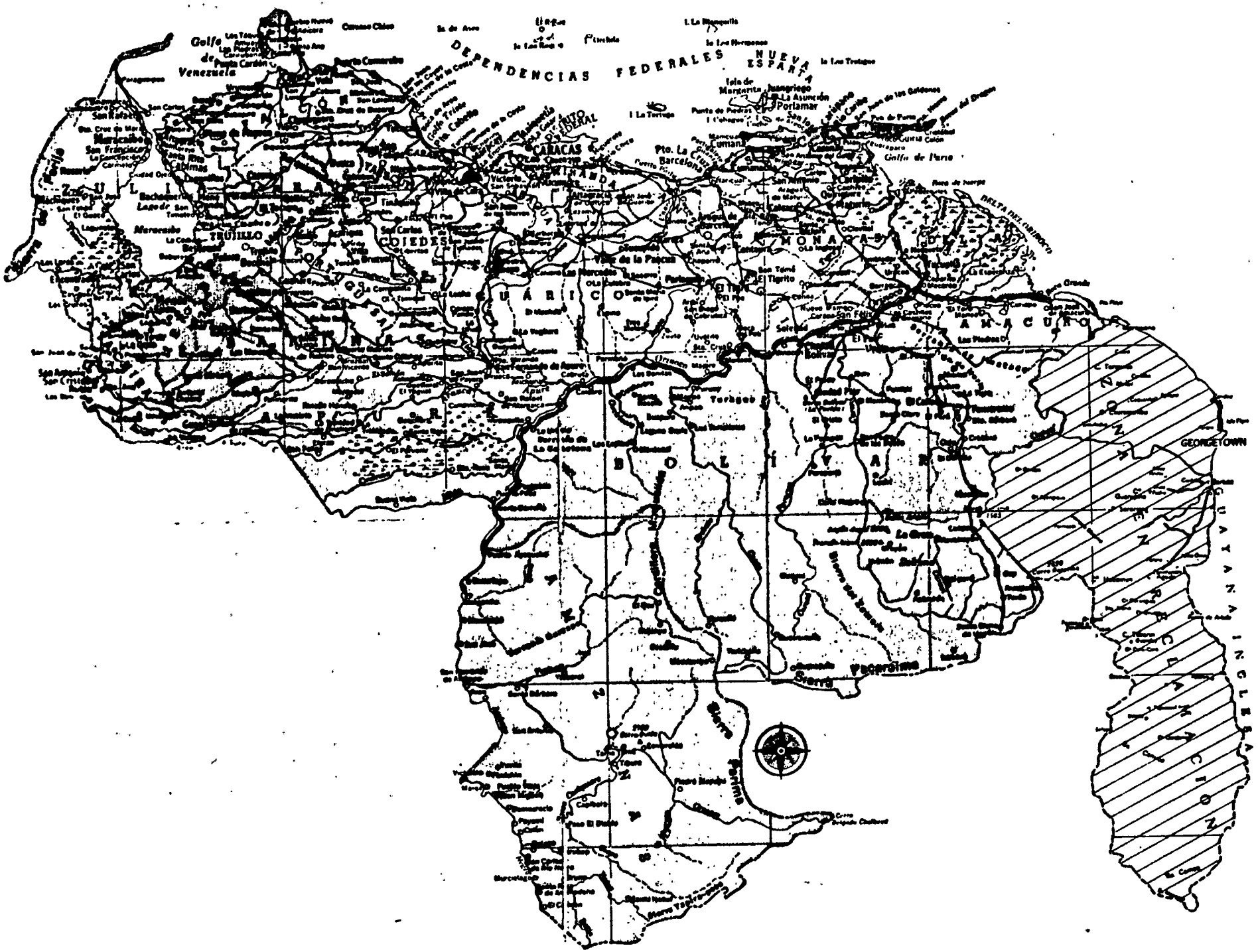
CAPITAL:

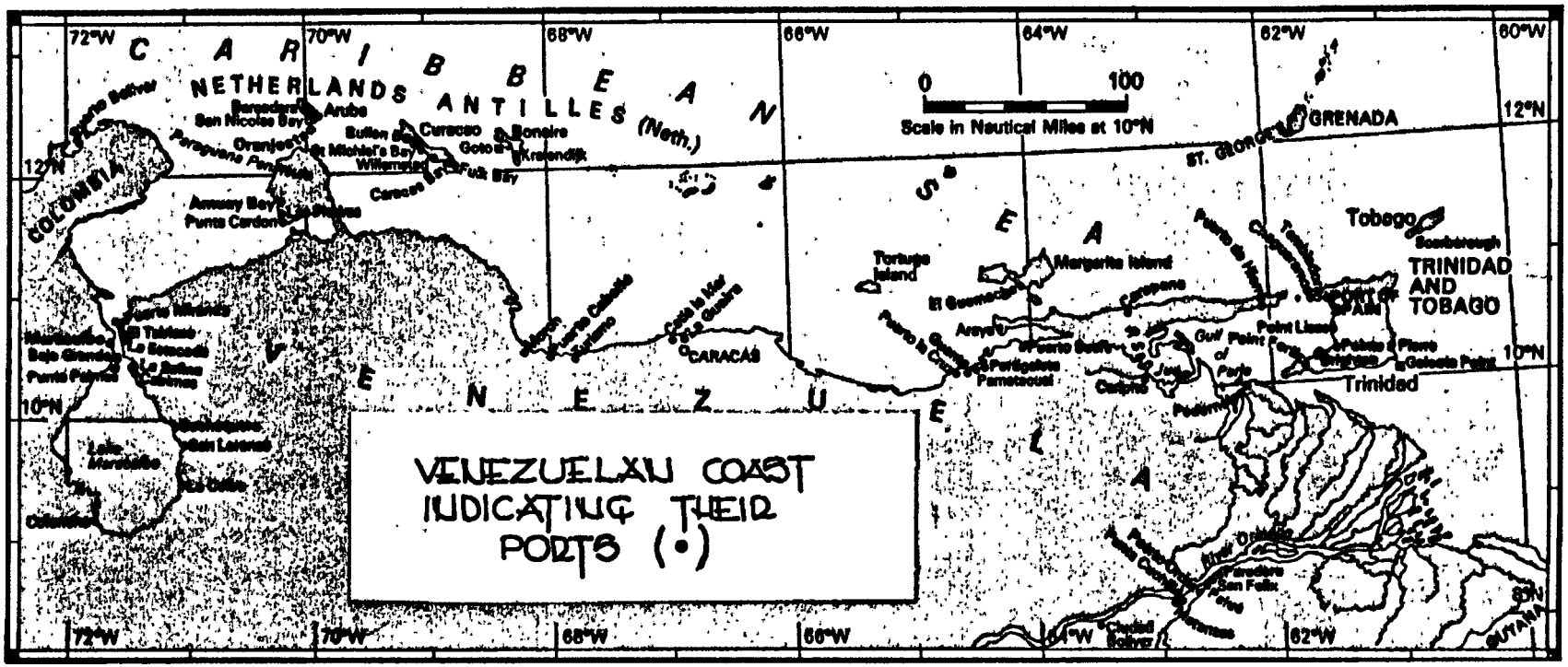
Caracas.

LOCATION, SIZE, AND EXTENT:

Venezuela, located on the northern coast of South America, covers an area of 912.050 sq km (352.143 sq mi), extending 1,487 km (924 mi) WNS-ESE and 1,175 km (730 mi) NNE-SSW. It is bordered on the N by the Caribbean Sea and the Atlantic Ocean, on the E by Guyana, on the S by Brazil, and on the W by Colombia, with a total boundary length of 7,609 km (4,728 mi). There are 72 offshore islands.

Venezuela claims more than 130.000 sq km (50,000 sq mi) of Guyanese territory west of the Essequibo River. Conflicting maritime claims with Colombia in the Gulf of Venezuela remain unresolved, despite negotiations since 1970. Demarcation of the land boundary between the two nations began in February 1982.


DEPENDENCIAS FEDERALES
NUEVA ESPAÑA
Golfo de Venezuela
Golfo de Paria
CARACAS
DISTRITO FEDERAL
MIRANDA
Pto. La Cruz
Barcelona
Cumaná
Isla de Margarita
Porlamar
La Asunción
Pampatar
ZULIA
Maracaibo
TRUJILLO
COJEDES
FALCÓN
LARA
PORTUGUESA
YARACUY
CARABOBO
APURE
MONAGAS
DELTA DEL ORINOCO
AMACURO
BOLÍVAR
Ciudad Bolívar
Upata
Tucupita
GEORGETOWN
GUAYANA INGLESA
Sierra Parima
Sierra Pacaraima



VENEZUELAN COAST INDICATING THEIR PORTS (•)

TOPOGRAPHY:

Venezuela has four principal geographic divisions. In the north emerges a low extension of the Andes chain; to the west lies the hot basin of Lake Maracaibo; to the southeast spread the great plains (llanos) and forest; and south of the Orinoco River lie the unoccupied and largely unexplored Guiana Highlands, accounting for about half the country's total area. The Orinoco, which is more than 2,900 km (1.800 mi) long and has over 70 mouths and a delta of nearly 23,300 sq km (9,000 sq mi), drains four-fifths of Venezuela. There are more than 1,000 other rivers. About 90 % of the nation's population is concentrated between the northeastern plateau of the Andes, on which is located the capital, Caracas, and another Andean extension to the west along the Venezuela-Colombia border, covering approximately one-fourth of the total national area.

Outstanding geographic features include Angel Falls (979 m/3,212 ft high) in the Guiana Highlands of southeastern Venezuela, the highest waterfall in the world; the navigable Lake Maracaibo in the west, which is about 80 km (50 mi) wide and 210 km (130 mi) long and is accessible to ocean shipping; and Pico Bolívar in the Sierra Nevada de Mèrida, the highest peak in Venezuela (5,007 m/16,427 ft).

CLIMATE:

Although Venezuela lies entirely within the torrid zone, generally there are four climatic regions, based mainly on altitude: tropical, up to 760 m (2,500 ft) in elevation; subtropical, from 760 to 1,830 m (2,500 - 6,000 ft); temperate, from 1,830 to 2,740 m (9,000 ft); and cold, above 2,740 m (9,000 ft). In the tropical region, including the cities of Maracaibo and Ciudad Bolívar, mean annual temperatures range from 24o to 35 oC (75 - 95 oF). In the subtropical region, where Caracas is situated the means range from 10o to 25 oC (50 - 77 oF). In January in Caracas the average minimum and maximun temperatures are 15 oC (59 oF) and 26 oC (79 oF), respectively; the range in July is 17 - 26 oC (63 - 79 oF).

LANGUAGES:

The official language is Spanish. It is fairly standardized throughout the country among the educated population, but there are marked regional variations

RELIGIONS:

Venezuelans are constitutionally guaranteed freedom of religion provide a faith "is not contrary to public order or to good customs." The 1961 constitution also stipulates that no citizen may refuse to obey the law on religious grounds. In 1980, an estimated 95 % of the population was Roman Catholic. There were also about 212,000 tribal religionists, 140,000 Protestants, 122,000 Afro-American spiritists, and 17,000 Jews.

TRANSPORTATION:

The most important mode of domestic cargo and passenger transport is shipping over the country's more than 16,000 km (9,900 mi) of navigable inland waterways. A large percentage of Venezuelan tonnage is carried by ships of the government-owned Venezuelan Navigation Co. In 1981, the merchant fleet had 64 vessels of over 1,000 gross tons, for a total GRT of 613,000. Shallow-draught ships are able to reach Colombian river ports in the wet season. Shallow-draught river steamers are the principal means of transportation from the eastern llanos to Puerto Ordaz, which, thanks to constant dredging, is also reached by deep-draught oceangoing vessels. Dredging operations also are maintained in Lake Maracaibo to allow the entry of oceangoing tankers. The government has inverted substantially in the port of La Guaira, hoping to make it one of the most modern in the Caribbean area; five new docks were completed at La Guaira in 1979. Puerto Cabello handles the most cargo, and Maracaibo is the main port for oil shipments.

The passenger railway network, formerly consisting of six lines, has diminished to one line of only 268 km, linking Barquisimeto with Puerto Cabello. Plans for the network to be expanded massively, to 3,900 km, have existed since 1950. The

scheme would include two north-south lines and one east-west line; however, little progress had been made by 1985. Other lines exist for the transportation of iron ore.

A 50 km underground railway project in Caracas has been under construction since 1976, and the first stage, a 20 km east-west rapid transit line, was completed in 1983 at a total cost of over 7,000m. bolivares. In 1981 Venezuela had a total of 62,449 km of roads, of which 22,975 km were asphalted. There are major highways linking Caracas with Ciudad Guayana (with a continuation to the Brazilian border), and Caracas with the Colombian border, near Cûcuta, via Valencia and Barquisimeto, with branches to Maracaibo, Coro and Puerto Cabello.

Venezuela has nine major ports for general cargo 34 petroleum and mineral ports, and five large fishing ports.

The main port for imports is La Guaira, which is close to Caracas, while raw materials for the industrial region around Valencia are handled at Puerto Cabello,and Maracaibo is the principal port for the petroleum industry. Shipments of iron ore from Cerro Bolivar are made from Puerto Ordaz, on the Orinoco river, which is navigable for about 1,120 km.

Steamer services operate on Lake Maracaibo. The Instituto Nacional de Puertos, the national port authority, has planned an expansion of cargo handling capacity to meet requirements to 1995, which will include the construction of a new port, Carenero, capable of handling 2m. metric tons of general freight and 300,000 tons of grain annually.

There are two adjacent airports 13 km from Caracas: Simôn Bolivar handles international services, and Maiquetîa handles domestic flights. In total, there are 61 commercial airports, of which seven are of international status.

FISHING:

Fish and fish products play a relatively minor role in Venezuela's international trade, but fish are extremely important domestically. Venezuela has the highest per capita fish consumption in Latin America, about three times that of the US. The principal fishing areas La Guaira, the Paraguanà peninsula, and the Cariaco-Margarita-Carûpano area. The total catch in 1980 was 171,800 tons, up from 126,000 tons in 1979.

The fish-canning industry, begun in the 1940s, has had difficulty finding a market, since there has long been a preference for imported canned fish of higher quality. In recent years, however, exports to the US and the Netherlands Antilles have increased. Tariff protection and improvements in quality have helped the industry.

HISTORY:

The coast of what is now Venezuela was first sighted by a European in 1498, during Chistopher Columbus's third Spanish expedition to the 'New World'. In 1499 a Spanish **conquistador**, Alonso de Ojeda, reached Lake Maracaibo, and the Amerindiam villages, constructed on poles over the lake, reminded him of little Venice hence the name Venezuela. However, the region was to prove an economic disappointment. It had pearls, and there was a short-lived pearl boom around Cubagua and Margarita, but it lacked both good mining potential and settled and exploitable agricultural tribes; the indigenous Indian population, largely of Caribs and Arawaks, was scattered, unlike those of Mexico, Peru or even neighbouring New Granada (present-day Colombia). The land of El Dorado was thought to lie some where in the Orinoco delta, and there were rumours of a populous kingdom and a large inland sea. These myths attracted German bankers, and as a recompense for their financial services, Charles V. awarded the Captaincy of Venezuela to the Welsers; however, it brought them no great profit. A later victim of these ilusions was the English navigator, Sir Walter Ralegh.

In 1777 Venezuela became a Spanish Captaincy-General, with an enhanced degree of administrative autonomy, but remained part of the Viceroyalty of New Granada. Its population was mixed: Spanish (many canarians), Indians and black slaves transportated from Africa. The local Roman Catholic Church was comparatively poor and lacking in influence. However, the 18th century witnessed growing commercial prosperity in the territory. A company of Basque merchants, the Caracas Company, obtained a monopoly of the territory's foreign trade in 1724 and, despite local jealousy and opposition, succeeded in developing new markets for the local produce, particularly cocoa and, later, coffee. Venezuela became something unusual in the Spanish empire: a successful agricultural colony with an export trade to Europe and other parts of the Spanish empire, and to the islands of

the Caribbean. This trade was sufficient to sustain a small élite of European planters, who were rich enough to earn the Spanish nickname of the Marqueses de Chocolate. It was a member of this class, Simón Bolívar, who emerged as the leader of the movement for independence in all northern Spanish America in the two decades after 1810. Venezuela became a separate republic in 1830, on the break-up of Bolívar's 'Gran Colombia', which comprised what is now Venezuela, Colombia, Ecuador and Panama.

Until 1935, Venezuelan history was characterized by long periods of authoritarian rule including the regimes of José Antonio Páez (1830-46 and 1861-63), Antonio Guzmán Blanco (1870-88) and Juan Vicente Gómez (1908-35), alternating with shorter periods of more democratic instability. The legacy is still apparent in the Venezuelan combination of respect for authority and an insistent democratic rhetoric . Venezuela's evolution on modern democratic lines dates from the death of Gómez in 1935. The process was interrupted by a military regime, headed by Marcos Pérez Jiménez, between 1948 and 1958, but, since his downfall, it has shown every sign of being consolidated. The dominant figure in recent Venezuelan political history was undoubtedly Rómulo Betancourt, the founder of the Acción Democrática (AD) party. Betancourt's democratic convictions derived from his early experiences of opposition to Gómez, and from 1945 to 1948 he was provisional President under a revolutionary seven-member junta, which had over thrown another dictator, Isaías Medina Angarita. Betancourt was a realist, with a sound practical understanding of Venezuela's place in the world. His policies during his second period of office (1959-64) and those of his successor, Raúl Leoni, revived the nation's finances after Pérez Jiménez had left the economy heavily in debt.

At the beginning of the 20th century, Venezuela's principal export was coffee; Venezuela had been the world's third largest producer of coffee in the 19th century, after Brazil and Java. By the end of the Gómez era, petroleum had overtaken coffee, and Venezuela's importance as a petroleum exporter was enhanced by Mexico's nationalization of its petroleum industry (in 1938) and by the outbreak of the Second World War (in 1939). Gómez was a skilled negotiator, although he made no clear effort to distinguish between the interests of his country and those of himself and his entourage. After 1935 Venezuela's capacity in negotiation clearly increased, and it can claim to have been responsible for much of the preliminary planning that culminated in the creation of the Organization of the Petroleum Exporting Countries (OPEC), of which Venezuela was one of the five founder-members.

OPEC was formally constituted at a conference in Venezuela in January 1961. Venezuela's petroleum industry was finally nationalized in 1976, but the process was gradual and carefully co-ordinated with the oil companies which operated in the country.

The dominance of the Venezuelan economy by petroleum has, inevitably, had political consequences. The Venezuelan Government receives extraordinarily high revenues, compared with those of neighbouring countries, and it does not have to tax the income of its citizens in order to obtain such revenues. One consequence is the enormous patronage that governments dispense, while another is the very large amount of money that goes into politics. The first produces an inflated and inefficient public sector, while the second results in electoral campaigns that must, by constitutional law, last for at least six months. However, Venezuela's wealth has also been intelligently used in restructuring civil-military relations, in bringing to a swift and humane end the small guerrilla conspiracies of the 1960s, and in promoting many advances in welfare and education. Venezuelan consumerism is the most spectacular in Latin America, and the benefits of the country's prosperity are quite widely distributed. Public liberties are secure, and Venezuela enjoys one of the best records in the Americas for respecting human rights. Since 1945 there has been substantial immigration from Spain, Portugal and Italy, as well as from elsewhere in Latin America.

PART ONE

THE PRESENT MARITIME SITUATION IN VENEZUELA

CHAPTER I

THE MERCHANT MARINE DEPARTMENT

I-1 THE CONSTITUTIONAL/STATUTORY POSITION AS REGARDS RESPONSIBILITY FOR MERCHANT SHIPPING AND PORTS

According to Venezuelan Legislation the Ministry of Transport and Communications has the responsibility for merchant shipping and ports and to fulfil this task the "Director General Sectorial of Aquatic Transport" has been designated.

Therefore, the Director General Sectorial of Aquatic Transport, through the Regulations of the Captain and Merchant shipping covers the primary objetive that is to develop, regulate, and comform to relevant International Laws and Conventions.

These regulations have been approved by the President of the Republic through Supreme Decree and make clear the policy of the Venezuelan Government as regards merchant shipping and ports.

The Government policy is complemented through directorial resolutions and ministerial resolutions that publish rules and regulations that need to be promulgated under the aforesaid primary legislation.

There are many maritime conventions relating to maritime safety, to which Venezuela is a party.

However, the various rules/regulations are yet to be promulgated so as to facilitate enforcement and compliance.

Specific officers of the merchant marine were assigned to deal with matters pertaining to the maritime safety of merchant ships.

The Ministry of Transport and Communications, through the Director General Sectorial of Aquatic Transport, has to perform the following duties:

- The registration of ships and all relevant matters.

- Issue safety certificates to Venezuelan ships through the recognized classification societies.

- Issue licences to other craft and fishing vessels.

- Issue and control seamen's ID cards and the maritime certificates of competency.

- Appoint the investigations committee and its procedures in cooperation with other authorities.

- Issue a trading permit for Venezuelan ships.

- Put forward the necessary recommendations for improving and enlarging the protection of the national shipping trade.

- Recommend to the Council of Ministers the ratification of maritime conventions and agreements.

The Venezuelan Seaports Authorities (INP) is the authority responsible for Venezuelan ports, except oil ports, which are under the jurisdiction of "Petroven". The Nactional Institute of Ports (I.N.P.) is the headquartes for Venezuelan Ports and issues regulations under the following headings:

A.- Regulations for vessels in ports including:

- Arrival, departure, pilotage, towage, berthing, unberthing and shifting of vessels.

- Loading and discharging vessels, fire precautions and firefighting.

- Vessels in distress within harbours.

B.- Regulations for port operations including:

- Road traffic and general good order in the port, communications and safety.
- Handling, storage and delivery of goods.
- Containers and Ro/Ro operations.

C.- Regulations for port safety including:

- General and special safety regulations pertaining to dangerous goods.
- Special Safety regulations pertaining to tankers.

D.- Rules and regulations for navigation including:

- Navigation rules and signals for approaches and anchorages in the Venezuelan fairways and ports.
- Maritime Buoyage.

I-2 STATUS OF PRESENT MARITIME LEGISLATION

LEGISLATION - OBJETIVES

The very nature of merchant shipping demands that all the related activities involved be carried out under set laws and regulations. Depending on the policies and regime of a country, these laws are grouped into either a Maritime Code or a Merchant Shipping Act.

Basically, the main sources of these laws are long established practices laid down by tradition that can be traced right back to the Middle Ages. These national practices have been collected at the level of international fora, examined, screened, and made into international maritime law which in turn, has served as the source of international conventions which have now become the source of national maritime legislations.

Long established maritime nations like the United Kingdom, the United States, the U.S.S.R., Norway, Sweden and France to name just a few have thus contributed immensely to the establishment of the present International Maritime Law.

It is to be noted that the process described above continues today in a more modern way. This explains why:

- Some maritime related fields, not regulated by international laws, are regulated by certain national legislations.

- Certain maritime related areas are regulated by law, the provisions of which are more stringent in some national maritime legislations than they are in the international convention from which they are supposed to draw their source.

Thus, it is well known that maritime legislation is one of the fundamental factors for the development of merchant shipping in every country.

Without an up-to date and complete legislation, clearly and precisely worded and with effective sanctions, the pursuits as well as the government's policy, and the establishment of an efficient maritime department, are not possible to achieve.

As far as Venezuela is concerned the maritime administration needs to be restructured and the funtions of each departments designated in a proper way. On the other hand, we the Venezuela people are very lucky because we have all the tools in our National Legislation to start this work.

The various existing maritime laws and regulations, which are relevant to the operations and activities of the Merchant Shipping Department, are as follows:

1.- Law regarding the continental shelf, dated October 30, 1958.

2.- Law of territorial waters and the contiguous zone, date October 30, 1958.

3.- Law regarding the conservation of the environment in the sea, dated October 30, 1958.

4.- Law regarding the International Convention for the Prevention of Pollution of the Sea by Oil, 1954.

5.- Law regarding the International Convention on Safety of life at Sea (SOLAS 1960).

6.- Law regarding the International Convention on Load Line 1966.

7.- Law regarding the ratification of the IMCO Convention.

8.- Law regarding the Merchant Shipping Act, dated August 09, 1944.

9.- Law regarding Pilotage, dated August 06, 1971.

10.- Law regarding the titles (certificate of competency) in the Merchant Marine. dated January 03, 1973.

11.- Law to protect the development of the National Merchant Marine, dated July 25, 1973.

12.- Law regarding the territorial waters, Continental shelf, fishery protection and air space, dated August 17, 1956.

13.- Law in order to establish the Economical, exclusive zone EEZ, dated July 26, 1978.

14.- Rules regarding the expedition of certificatee, patents and navigational licences, dated October 28, 1944.

15.- Rules regarding the log book, dated July 20, 1951.

16.- Rules regarding the crew list, dated July 26, 1951.

17.- Rules regarding the register of the seafarer in general, fishermen and recreation, dated July 26, 1951.

18.- Rules regarding the reception and delivery of ships by the authorities, dated September 17, 1951.

19.- Rules regarding the expedition of certificates of seaworthiness and load lines, dated October 31, 1953.

20.- Rules of the Maritime firefighting brigade, dated May 20, 1968.

21.- Rules regarding the National recreative Marine, (pleasure vessels, marinas, etc), dated February 02, 1979.

22.- Rules regarding Tonnage Measurement, dated November 20, 1957.

23.- Rules regarding how to avoid collisions at sea (Collreg 1960), dated August 21, 1970.

24.- Mortgage Law.

25.- Rules regarding: El Fondo para la Capacitación Profesional del Personal de la Marina Mercante. (fund for training of personnel,etc).

Also, different resolutions and Decrees regarding the above mentioned matters.

Further, there are many rules/regulations (subsidiary legislation) which need to be drafted and promulgated.

I-3.- PRESENT FUNCTIONS AND ACTIVITIES OF THE MARITIME ADMINISTRATION

The development of the marine transport sector has moved along many parallel lines, all departing from a specific point which takes the best modern information and relates same to the framework of responsibilities held by the Republic of Venezuela as an active member of the global community.

This development has included the utilities and activities of marine transport at the local, regional and international levels.

The Maritime Administration is under the authority of the Ministry of Transport and Communications.

Along the national coast, the Maritime Administrative funtions are carried out by the local maritime districts.

The organization and the roles of the local maritime districts are fixed according to the published version in the internal regulations official gazette No. 3792 of 01 June 1983.

Abroad, the Maritime Administration funtions depend on the competency of the Venezuelan Consular Authority.

Briefly, the objective of the Venezuelan Maritime Administration is to give the government a system which is able to make efficient funtions which are embodied within the Maritime Code and the implementation of the requirements of International Maritime Safety Convention to which Venezuela is party. Such administration is also responsible for the different surveys and certification of ships, training, examination and certification of masters and officers, crew matters and registration of ships, etc.

DIRECTOR GENERAL SECTORIAL OF AQUATIC TRANSPORT

- Advise the Minister of Transport and Communicaction

- Propose the policies which are best for the development and protection of national shipowners.

- Manage and supervise the rates of maritime transport.

- Establish the cargo reserve (*) in conjuntion with the National Council of the Merchant Marine.

- Collect and act upon all the information and statistics concerning the evolution and tendencies of maritime transport with reference to the influx of traffic and goods between Venezuela and other countries.

- Perform other duties according to the rules, laws and resolutions.

DIRECTOR OF AQUATIC NAVIGATION

This department has the following responsibilities and funtions:

- Advise the Director General Sectorial of Aquatic Transport.

- Carry out studies such as marine surveys and navigation assisting projects, and following - up and supervise their execution.

(*) The Venezuelan law for protection and develop of the National Merchant Marine, state provisions on reservation of certain parts of the transportation of cargo to the national ships with property title registered in the Country in accordance with the Venezuelan law.

- Establish the procedure for overseeing and controlling marine, riverine and lake navigation.

- Control the implementation of the international conventions related to navigation and safety procedures promulgated by the IMO and referring to the pollution of the sea by ships and to investigate marine casualties.

- Prepare and issue navigation bulletins and distribute them to the projects concerned.

- Establish the procedures and norms for controlling maritime documentation (certificate of competency) automization and certificates of the crew including fishing and sport.

- Promulgate the supervision program of the Director General regarding the development and conservation of the National navigational aids system.

- Manage, coordinate and supervise the activities and evaluate all this work in order to inform its superiors.

- Administrate ship measurement, expedite licenses, titles, patents, special authorization and temporary renewals and other services required related to rules in navigational matters.

- Contribute to the education and technical support of personnel in the field of the marchant marine and fisheries.

- Appraise companies for their qualifications in carrying out marine safety projects.

- Control the extraction of sand in the costal zone.

- Study wreck removal projects and supervise their execution outside the port limits of Venezuela.

- Control the rules regarding cargo reserve.

- Perform other duties according to laws, rules and resolutions.

CAPTAIN OF PORT

- Advise the Director General of Aquatic Transport.

- Control and supervise the performance of the port's captaincy and the different services of this competency.

- Establish the norms and procedures for register control, the arrival and departure of all ships which are moving within the jurisdiction of each captaincy.

- Give the services of search and rescue, comprising the Marine Fire Department and the Marine Policy of the Port Captaincy.

- Supervise the service tariffs within their jurisdiction.

- Manage and maintain the radiocommunication system in the Direction General Sectorial and its interrelation with the communications system in his office.

- Control the applications for the extraction of sand along the coast and all matters regarding the construction and exploration of the coast and territorial waters.

- Manage, coordinate and supervise the activities within their jurisdiction in order to evaluate and inform.

- Contribute to the education and technical support of personnel within the field of the merchant marine and fisheries.

- Perform other duties according to the laws, rules and resolutions.

I-4. TOTAL NUMBER OF OFFICERS IN THE MARITIME ADMINISTRATION QUALIFICATIONS AND EXPERIENCE STIPULATED FOR DIFFERENT POSTS:

The Direction of Navigation of Aquatic Tranport, has overall control regarding these matters. The surveyor's duties are planed and coordinated with the Captains of ports and the above mentioned divisions, the number of such officers is listed in table No.1

The Number of marine officers in the Maritime Safety Administration.

Some are merchant marine officers qualified in these matters and certain others are those of the maritime police, well-trained in these fields, to develop duties in the best manner possible.

TABLE 1

Number of officers in the Administration and location of such officers

Place	Present Actual Number	Number according to plan
Maracaibo	2	3
Las Piedras	1	-
La Vela de Coro	-	-
Pto. Cabello	5	6
La Guaira	25	56
Guanta Pto. La Cruz	3	-
Puerto Sucre	-	1
Pampatar	-	1
Carupano	-	2
Guiria	1	2
Ciudad Bolivar	3	2

CHAPTER II

SHIPS AND RELATED MATTERS

II-1 NUMBER OF NATIONAL SHIPS AND THEIR PARTICULARS:

The national fleet is composed of all the ship flying the Venezuelan flag and registered in Venezuela.

The concept of the national fleet does not necessarily mean that ships be used only in traffic in which Venezuela should be a point of departure or destination.

A Venezuelan ship could be chartered to a shipowner, loader, or carrier who could use her more or less freely, according to the conditions of the agreement.

The merchant fleet is composed of 279 ships, which are divided into:

TABLE 2

MERCHANT FLEET

Fleet	No.	Gross Tonnage
Steamships	5	5,993
Motorships	274	992,303
Total	279	998,296

Total deadweight..... 1,428,634

TABLE 3

VENEZUELA'S NATIONAL FLEET
(ANALYSIS BY PRINCIPAL TYPES)

Fleets	No.	Gross Tonnage.
Oil Tankers	22	458,900
Oil/Chemical Tankers	01	11,410
Chemical Tankers	01	4,806
Liquefied Gas Carries	02	23,958
Ore & Bulk Carries	06	85,569
General Cargo Single Deck	18	36,922
Multi-Deck	47	268,479
Container Ships & Lighter Carries	01	497
Fishing Factories & Carries (inc. Canneries)	01	199
Fishing (inc. Factory Trawlers)	93	32,006
Ferries & Passenger Vessels	14	21,857
Supply Ships & Tenders	07	1,312

Tugs	57	15,169
Dredgers	03	34,067
Livestock Carries	01	1,344
Research Ships	02	208
Miscellaneous (Non-Trading)	03	1,593
Total.....	279	998,296

TABLE 4

OIL TANKER FLEETS

Fleet	No.	Gross Tonnage
Steamships	1	3,164
Motorships	22	467,146
Total	23	470,310
Total Deadweight.....		769.411

OIL AND BULK CARRIER FLEETS

Fleets	No.	Gross Tonnage
Steamships	-	-
Motorships	6	85,569
Total	6	85,569
Total Deadweight.....		142,095

The average age of the national fleet is 10 years. This is distinctly below the average for both world and developing countries fleets which are closer to fourteen years.

Source: Lloyd's Register of Shipping Statistical tables, 1986.

II-2 REGISTRATION OF SHIPS - RULES AND PROCEDURES

Every national craft, of any tonnage, for free navigation in or outside the home waters must be registered.

The registration of a ship is used as evidence of the right to fly the flag of the state as well as of the right of ownership and of mortgages. Therefore, the state has jurisdiction and control in technical, administrative and social matters over ships flying its flag.

According to the Law of the Sea Conventions which lay down the principles of the exclusive jurisdiction of the flag state over ships, it is obligatory that a ship should have a nationality i.e should be registered in a given country whose flag it is entitled to fly.

Rules and regulations will be enacted in the national legislation to that effect. As soon as a ship is registered in a country, there is a link between the ship and that country. Then the ship must comply with the national legislation of the country concerned. It is for these reasons the process of registration of ships should be performed by a competent maritime administration in every country.

The rules and regulations of the National Law relating to the registration of ships are to be assumed, implemented and enforced by the Maritime Administration . In general, these are incorporated in the Merchant Shipping Legislation in accordance with the International Conventions.

The ships of Venezuela are being registered under a navigational law and subsidiary regulations dealing directly with this matter. The President of the Republica serves as the registrar of ships assisted by the Minister of Transport and Communications who is subsequently assisted by the Director of Aquatic Transport as regards tonnage measurements the present procedures adopted for the registration of ships are found to be satisfactory.

It is also important to register fishing vessels. To promote the fishing industry in the country, all equipment on board fishing vessels and the Certification of Fishermen should be examined carefully. It is very useful for the country to sign a regional agreement with the neighbouring countries to fish in the waters of jurisdiction.

RULES RELATING TO THE REGISTRATION OF SHIPS, EXTRACTED FROM THE NATIONAL MARITIME LEGISLATION

1.- Venezuelan ships have to be registered in the Venezuelan Book of Registration of Ships which comes under the responsibility of the Maritime Administration Authority.

2.- Each ship has to have a registration in which the following points are prescribed:

- The registration order number and the date of inscription.
- Every single element of the ship such as name, tonnage, port, etc.
- The time and the place where the ship was built and the name of the builder.
- The name and address of the ship-owner and the name and address of the share-holder or share-holders, indicating their number of shares.
- The certificate of property.
- The cause and the cancellation date of registry.

3.- Each modification relating to the above must be prescribed in the Register Book. Ships in the following situations are supposed to cancel their registry:

- Sunk, destroyed or demolished.
- Lost or considered lost (missing).
- Declared unrepairable or its reparation is not necessary for one reason or another.
- Does not have the required nationality any more.

- Is sold abroad.

4.- In case the ship is unrepairable or its reparation is not necessary for one reason or another, its registry cancellation should not be done without the mortgagee's assent.

5.- A ship is considered lost if she is not heard of for the period of three months.

6.- A ship is considered unrepairable when the reparation is impossible or could not be done at the location where she is and she cannot sail to another location where reparation could be done.

7.- Reparation of a ship is considered unnecessary when the charges are higher than the value of the ship at the departure of her voyage or, if she was not underway than her value before the accident.

8.- The book of registry can be read by any one who desires so. In other words it is open to the public.

9.- Every application for registry shall be accompanied by the following documents:

- The declaration of ownership.

- The builder's certificate, that is to say, a certificate signed by the builders of the ship.

10.- A ship registered abroad cannot enter the Venezuelan Register Book before the withdrawal of her current registry.

11.- Venezuelan ships cannot be registered abroad before withdrawal from the registry in the National Registry Book.

12.- The elements of identification of a ship are: name, tonnage port of registry and nationality.

13.- The distinctive number or letters must be marked on the ship in Latin letters.

14.- Each ship must have a name which is not already given to another one. The name is chosen by the owner. The giving and changing of names must be approved by the Maritime Administration .

15.- The name of the ship shall be marked on each of her bows and her name and the name of her intended port of registry shall be marked on her stern.

SYSTEMS FOR SURVEYS, INSPECTIONS AND ISSUE OF APPROPRIATE SURVEY AND INSPECTION CERTIFICATES TO THE VENEZUELAN SHIPS

Survey work is one of the most important aspects of the regulatory funtions of the Maritime Safety Administration of a country.

Once a ship is registered, it is the duty of the flag state to ensure that the required standards as regards safety of life at sea, the safety of navigation and the protection of the environment are maintained.

These standards are set out under the relevant regulations in the Merchant Shipping Act of the country and cover the specifications, testing, installation and maintenance of a wide range of safety equipment and fittings on board. The ships which after surveys have been found to meet the relevant criteria are issued with safety certificates.

The various types of periodical surveys/inspections of ships in accordance with the relevant Rules/Regulations conforming to International Standards (Conventions) and national requirements, and the issuance, if justified, of one or more of the following certificates to each ship, include the following:

1.- a) Passenger Ship Safety Certificate.

b) Cargo Ship Safety Equipment Certificate.

c) Cargo Ship Safety Construction Certificate and its supplement.

d) Cargo Ship Safety Radio-telegraphy / Radio-telephony Certificate.

e) Tonnage Certificate.

f) International Oil Pollution Prevention Certificate.

g) International Pollution Prevention Certificate for the carriage of Noxious Liquid Substances in Bulk.

h) Exemption Certificates where necessary.

2.- Intermediate surveys/inspections of ships so as to verify that the ships and their equipment continue to be so maintained as to warrant the continued holding of the appropiated Certificate (s).

3.- Inspection and detention of unseaworthy / unsafe ships.

4.- Co-ordination of the work of the Classification Society to whom statutory funtions may be delegated as regards surveys of national ships.

- As regards the basic guidelines for Surveys, Inspections of Ships having due regard to their construction, machinery, equipment and age, IMO has developed a set of such guidelines to be made available to the future inspections, and surveyors of the Safety Division.

- The aforesaid form of the basic guidelines in relation to the various IMO Conventions specified are to be complied with and ensured for the various surveys/inspections. The detailed requirements are to be in the relevant Rules/Regulations.

As far as Venezuela is concerned, the systems for surveys and inspections of ships came under the responsibility of the Navigation Division (MSA).

The present system has the following features:

- There is a specific cadre for this purpose.

- The Merchant Marine Officers carrying out such surveys and inspections have had the benefit of special training for such work.

While as a matter of convenience the relevant international IMO Conventions (e.g SOLAS convention, 1974) have been made part of the law, detailed rules/regulations have not been promulgated so as to facilitate enforcement and compliance.

There is at present in Venezuela a survey society which has the primary mission to collect all the surveys in order to regulate and standardize such matters.
It deals with all the activities in the maritime field.

The system for the issuing of appropiate survey and inspection certificates, contains all matters regarding the IMO Conventions. However it needs to be restructured and brought further up to date in order to facilitate the issuing of such certificates.

CLASSIFICATION SOCIETIES - CERTIFICATION OF SHIPS

A contracting Government's obligations under the Convention system are of two main types:

a) As a Port State ensuring that foreign ships visiting its ports are safe to proceed to sea.

b) As a Flag State ensuring that its ships meet the standards of the Conventions and that it carries out certain other duties in respect of safe manning and investigates casualties to its ships and reports to the organization accordingly.

The allocation of available resources between these two functions provides a mayor problem for countries. The longer and more vulnerable the Coastline and the greater the number of ships' visits the larger the propotion of surveyors' resources employed on Port State Control.

This may mean the provision of a very large force of Inspectors even though the country has a relatively small fleet. In this category one might include the United States with its intensive Coast Guard Service and France with its Security Centres spread all along the littoral state. On the other hand, some countries with relatively short Coastline have large Merchant Fleets and the proportion of resources employed on Flag State duties will be greater. For most countries there is a near balance and then some surveyors can be employed for both duties.

However, it has been recognised that no Government has a Safety Division extensive enough to perform all its obligations under the Conventions and it is a question of judgement as to which of these obligations can be undertaken by organizations acting on its behalf.

This delegation is permissible under the Convention System but it does not relieve an Administration of its responsibilities and in particular its obligation is clearly defined in Regulation 6 (e) of the Protocol of 1978 relating to the International Conventions for the Safety of Life at Sea, 1974, which states:

" In every case, the Administration shall fully guarantee the completeness and efficiency of the inspection and survey, and shall undertake to ensure the necessary arrangements to satisfy this obligation".

The problem for each Administration is how to fulfil the international obligations for both Flag and Port State activities, without excessive cost and perhaps with a limited number of qualified surveyors.

Delegation:

Subject to the Administration's guarantee mentioned above the convention permits an Administration to nominate surveyors or recognised organizations to conduct both surveys

and inspections. In general, it may be said that Port State inspections are normally performed by Government surveyors and general inspections are either performed by Government surveyors or by private organizations (other than Classification Societies) or individual surveyors appointed by the Administration. Statutory surveys are almost invariably dealt with by either government surveyors or by surveyors of the Classification Societies (who class ships for insurance purpose).

As has been previously implied, no Administration has sufficient resources to deal with statutory surveys required under the Conventions without the assistance of the Classification Societies who maintain World Wide networks of qualified surveyors.

In its initial stage of development, the Maritime Administration may also usefully delegate its resposibilities regarding surveys/inspections of its ships, either in full or in part to Classification Societies of international repute such as the American Bureau, Lloyd's Register of Shipping Germanischer Lloyd, Bureau Veritas, Det Norske Veritas, Nippon Kaiji Kyokay, and Registro Italiano. However, the Administration (Safety Division) would have to back up the Classification Societies, performing statutory funtions. It is essential that the Societies are aware of the extent of the delegation accorded to them. The Safety Division must give guidance and this should be contained in a written agreement which states that the Societies are to survey to the minimum requirements of the appropiate Conventions applicable to every ship according to its age, type and nature of its voyage. Clear instructions should be issued laying down the action to be taken by the Societies' representatives. In the event that safe and seaworthy conditions cannot be maintained on any ship or if it is suspected that they cannot be maintained, Societies should be provided with the national Rules/regulations. Surveys refer to surveys for statutory certificate purposes under the Convention. Inspections refer to Port State inspections of an Adminitration's own ships.

II-4. THE CLASSIFICATION SOCIETIES RECOGNISED AND DELEGATED WITH STATUTORY FUNTIONS

The International Classification Societies are specialists in the technology of shipbuilding and construction

as prescribed by international agreements. These non-governmental organizations (Societies) have experts in the various branches of shipbuilding and marine engineering. The International practice is for each state to authorize some of these societies to supervise the building of ships carrying their flag and then survey and issue certificates for the ships in accordance with the international conventions to which each particular state is a party.

The Division of Aquatic Transport of the Minister of Transport and Communication has, on behalf of the Republic of Venezuela, authorized five of the Internationally recognised Classification Societies to inspect and certify vessels flying the Venezuelan Flag. These Societies have representation in most of the World's ports and are therefore able to maintain the necessary contact with the vessels during their normal working operations when it is difficult or impossible for the vessels to remain in continuous contact with their home (Venezuelan) ports.

The classification Societies operate under two different conditions:

1.- For Statutory Certifications.

In this case,the Societies' surveyors are operating as representatives (agents) of the government of Venezuela.

2.- For Classification Surveys.

In this case, the surveyor is operating as a representative of the classification society to enable the vessel's owner to obtain certification showing that the vessel has been maintained in a satisfactory condition in all respects; (actual condition of hull and machinery).

As stated by Ministerial order No. 32, 09 June 1.955 the President of the Republic has authorised Lloyd's Register of Shipping survey to assign load lines to all national ships.

II-5 MAINTENANCE OF RECORDS / PLANS OF NATIONAL SHIPS

In Venezuela the records and plans for national ships are generally carried out by the Merchant Marine. (Directorate of Aquactic Navigation) with the participation of other concerned national bodies.b

On completion of the registration requirements under the Venezuelan flag, a registration certificate is issued with a Trade Certificate (Navigation Licence). A special file is then opened in the ship's name with the respective registration number.

According to the Merchant Shipping Act, copies of the registration and Trade Certificates must be sent to the Ministry of Transport and Communications upon the inspection and surveying of the ship by the officially delegated Classification Societies concerned.

A list of safety certificates are required to be issued by them, copies of which are to be kept on file at the respective registration office.

Other Venezuelan maritime crafts which may apply for registration are:

1.- Fishing vessels and boats which do not exceed thirty tons gross tonnage or do not exceed 65 feet in length and are working along the Coast and inside the regional waters of the Republic of Venezuela.

2.- The pleasure and diving boats not exceding ten tons gross tonnage and not exceeding 36 ft in length and which are sailing only within the coastal waters of Venezuela.

3.- Barges and pontoons.

The marine inspection office shall enter the above units in special registers and they shall be given a serial number according to the priority of registration.

A seacraft register certificate shall be given to these units, in which the name of the owner, his nationality and address, the type of the unit, its dimensions and name, and the selling price, shall be recorded. The number of the seacraft register certificate shall be the number of its registration.

A copy of the marine work permit and seacraft registration certificate will be kept in a special file, with the documents and the inspections certificates and shall be given the same serial number of the unit separated from the files of the registration of the ships.

In the ship's file the following items must be kept as well:

a.- Application of owner ship.

b.- Bill of sale.

c.- Construction Certificate.

d.- Deletion from previous registry.

e.- Safety Certificates.

f.- A copy of the registry certificate.

g.- A copy of the Trade Certificate.

h.- Any other necessary documents.

II-6 PROCEDURE FOR DETENTION OF UNSEAWORTHY SHIPS:

Every ship in every Venezuelan port could at any time, be controlled by the Maritime Administration Authority.

The purpose of this control is to check the Safety Certificate validity and to ensure that the ship is in good condition for navigation, labour, crew accommodation and in general if all the indications reported in the Certificates correspond to the real state.

In a case in which the ship does not comply with the international safety requirements, the Maritime Administration Authority has to take the necessary measures to prevent the ship sailing by either keeping the ship's safety certificates or refusing to extend them until all the safety requirements are fulfilled.

In the case of foreign ships, the nearest representative of the flag country should be informed. He may request an inspection by a local commision which can then issue temporary safety certificates.

CHAPTER III

TRAINING AND CREW MATTERS

III-1 SYSTEM OF MARITIME TRAINING

GENERAL

An important factor, which determines , to a large extent , the pace of the economic and social development of a country, is the degree to which it participates in world trade. The ability to engage in vigorous trading is normally the sign of a healthy economy.

Many nations, particularly in recent years, have seen the wisdom of exercising control over the carriage of their own imports and exports and have subsequently decided to direct financial and human resources to the establishement of their own shipping industries.

Such industries are recognised to be of great value to countries in terms of providing a pool of skilled manpower, competent to assist in the development of not only shipping, but also other related industries, by moving into the shorebased organizations which are essential to enable full maritime development to take place. This, the development of a shipping industry and national participation in world trade depends not only upon the provision of the money necessary to build ships and ports and to finance other projects, but also requires specialised maritime personnel who are capable of running and operating these projects efficiently.

In recent years, three main developments have transformed world shipping and now dominate the nature of the world's maritime industry. These are:

a) The increasing interdependence between countries as technology and communications develop.

b) The establishment of global standards for such things as vessel construction, the training of seafarers and pollution control.

c) The impact which technology has had on the design and operation of marine craft.

For this reason, the teaching and training of personnel responsible for operations within the maritime sector is an extended and costly undertaking. It is now vital to ensure that adequate provisions are made for the training of the necessary staff to the required standards. The doors must be kept open for nationals wishing to receive education and training in maritime skills, and the only way to enhance the competence of the personnel onboard is through training.

In essence the adoption of the Convention on Standards of Training, Certification and Watchkeeping in 1978 by the IMO is a recognition of the importance of personnel training onboard.

This instrument is considered, justifiably so, to be a landmark in nautical training and is regarded as one of the most important maritime conventions ever developed.

It lays down the minimun requirements for training, qualifications and sea-going service for masters, deck officers, engineer officers, radio officers and certain categories of ratings, all of which must be met before governments issue Certificates of Competency under the Convention.

According to research carried out by the Det Norske Veritas Classification Society, 80 % of all accidents and damages occur through human failure and only 20 % from technical failures.

Therefore, the human element is the most crucial element as far as marine safety is concerned and a ship is only as good as the men who man it. No matter how sophisticated the available equipment onboard, the safety of any ship will ultimately depend upon the crew and their professional ability and dedication.

This the proper training of sea - going personnel takes up all the importance it deserves in our eyes when the foregoing is considered.

III-2 PARTICULARS OF PRESENT INSTITUTIONS FOR TRAINING SEAFARING PERSONNEL IN VENEZUELA

The training of merchant marine personnel is taken care of by the government through the Ministry of Transport and Communications in the following institutions:

1.- The Venezuela Naûtical Academy.

2.- The Merchant Marine College.

3.- The Institute Superiem of the Merchant Marine (Postgraduate School).

4.- The Skippers and Motorist School.

1.- The Venezuela Naûtical Academy.

This academy was created under Presidential decree No. 385 dated 10 August, 1946.
The primary goal takes care of the formation of the Merchant Marine officers in the speciality of nautical and marine engineering.
The duration of the course is a three - years theoretical syllabus and six months of practice on board national ships, this for the award of second mate on the Naûtical side, and third marine engineer on the Engineering side.

2.- The Merchant Marine College

This was created by Presidental decree, No. 32 429 dated 09 March, 1982. This institution was established in a similar way but to offer superior education in order to raise the level of competence and acquaint the participants with the latest maritime developments and management techniques. Students enroll on a four - year theorethical course plus six months training on board national ships. Furthermore, a paper has to be submitted to the faculty of the College in partial satisfaction of the requirements for the award of a Bachelor in Nautical science.

3.- Institute Superiem of the Merchant Marine

This postgraduate shoool was established by resolution D-01 in Caracas on 06 January 1970, under the auspices of the Ministry of Transport and Communications.
The Institute has to provide the commercial sector of the Merchant fleet with the necessary technical personnel.
It is also in charge of perfection on the cycles and training courses for specialization. It gives specialized training courses to masters, chief engineers and executive personnel of the ports Captaincy and intermittent education for obtaining the diploma of Port management and maritime administration .
Furthermore in this institute the Junior officers (Nautical and Marine Engineer) must take a one-year theorethical course in order to warrant their promotion to superior categories, the requirements for that these superior categories necessitate marine officers be on board ships for, at least, 36 months of working experience.

4.- Skippers and Motorist Schoool.

This is a relatively new kind of three-year technical school. The main goals are to improve and maximize the level of education in promoting maritime awareness in Venezuela and to attract young Venezuelan men to work in the maritime field. It co-ordinates, with the other agencies concerned, the inclusion of certain programmes and subjects related to the development and maintanence of maritime transportation in the cirrucula of technicians.

Recently, the Venezuelan government has established four of these technical shools along the Venezuelan Coastline, three of them to the east of the country and one to the west.

III-3 RULES / SYSTEMS FOR MANNING NATIONAL SHIPS

The minimum required numbers of certified officers and personnel for manning national ships are contained in the Venezuelan Maritime Legislation.

New laws need to be enacted in order to bring manning scales on Venezuelan vessels in line with the requirements of modern - day shipping.

These laws should take into consideration the manning implications for deck and engineer officers in accordance with the STCW 1978 convention, and the guidelines which have been set out in IMO resolution A 481 (XII) concerning minimum safe manning on board ships.

Any law on the subject should, inter alia, provide that ships should be sufficiently and efficiently manned for the purpose of ensuring Safety of Life at Sea, pollution prevention and the prevention of excessive strain on the crew.

With regard to Venezuelan Maritime Legislation, no person shall be engaged to perform the following duties on board Venezuelan ships unless he holds a certificate of competency to perform such duties:

1.- Ship's master.

2.- Ship's officer in charge of watch.

3.- Chief engineer of the ship.

4.- Marine engineer in charge of watch.

The requirements for issuing maritime certificates of competency for the job mentioned in the aforesaid, shall be determinated by the Ministry of Transport and Communications through the Instituto Universitario de la Marina Mercante and the Escuela de Estudios Superiores de la Marina Mercante.

The following marine certificates of competency shall qualify the holder to perform the duties stated below:

1.- "Master Certificate Foreign - Going" will qualify the holder to take command of ships of any tonnage of any type and on any voyage.

2.- "First Mate Certificate Foreign - Going" will qualify the holder to perform any of the following duties:

a) Officer on foreign - going ships.

b) Command of a Cargo ship with a gross tonnage of less than 500 on the high seas.

c) Command of Coastal ships.

3.- Second Mate Foreign - Going" will qualify the holder to perform any of the following duties:

a) Second deck officer on ships on the high seas of any tonnage of any type.

b) First navigation officer on Coastal ships (cargo or passengers)

c) To command Coastal ships (cargo or passengers) under 200 gross reg. tons.

4.- "Master Certificate (Coastal)" will qualify the holder to perform any of the following duties:

a) Command of Coastal ships.

b) Second deck officer on ships on the high seas.

5.- "Second mate (coastal)" will qualify the holder to perform any of the following duties:

a) Deck officer on coastal ships.

b) Command of coastal cargo ships with a gross tonnage of less than 150.

6.- "Chief engineer certificate (steam or diesel)" will qualify the holder to perform the duties of chief engineer on foreign-going and coastal ships of any tonnage and type provided that the type of engines be compatible with the certificate.

7.- "Second engineer certificate (steam or diesel)" will entitle the holder to perform the duties of an engineer officer in charge of a watch on foreign-going coastal ships of any tonnage or type provided that the type of ship's engines are compatible with his type of certificate.

No one is allowed to command motor launches or barges in Venezuelan ports, unless a licence has been obtained from the Ministry of Transport and Communications.

The number of certified officers on board Venezuelan ships, in accordance with their tonnage, shall not be less than the following:

1.- Deck Officers	Number
a.- Ships with a gross tonnage of less than 700.	2
b.- Ships from 700 to 2.000 tons. gross	3
c.- Ships of more than 2.000 tons gross	4

2.- Marine Engineers	Number
Ships of more than 700 tons gross and the total power of operating engines 800 H.P	3 persons including the chief engineer

Regarding the aforesaid, uncertified persons may be employed on the condition that they are not permitted to take charge of a watch, neither are such persons allowed to relieve certified ones on watch except in the case of emergency.

Ratings

The number of qualified ratings on Venezuelan ships shall not be less than the following, depending on the tonnage of the ship:

Ratings	Number
a.- Ships from 700 to 2.000 Ton.gross.	6
b.- Ships more than 2.000 Tons.gross	9

A qualified rating is the person whose actual service on deck is not less than three years, and the number of qualified ratings on each watch shall not be less than three.

Radio Officers

The number of radio officers on Venezuelan ships shall not be less than the following limits:

1.- Passenger Ships (Supplied with automatic alarm system).	Number of Radio Officers
a.- Passenger ships carrying or allowed to carry , 250 passengers or more	One (1), provided that listening hours on distress frequencies are not less than 8 hours /day.

2.- Cargo Ships (Supplied with radio telegraph auto-alarm system)	Number of radio officers
a.- Ships with a gross tonnage of 1.600 or more.	One officer; provided that listening hours on distress frequencies are not less than 8 hours/ day.
b.- Ships of 300 - 1600 Tons. (fitted with radio telegraph station and auto alarm system).	One officer; provided that the number of listening hours on distress frequencies are not less than 8 hours/ day.

A ship fitted with a radio telephone station shall have on board at least one operator holding a "radio telephone operator's" certificate.

The maritime safety administration authorities at Venezuelan ports may inspect the Certificates held by masters, deck, engineer and radio officers on board Venezuelan and foreign ships. Furthemore in the National ports, the authorities may also prevent any Venezuelan or foreign ship from sailing if the ship does not have on board the minimum number of certified persons required in accordance with the provisions of the Venezuelan Maritime Legislation.

III-4 SYSTEM FOR REGISTERING SEAMEN:

The Merchant Marine has a system of issuing identification documents to seamen, under the present regulations called " Reglamento para el Registro y Cedulación del Personal de la Marina Mercante Nacional en General, de Pesquería y de Recreo: Regulations for the Registration and Certification of Personnel of the Merchant Marine, Fisheries and Recreation".

There are good specifications for all these matters.

III-5 EXAMINATION AND CERTIFICATION OF SEAFARERS

One of the most important things influencing the safe and efficient operation of a ship is of course the professional standards of the seafarers. The different standards for training the required personnel will reflect different standards of efficiency. Nevertheless, standards and systems have varied considerably among countries and there were no international standards established until 1978. Obviously this was an anomalous situation since the shipping industry is most international. Therefore, the maritime community made a great deal of effort through I.M.O and I.L.O to establish global minimun professional standards for seafarers and this is how the STCW Convention came into being. Its universal implementation should help to better equip seaferers to meet the requirements of today's shipping and navigation.

Along the same lines it is important to quote Article II Part V of the UNCTAD report which is relevant to this matter. It states:

" The state of Registration shall ensure:

a) That the manning of ships flying its flag is of such a level and competence as to ensure safety at sea in comformity with generally accepted International Rules and standards.

b) Compliance with International Rules and standards concerning competence of the officers and the crew.

Therefore, one can say that the human factor as a whole is dominant in the operation of a ship. The professional competence of the personnel should be predominant.

Then, within the context of Safety of Lives at Sea, the Safety Division, will here also be in the best position to implement the following salient features of the STCW Convention:

i) Conducting of examination and certification of seafarers.

ii) Manning of ships.

iii) Certificated manning and manning by other crew members (such as ratings).

Therefore, obviously the part related to manning of ships' Masters, Officers, Seamen, etc in the Merchant Shipping Act would have to be build in accordance with the STCW conventions."

As far as Venezuela is concerned the examinations are being carried out by the Ministry of Transport and Communications through the Nautical Academy or the Merchant Marine College, according to Presidential decree No. 50 "Law regarding the titles in the Merchant Marine " dated on November 04, 1953.

The existing rules and syllabuses for the examinations, as prescribed, as well as the present system for the examination appear adequate and appropriate to present day requirements.

Minimum requirements to become a Merchant Marine Officer in Venezuela.

"Studies & sailing"	Age
Elementary School - 6 years	Leaving at 11 or 12
High School (secondary) - 5 years	Leaving at 16 or 17
Nautical Academy - 4 years = 3er Engineer/2nd Pilot/	Leaving at 21 or 22
Sailing - 36 months (minimum requirement)	Leaving at 26 or 27
Superior studies of the Merchant Marine Institute - 1 year = Second Engineer/Chief mate.	Leaving at 27 or 28
Sailing - 36 months (minimum requirement)	Leaving at 31 or 32
Superior studies of the Merchant Marine Institute - 1 year = Master /Chief Engineer.	Leaving at 33
Sailing - 1 year (minimum requirement)	Leaving at 34 or 35
Superior studies of the Merchant Marine Institute - 8 Months. Marine Surveyor.	Leaving at 35 or 36

Syllabus

Chief Engineer/Master.

1.- Organization of Management of Shipping Company.

2.- Maritime Transportation & Economics.

3.- Legislation & Fishing Policy.

4.- Ship Yard' Technology.

5.- Methodology & Statistics.

6.- English Language.

7.- Human Relationship

8.- Classification & Marine Insurance.

9.- Harbour Technology.

10.- Electronics and General Instrumentation for Navigation.

11.- Financial Statements.

12.- International Maritime Law.

13.- Works Right. (International Labour Organization Conventions).

Seminars:

Maritime Management - 40 hours.

Freight - 80 hours.

Technical - 80 hours.

Oratory or rethoric - 30 hours.

14.- Thesis about Maritime Matters (dissertation, defense).

Time - 1 year.

Syllabus

Chief Mate (1st Pilot).

1.- Pure Maths III

2.- Navigation II

3.- Ships' Stability

4.- Meteorology and Oceanography II

5.- Manoeuvrability & Ship's Operation II

6.- Ships' Automation

7.- Maritime English II

8.- Electricity I

9.- Marine Machinery

10.- Maritime Law and Regulations

11.- Ships' Structure

12.- Electronics & Nautical Instruments

Seminars:

Maritime Management	-	20 hours.
Safety of Life at Sea	-	30 hours.
Astronomy	-	30 hours.
Economics and Transportation	-	20 hours.

Time 1 year.

* Seminars also for Engineers (2nd Engs).

Second Engineer...

1.- Pure Maths II

2.- Marine Turbines II

3.- International Combustion of Marine Engines II

4.- Electricity & Electronics II

5.- Thermodynamics II

6.- Mechanical Fluids

7.- Materials Strength II

8.- Ships Automation II

9.- Auxiliary Maritime Machinery II

10.- Maritime Law and Regulations II

11.- Ships' Structure

12.- Maritime English II

Time 1 year.

Second Pilot

1.- Pure Maths I

2.- Pure Maths II

3.- Astronomical Navigation I

4.- Stowage and Cabotage Navigation I

5.- Stowage & Stability I

6.- Oceanography & Meteorology I

7.- Maneuverability & Ships' Operation I

8.- Ships' Automation I

9.- Kinematics (Maneuverability Rose)

10.- Maritime Technical Englis I

11.- Technology of Harbour I (Ports Technical Operations)

12.- Personal Management and Administration.

13.- Fishing Technics

14.- Maritime Law and Rules I
(Navigation Law & Regulations - Work Law and Regulations)

15.- Thesis about Maritime Matters.

Time 4 years.

Third Engineer

1.- Pure Maths I

2.- Pure Maths II

3.- Maritime Turbines

4.- Internal Combustion of Marine Engines I

5.- Steam Marine Generators

6.- Electricity & Electronics

7.- Thermodynamics I

8.- Auxiliary Maritime Machinery

9.- Physics & Mechanics

10.- Materials' Strength

11.- Mechanical Drawing

12.- Ships' Automation

13.- Maritime Technical English I

14.- Air Condition & Refrigeration

15.- Personnel Management & Administration

16.- Maritime Law and Rules I
(Navigation Law & Regulations - Work Law & Regulations)

17.- Workshop Skill

18.-Thesis about Maritime Matters

Time 4 years.

** NB: In 1986, the MMUI will have the 1st promotion with the highest standard. Therefore, the Officers will reach

a/ A degree (BSc) Nautical Engineering field.

b/ Lieutenant (reserve) "Navy"

c/ A License as 3rd Eng/2nd Pilot.

CHAPTER IV

SAFETY MATTERS AND SEARCH AND RESCUE SYSTEMS

IV ARRANGEMENTS FOR NAVIGATIONAL CHARTS, NOTICES TO MARINES AND NAVIGATIONAL WARNINGS

When someone stands on the shore and looks out to the sea, it is rather difficult to understand why, with so much sea space in which ships can manoeuvre, expensive and highly advanced equipment and systems are required for directing ships into ports. A closer examination of the sea will show that the smoothness of the surface of the sea will not necessarily entail a level botton. Some areas are therefore deeper than others and a ship has to be "guided" by external aids in order to avoid groundings.

The factors which contribute to marine accidents, such as grounding and collisions, range from human error, bad weather, to lack of equipment or malfuntioning of such equipment.

Experience has shown that as a vessel nears land, the probability of these accidents increases, and it becomes vitally important for the safety of the vessel and the protection of the environment that appropriate systems of aids to Navigation and Vessel Traffic Management be developed and implemented.

Aids to Navigation can be vulgarly defined as visual, acoustic or radio devices which:

(i) Assist the captain and his crew to move a vessel safely and easily from one point to another.

(ii) Warn them of major dangers or obstructions.

(iii) Advise them of the location of the best or preferred route.

These devices are either shipborne or external to the vessel shore-based or placed on the surface of the sea and will include:

a) Navigational Charts.

b) Compass.

c) Log.

d) Lead (or echo-sounder).

e) Sextant.

f) Chronometer.

g) Beacons.

h) Radio Receives.

i) Radar.

j) Lighthouses or Stations.

k) Buoys.

l) Vessel Traffic Services etc.

m) Station referenced systems.

The establishment and maintenance of aids to navigation, as well as hydrographic surveying and the issuing of charts and other nautical publications, is usually considered the responsibility of the National Maritime Safety Administrations. However very often these activities are delegated to other national institutions; as for example, in Venezuela the local charts are published by the Hydrographic Department of the Navy. For ocean navigation the ships of Venezuela use charts and notices to mariners published by the Government of the United States of America. Notices to mariners regarding the local charts, are published each month by the Hydrographic Department of the Navy as well as Navigational Warnings. The official local time (hour) are promulgated by the same department by radio broadcasts to Venezuela and the Caribbean area.

IV-1 PROCEDURE / SYSTEM FOR CONDUCTING INQUIRES/INVESTIGATION INTO SHIPPING CASUALTIES

Each Maritime Administration is under the obligation to conduct and investigate any casualty occuring to any of its ships and or foreign ships if the casualty occured within its territorial waters.

This international obligation arises and can be based on the following documents:

i) SOLAS 74 Reg. 21.

ii) Load Line 66 Art. 23.

iii) IMO Res. A. 147.

iv) IMO Res. A. 173.

v) IMO Res. A. 440.

vi) Law of the Sea Conventions Art. 94.

There is no international Convention for the investigation procedure, therefore the National Law which is applicable may differ from country to country. Venezuela has the obligation to investigate marine casualties as a party to Solas 74 and Load Line 66. At present there is not any specific legislation covering this matter.

Inquiries/investigation into shipping casualties in Venezuela are carried out by the Merchant Marine through the ports' Captaincy. In the first instance, and to deal with more important cases, a court is set up, in accordance with the existing law.

By resolution number D-20 from the Minister of Transport and Communication dated on November 04, 1970, there was created a permanent and AD-Honorem Board of Investigation and Inquiries into shipping casualties and the following persons were integrated:

The Director General of Merchant Marine, who will be adviced from the Legal Department, the Director of the Navigational Department (Maritime Safety); the Chief of the Operation Division of the Department of Port's Captaincy; and Official of the Merchant Marine, who will be designate through the Director General and depending upon the case, the Port Captain of the Maritime Disctrict where the accident may happen.

IV-2 PROCEDURE/SYSTEMS FOR HANDLING DANGEROUS GOODS

Introduction

Exporters of dangerous substances are required to accept legal responsibility for the packing, identification / marking labelling and placarding, and documenting of their consignments. These responsabilities are laid down, according to the mode of transport, in national and international regulations and recomendations.

Transport by sea:

Regulation (5) of Chapter VII of the 1974 SOLAS Convention prescribes that:

a) In all documents relating to the carriage of dangerous goods by sea where the goods are named the correct technical name of the goods shall be used (trade names shall not be used) and the correct descriptions given in accordance with classifications set out Regulation (2) of this chapter.

b) The shipping documents prepared by the shipper shall include, or be accompained by, a certificate or declaration that the shipment offered for carriage is properly packed, marked and labelled and in proper
condition of carriage.

c) Each ship carrying dangerous goods shall have a special list or manifest setting forth, in accordance with regulation (2) of chapter VII, the dangerous goods on board and location thereof. A detailed stowage plan which identifies by class and sets out the location of all dangerous goods on board may be used in place of such a special list or manifest.

Reference and footnotes:

Carriage of Dangerous Goods Documentation for Multimodal., by Captain /Hubert E.H.S. Wardelman.

IV-3 PORT SAFETY RULES

The Ports Authority has established its own rules and regulations pertaining to dangerous goods. However, there are a few rules for handling dangerous goods in the ports of Venezuela that need to be revised and updated according to the International Maritime Dangerous Goods Code (IMDG code) National and foreign vessels have to follow the necessary safety procedures and provide appropriate equipment while such goods are on board and during the discharge operation.

The following rules are given to regulate tha safe handling of dangerous goods in Venezuelan Ports according to the Maritime Legislation:

2.1.

Advance Notification:

The Master, Owner or Agent of any vessel carrying dangerous goods, either for discharge or in transit to another port, must supply the Port Management, the Customs, the Coast guard, and the Port Police with copies of a list of all dangerous goods on board. The list shall be submitted not less than 48 hours before the expected time of arrival showing:

a) The name of the vessels and the expected date and time of arrival.

b) Stowage details.

c) The quantity of all dangerous cargo on board by IMDG class, Technical name, Weight and number of packages; showing separately cargo for other destinations.

d) For each consignment for discharge.

   i) The shipping marks and Bill of Lading number.

   ii) The net quantity of powder or explosive material for all dangerous goods in IMDG class 1.

iii) The technical name and UN number.

2.2.

Vessels carrying dangerous goods shall hoist the signal flag B by day and a red all round light by night.
The said flag or light shall be displayed in such a position above any other signal or light as may best ensure its visibility.

2.3

The Port Management shall send a full written information to the fire fighting brigade about precautions and procedures in the event of fire or emergency.

2.4

Before the discharging or loading of dangerous goods commences, the fire fighting chief will send on board the number of firefighting men that he considerers necessary for the vigilancy and prevention of any accident.

The prohibition of smoking, use of naked lights, and carrying of matches or lighters on the person shall be rigorously enforced both on board and ashore in hazardous areas which are to be clearly marked. Danger warning signs and no smoking signs shall be prominently displayed, written in both English and Spanish, and adequately illuminated by night. The ship's fire safety orders shall be fully observed, particularly in respect to living accomodation and quarters, by both ship and any shore personnel authorized to come aboard.

Vehicles carrying dangerous goods shall mount or display a red flag.

The Master and berth operator, within their respective areas of resposibility, shall ensure that all equipment used for handling dangerous goods is suitable for such use.

The lifting equipment and accesories including pallets, slings and boxes shall be supplied with safety nets, bars or devices to prevent damage to or dropping of the packages.

Dangerous goods shall always be handled with care to prevent them being thrown, pushed, set down violently or otherwise suffer impact or demage. Cargo stacks must be secured to prevent movement, chafing or falling.

All unnecessary handling should be avoided and the use of hooks is forbidden.

There shall be no admittance to any hold or cargo compartment containing dangerous goods liable to give off inflammable or toxic gases until the Master has caused such a hold or cargo compartment to be opened and ventilated and has declared such hold or cargo compartment to be safe. Gas-testing equipment designated for the particular gas or gases may be used to ensure safety instead of or in addition to ventilation.

Dangerous goods received in the port shall be cleared or shipped within the same day unless otherwise permitted by the Port Management.

IV-4 AIR / SEA SEARCH AND RESCUE SYSTEM

Venezuela is not yet a party to the International Convention on Maritime Search and Rescue, 1979, which provides the basis under International Law and the necessary guidelines for SAR operations.

The Search and Rescue Convention, which entered into force on 22nd. June 1985, has the main purpose of facilitating co-operation between states and those participating in SAR operations at sea, by establishing an international SAR plan.

The obligation of ships to respond to distress messages and signals from other ships is one of the oldest traditions of the sea and is also enshrined in various international conventions. Solidarity between seafarers is perhaps the most sincere union in human history. It is done without distinction between races, religions and countries which is one of the main purposes, never fully reached, of the U.N systems.

The Brussels Convention on Assistance and Salvage of 1910 established in international law the tradition of the brotherhood of the sea and stated that " every master is bound, as far as he can do without serious danger to his vessel, her crew and her passengers, to render assistance to every body, even though an enemy, found at sea in danger of being lost."

In Venezuela it is stated that as regards air/sea search and rescue matters, the following Ministeries hold responsibilities:

The Ministry of Transport and Communications, the Ministry of Defense and the Ministry of Interior.

The conducting of SAR operations, is designated, depending on the situation, to the national defense organization.

They are acting with the Rescue Coordination Center, having their own rules etc. There are also a lot of voluntary groups dealing with these matters and they are very useful to SAR operations.

A few years ago an organisation Called Onasema was created in order to assist all these organisations in their labours.

This organisation depends on the Coast Guard Service, and therefore subsequently depends on the Navy.

The maritime search and rescue concept was mentioned in the SOLAS 74 chapter V regulation 15, viz.

a.- " Each contracting government undertakes to ensure that any necessary arrangements are made for coast watching and for the rescue of persons in distress at sea round its coast. These arrangements should include the establishment of operations and maintenance of such maritime safety facilities as are deemed practicable and necessary having regard to the density of the seagoing traffic and the navigational dangers and should, so far as possible, afford adequate means of locating and rescuing such persons.

b.- Each contracting government undertakes to make available information concerning its existing rescue facilities and the plans for changes therein, if any."

This means that any contracting government to the SOLAS 74 has already signed a convention obligation on maritime search and rescue.

It is important to note that the most vital factor which facilitates the coordination of maritime search and rescue operations is "Communication". The current maritime distress system has shortcomings which have subsequently contributed to the delay of entry into force of the SAR Convention.

Furthermore, IMO intends to introduce in 1990 a comprehensive system to improve distress and safety communications and their procedures in conjunction with coordinated search and rescue infrastructure in order to significantly improve Safety of Life at Sea by the introduction of the GMDSS which is now under study and development by IMO. GMDSS presents, briefly, the direction in which the future system is being developed and the main techniques which will be used, the procedures likely to be introduced, possible equipment carriage requirements and the way in which it is hoped Satelite Communications will further enhance the safety of life at sea. To this end ITU and INMARSAT continues to work closely with IMO in the development of GMDSS.

These approaches necessitate that SOLAS parties also have to join INMARSAT in order to support the SAR Convention and to facilitate the establishment of the GMDSS schemes which are expected to subsequently improve the Safety of Life at Sea.

Even though Venezuela is not yet party to the SAR Convention, as mentioned above, it has an obligation to the Convention with a well-defined SAR zone.

There are attempts to prepare a Search and Rescue plan and to create a committee charged with studying all those questions and also to prepare for the participation in the SAR Convention.

The need for materials and high level technical personnel with wide experience to be involved in these arrangements have so far been obstacles in reaching the target.

Taking due note of the aforesaid situation it is important to make the following suggestions:

1.- The SAR organization does not need, at the first stage, a tremendous amount of equipment or dedicated units as the contingency organization dealing with marine pollution matters does.

2.- A complete plan can seldom be formed all at once. In most cases it will be more appropriated to form

it step by step as resources covered by the plan are available or are developed.
Venezuela can make maximum use of existing organizations e.g Navy, Coast Guard, Marine Division of the Maritime Safety Administration and Merchant Ships, and should identify a lead agency for national SAR response efforts in this field.

3.- It is obvious that present SAR practices are no longer adequate in dealing with all accidents to human life and properties around Venezuela. As a result it would be better to adopt national legislation which would give the power to a public authority to deal with search and rescue operations.

a) The International Convention on Maritime Search and Rescue.

b) The Marchant ship Search and Rescue manual "MERSAR".

c) The IMO Search and Rescue manual "IMOSAR"

In this vital area it is important to exactly define the role of the Maritime Safety Administration as having the coordinating role and as an advisory body.

4.- Arrangements for the provision and coordination of Search and Rescue services / plan.

A contingency organization for dealing with Search and Rescue can come within the area of responsibility of the Ministry of Transport and Communications who can delegate the rescue operations to what might be called the Venezuelan Search and Rescue Authority.

The SAR Authority should be responsible in taking urgent steps to provide the most appropriate assistance available upon receiving information when a person is in distress at sea in the area around the Venezuelan Coast.

The LOCAL RESCUE COORDINATION CENTRES RCC are units established for coordinating search and rescue in designated areas nominated SEARCH AND RESCUE AREAS. At least 4 RCCs from the Navy can be established in Maracaibo, Pto. Cabello, La Guaira and Carûpano in conjunction with maritime safety administration districts.

In the majority of areas, MERCHANT SHIPS will normally be able to participate although the degree of participation will depend on shipping density. In this context the role of powerful COAST RADIO STATIONS (CRS) to ensure a ship reporting system should be established in North and West VENEZUELA, which are the most vulnerable areas. In preference this facility should be built in the Paraguana Passange near to Aruba Island, the dense traffic separation scheme area.

SAR units can be available from the Navy such as aircraft and warships which have a SAR capability. In all cases merchant ships are liable to be involved in search and rescue operations either in conjunction with specialised SAR units or independently. In the former case merchant ships may receive information additional to that obtainable from the SAR Authority. However in view of the general practice of cooperation by merchant ships it must be emphasized that no order or advice from this authority can set aside the obligation or the rights of any matter as set in regulation 10 of the SOLAS convention.

In this connection on-scene coordination between the units concerned will be required and the role of the merchant ships in this context will be governed by the following considerations.

If specialised SAR units are not available to assume duties of ON-SCENE COMMANDER OSC, but a number of merchant ships are participating in the operation it will be necessary that one of these assumes the duty of COORDINATOR SURFACE SEARCH CSS. It is desirable that the CSS should be established by mutual agreement between the ships concerned, having due regard to their capabilities and ETA's (Expected time of arrival).

However the first arrival should take such immediate action as may be required.

It is important that the CSS should have good radiocomunications facilities including preferably 2182 Khz and/ or 158,8 Mhz (VHF Channel 16) radiotelephony in addition to 500 Khz radiotelegraphy.

In case of language difficulties the International code of signals and the Standard Marine Navigational Vocabulary should be used.

On assuming the duty, the CSS should immediately inform the CRS and should also keep it informed of developments at regular intervals.

If specialized SAR units are on the scene (Aircraft or warships) simultaneously with merchant ships, it can normally be expected that one of them will assume the duties of ON-SCENE COMMANDER OSC. Merchant ships can then expect to receive specific instructions from the OSC in carge of on scene SAR operations.

It is important that the CSS and any SAR units OSC present should coordinate their operations. Direct communications between units on 2182 Khz or VHF Channel 16 would be most desirable. Intercommunications and coordination can also be effected via the CRS and the SAR Authority. The location of established rescue coordination centres, their telephone and telex numbers and areas of responsibilities should be well identified and forwarded to IMO.

Each rescue coordination centre RCC shall have adequate means for the receipt of distress communication via the CRS. Every such centre shall have adequate means for communications with its rescue units and with rescue coordination centres as appropiated in adjacent areas.

Designation of Rescue Units and equipment.

As rescue units: Aircraft and Coast Guard ships from the navy RCC suitable located and equipped.

As elements of the SAR authority: Tugs or public services not suitable or designated as rescue units but which are able to participate in search and rescue operations.

These rescue units shall be provided with facilities and equipped appropriately to its tasks.

Containers or packages containing survival equipment for dropping to survivors should have the general nature of their contents indicated by a colour code and by printed indication and self explanatory symbols to the extent that such symbols exist.

The colour identification of the contents of dropable containers and packages containing survival equipment should take the form of streamers coloured according to the following code:

- **Red:** Medical supplies and first aid equipment.
- **Blue:** Food and water.
- **Yellow:** Blankets and protective clothing and
- **Black:** Miscellaneous equipment.

Ships in distress may be supplied with special items such as:

- Individual life raft or pair linked by a buoyant rope.
- Buoyant radio beacons and/ or tranceivers.
- Dye and smoke markers and flame floats.
- Parachute flares for illumination.
- Salvage pumps.
- Etc....

In case of helicopter SAR units for the evacuation of persons, a special device for hoisting and lowering can take the form of:

- A rescue sling.
- A rescue Basket.
- A rescue net.
- A rescue Litter.
- A rescue Seat.

A close practicable coordination between the Venezuelan aeronautical services so as to provide for the most effective and efficient search and rescue services.

Each RCC and Rescue Coordination subcentre shall have available uptodate information relevent to search and rescue operation in its area such as:

- Private resources including transportation facilities and fuel supplies.

- Characteristics and coordination facilities with shiping agents, international organisations who may be able to assist in obtaining vital information on vessels.

- Location and call signs of all radio stations likely to be employed in SAR Operations.

Each RCC shall prepare or have available detailed plans or instructions for the conduct of search and rescue operations in its area.

It is important that all means and designated rescue units shall maintain a state of preparedness commensurate with its task and should keep the appropiate rescue coordination centres informed of its state of preparedness.

Within the SAR Authority a special division, the marine division can be set up which has at its disponsal a staff of former naval officers, engineers, economists, lawyers. As governmental bodies the RCC and the Navy etc.

The lead roles of the marine division (Maritime Safety Administration):

- International conventions and national legislation.

- Contingency planning.

- Selection of SAR Units and materials and purchase.

- Education, training and exercise planning.

- Claims and

- Budgeting.

The control of vessels during the navigational passages and the role of the Veenezuelan Coast Radio Station CRS.

The ship reporting system's objetives are to provide up to date information of the movements of vessels in Venezuelan areas covered by this system in order to permit the rapid determination of vessels able to provide assistance and delineation of the search areas.

As mentioned before, a powerful coastal radio station CRS to provide a ship reporting system would need to be established in the Northwest of Venezuela, which is the most vulnerable area.

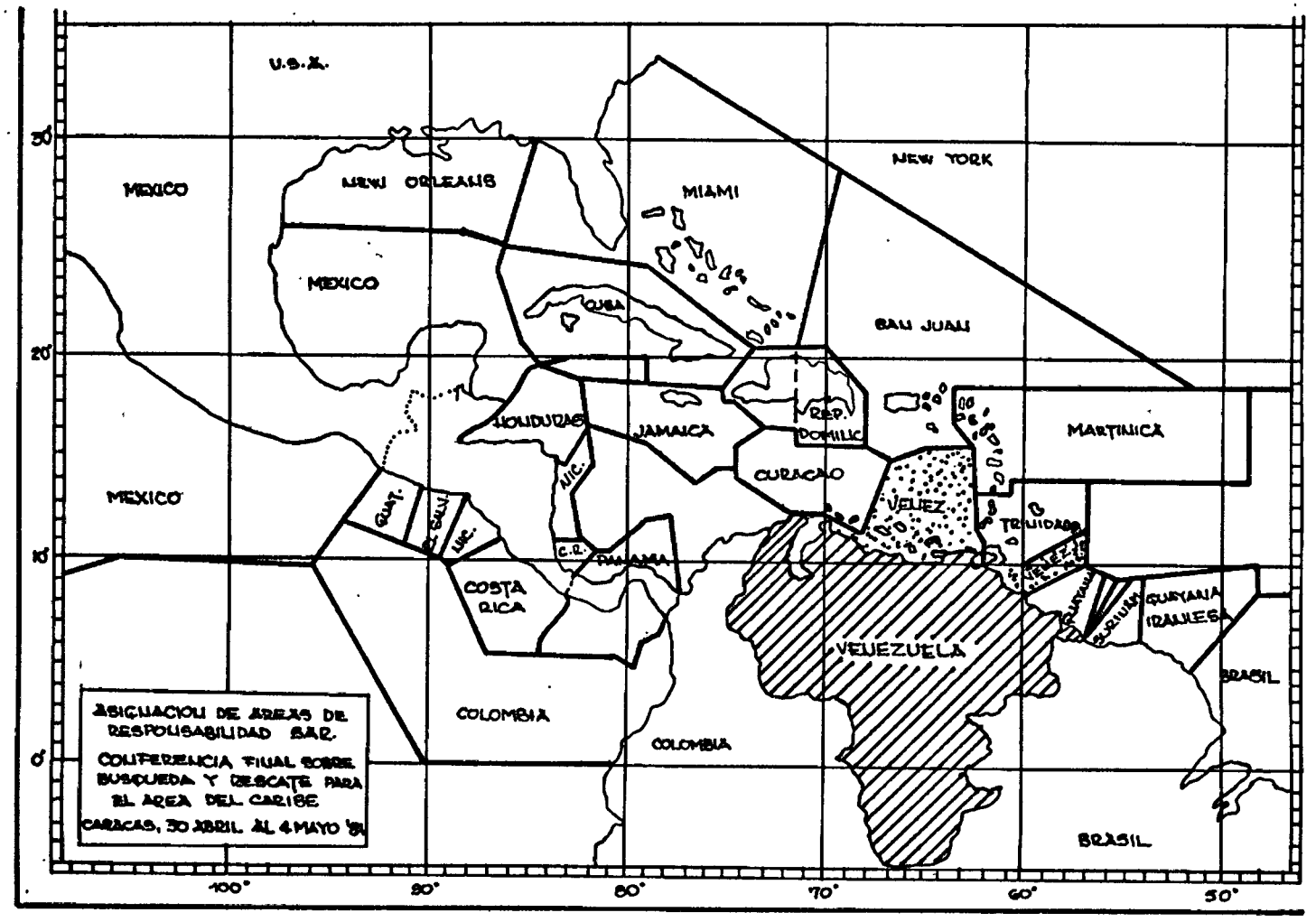
The ship reporting system is necessary to facilitate search and rescue operation in order to:

- Permit rapid determination for OSC or CSS.
- Permit delineation of search and rescue area.
- Maintenance of shipping plot.
- Provision of information, including sailing plans and position reports which would make it possible to predict the future positions of participating vesels.

At present there are three common forms of marine traffic regulations in operation.

- The traffic separation schemes TSS.
- The vessel Traffic Reporting System VTRS.

The Venezuelan capability will only afford the TSS combined with slightly more sophisticated ships to CRS-to-ship schemes which require vessels to obtain clearance from a shore station prior to entering and proceeding through the traffic control area limited between Venezuela, Curacao and Aruba. The clearance may be made conditional on the provision of information about the ship relating to machinery and equipment condition, ability to navigate, nature of the cargo, details of identification and intended course, speed and destination.


U.S.A.
MEXICO
NEW ORLEANS
MIAMI
NEW YORK
MEXICO
CUBA
SAN JUAN
HONDURAS
JAMAICA
REP. DOMINIC
MARTINICA
MEXICO
GUAT.
EL SALV.
NIC.
CURACAO
VELEZ
TRINIDAD
C.R.
PANAMA
COSTA RICA
VENEZUELA
GUYANA
SURINAM
GUYANA FRANCES
COLOMBIA
COLOMBIA
BRASIL
BRASIL
ASIGNACION DE AREAS DE RESPONSABILIDAD SAR.
CONFERENCIA FINAL SOBRE BUSQUEDA Y RESCATE PARA EL AREA DEL CARIBE
CARACAS, 30 ABRIL AL 4 MAYO '84
30°
20°
10°
0°
100°
90°
80°
70°
60°
50°

CHAPTER V

POLLUTION CONTINGENCY PLAN

V-1. IMO CONVENTIONS RELATING TO MARINE POLLUTION

During the last twenty years the need to carry oil from one part of the world to another has increased tremendously. In order to respond to this need, and with the help of advanced technology the size of ships carrying oil has also increased. The giant tankers carrying oil between various countries do not limit themselves to a secure area but move from one part of the world where oil is exported to another part where it is required.

In recent years several accidents have ocurred including loss of lives and great pollution damage to oceans and beaches.

Although the safety records of the world tanker fleet seem to be acceptable the number and size of accidents indicate that not only has the size of tankers and the amount of oil transported increased but, as a result, the possibility of the occurrance of accidents has also increased, which is a very serious matter. The Torry Canyon incident of 1967 and the disaster of the AMOCO Cadiz of 1978 is a good example of this kind.

It has been drawn to the attention of the authorities for many years now that the amount of the oil being pumped into the sea is too much to be assimilated and the world is facing what is called "Operation Pollution". In order to eliminate this problem attempts have been made to introduce various methods.

In relation to introducing different systems in order to moderate operational pollution and, if possible, prevent tanker accidents, the individual governments and tanker operators have played a large role. Nevertheless, since the carriage of oil by sea is an international business it is proper that any problem related to it be solved at an international level.

The International Maritime Organization (IMO) which is the United Nations specialized maritime agency was created in 1958. At this organization the measures are discussed and adopted.

The main responsibilities of this organization are:

- To promote and advance safety at sea; and
- To eliminate marine pollution from ships.

The work programme of IMO in the field of Marine Environment protection focused towards the following:

1.- To develop and adopt the highest practicable standards for the prevention and control of deliberate and accidental pollution from ships and other equipment operating in the marine environment.

2.- To encourage governments in the effective implementation and enforcement of internationally accepted standards and other related measures.

3.- To promote co-operation among governments, particularly at regional level, for combating marine pollution in cases of emergency.

4.- To provide assistance to developing countries in order to meet the objectives of IMO mentioned in paragraphs 2 and 3 above.

In view of the aforementioned IMO objectives several Conventions have been drawn-up by which member governments are to be bound when marine disasters arise:

These Convantions are listed below:

a) International Conventions for the Prevention of Pollution of the Sea by Oil, 1954.

b) Convention on the Prevention of Marine Pollution by Dumping of wastes and other Matters, 1972.

c) International Conventions for the Prevention of Pollution from ships, 1973.

d) International Convention Relating to Intervention on the High Sea in Cases of Oil Pollution Casualties, 1969.

e) International Convention on Civil Liability for Oil Pollution Damage, 1969.

f) International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971.

g) Convention on Limitation of Liability for Maritime Claims, 1976.

Oil Pollution in General

Physical Location

Venezuela is well-known world-wide for its oil resources. Oil exports are mainly concentrated at the Maracaibo Lake, and Las Piedras oil terminal on the West Coast. In the North West is the Amuay refinery and El Palito oil terminal and on the east Coast, in the Barcelona state, is the Jose Project that is another oil refinery and terminal. Also the Venezuelan Government has the responsibility for the Oil Refinery and Terminal on the Curacao Island.

V-2. COMBATING OIL POLLUTION IN THE VENEZUELA MARINE ENVIRONMENT

It is an infortunate fact of life that many oil spills occur close to Coastal areas, which may be of ecological importance or socioeconomical value, and if these are to be protected, some form of response is required to combat the oil before it can cause damage.

The basic policy of most countries is that if an oil spill is likely to pose a threat to its Coastal resources then every attempt should be made to deal with it at sea, thus preventing the damage, high clean-up costs and public outcry that are often associated with extensive pollution of inshore waters and shorelines. However, the limitations of most offshore response techniques frequently result in the extensive contamination of inshore waters and shorelines.

The fundamental attitude of most countries is that the party causing the spillage should be responsible for cleaning it up. However, the extent to which this policy is implemented depends upon factors such as size, nature and location of the incident. Thus most governments expect industry to respond to minor oil spillages at fixed installation such as terminals, refineries, or affshore exploration and production platforms as the operators are already on site and therefore should be able to respond rapidly and effectively.

The combating of oil pollution of the sea may call for close international co-operation. This is particularly necessary when one is faced with large quantities of oil and the pollution occurs in restricted sea areas surrunded by many countries.

This need for Co-operation in mainly based on two factors.

First, the nature of the oil itself - it spreads and moves with the effect that the pollution in a short time may cover an extended area constituting a threat to one or more of the Coastal states in the area.

Secondly, oil combating is difficult as Well as expensive.

It Calls for large resources of equipment and personnel as Well as for a quick response capability in every part of the sea area in question.

The Maritime Safety Administration has a dual role in the protection of the marine environment.

The first "Preventive" role has already been covered under the relevant surveys, inspections and certifications of ships. It is the second "Combat" role which is likely to pose major problems to the Maritime Safety Administration.

The following normally suffer losses as a result of oil pollution:

1.- The state.

2.- The shore from property owners (hotels, resorts, restaurants, etc).

3.- Fishermen - clam divers, oystermen.

4.- Boat owners.

5.- The Public in general (decrease in recreation).

For this reason one of the tasks delegated by the Government to the Maritime Safety Administration is to maintain a clean ocean. The Administration must therefore take into account consideration of the ratification of the IMO Conventions.

The measures adopted up to now are those established in Oil Pol 54.

Protective measures

If a tanker spills oil while it is moored at a Venezuelan terminal, the oil company will immediately respond by controlling and cleaning up the spill as though it has occured from its own facility. All applicable costs that accrue from this clean-up operation shall be charged to the tanker in accordance with the policy laid down. However, if the tanker is involved in a casualty, either inbound or outbound, from a Venezuelan terminal, the decision analysis procedure outlined by the Marine Department of the Ministry of Transport and Communications shall be followed.

In short, Venezuela will respond immediately to protect life or threatened Venezuelan facilities. However, beyond the assistance mentioned above, the situation must be analyzed both by the Government involved organization and by the operation deparment involved to determine the appropriate response on a case by case basis

Various spills or major spill occurrences that may take place are taken into consideration and relevant preventive measures are laid down for such; these include:

a.- Risk of coast line impact.

b.- Potencially threatened areas.

c.- Response priorities.

d.- Response time.

e.- Collision between two tankers.

f.- Tanker grounding.

g.- The availability of suitable organizations, including those in industry and neighbouring countries.

V-3.- Present System / Arrangement for the Prevention/Control/ Combat of Marine Pollution

There is at present a "Contingency Plan" for combating pollution by oil and other harmful substances from ships. With the very high increase in the density of maritime traffic and the capacity of oil tankers operating around Venezuelan Coasts, it has been essential to create a contingency plan in case of oil spills around the Coast and in the territorial sea.

General Policy and Objectives

a) General Policy

It is the policy of the Republic of Venezuela that the exploration for oil and the handling and transportation of oil and other harmful susbstances are to be carried out in such a manner as to minimise the risk of environmental and economic damage or threat to public health.

In the event that a spillage does ocurr, swift and effective action will be taken to minimise the environmental and public health and welfare risks resulting from that spillage.

b) Objectives

The Contingency Plan aims to provide for co-ordinated and swift action to protect the marine environment and coasts of the Republic of Venezuela from the effects of spills of oil and other harmful substances by establishing mechanisms that maximise the use of available resources and ensure the proper response at the scene of any discharge of oil or harmful susbtance including the mobilising of equipment, manpower and expertise at a level appropiate in combating such a spill.

The Contingency Plan also fulfils the Government of Venezuela's interregional agreement with the countries of the Caribbean Sea.

Contingency Plan contents:

1.1.- Planning of actions against oil spills

1.2.- Responsibility for the analysis of the area of spill.

1.3.- Potential identification of the spill.

1.4.- Establishment of sampling and alert process.

1.5.- Knowledge of the environment characteristcs.

1.6.- Actions.

1.7.- Causes.

1.7.1.- Cronic Pollution.

1.7.2.- Medium Spills.

1.7.3.- Big spills.

1.8.- Spill prevention.

2.1.- Preliminary evaluation of probable size of any spill.

2.2.1.- Manual and mechanical removal.

2.2.2.- Dispersal by quimic agents.

2.2.3.- Dispersal by sinking agents.

2.2.4.- Storage.

3.1.- Estimation on the amount of oil spilled.

3.2.- Analysis of oil.

Model of a Venezuela contingency plan:

1) Command structure:

The concept requires that the designated on-scene-commander (O.S.C) be given the authority and responsibility to staff his command team as appropriated to the nature and scope of the particular operation undertaken.

2) Command Team:

The command team is the on-scene-commander's staff for a particular operation. It consist of officers whose expertise and/or control of resources permit them to make an effective clean-up operation. In the present case, the structure and staffing are not fixed or standardized, but developed to meet the requirements of the particular operation. For small operations perhaps only two or three people will be required, while for large ones a fully staffed and properly structured team will be needed.

3) Command team staffing:

(a) **Operations:** The group responsible for planning and conducting the operations.

(b) **Operational Support:** The group responsible for supplying operations with the manpower and resources they require.

(c) **Administration:** The group responsible for administering paperwork.

(d) **Public affairs:** The plan allows for a public relations officers, to be attached to the Command Team, charged with providing the public with sufficient and accurate information.

4) Recommended disciplines for staffing a Command Team

a) For any operation, a variety of disciplines is required over and above an understanding of the mechanics of removing oil and other noxious substances from water and littoral areas. This includes experience of the mode of operation of special pollution clean-up equipment, and a basic knowledge of the impact that such operations would have on the environment.

b) Some of the activities requiring trained personnel are:

(I) Operations - Salvage, with its associated disciplines, such as emergency lightering capabilities.

(II) Operations Support:

- Ship and airborne surveillance; monitoring.
- Aquisition, maintenance, logistical, suport of equipment, ships aircraft and land vehicles.
- Adquisition, and logistical support of manpower.
- Alternative base arragements on-scene.
- Communications.
- Security.
- Traffic control and area clearance.
- Marine and littoral biology and other environmental disciplines.
- Hydrography.

- Chemistry.

- Legal.

c) **Administration:**

- Contract and Charter administration, finance.

- Manpower administration.

- Records and documentation.

- Preparation and disemination of reports.

d) **Public Affairs:**

- Reports and releases to the public through the news media.

Executive:

This body consists of the on-scene commander, his deputy and the chief or head of the operation; operations support and administration, groups and the Public Relation officer.
Its functions are to:

- Inform the On-scene commander of the course of the operation.

- Recommend future courses of action.

- Transmit decisions and instructions to the working parties.

Command Team Call List

The contingency plan requires that the lead office maintains a call list of officers in both the lead and support agencies who:

(I)
Have the expertise, control of resources, and / or some other capability which will permit them to make an effective contribution to an operation.

(II)
Have agreed to join a Command Team if called upon to do so by the On-Scene Commander. The plan may require some of them to be automatically called in to staff a Commander Team, with others being called in as appropriated.

The Command Team list will then be the basic document from which the commander will staff his command team.

Operational Communications:

Initial notification on a spill is routinely received by the field officer and forwarded to the lead office.
The report should include the following essential elements of information.

- Time and location of spill.
- Nature and quantity of spilled material.
- Source of spill (including location, characteristcs, ownerships etc.).
- Weather and sea conditions in the area of the spill.
- Movement of spill and potential offects.
- Name and location of On-Scene Commander.
- Action taken.
- Action planned.
- Any other relevant information.

Reporting Frequency

The plans establish the minimum reporting frequencies from the O.S.C. (such as daily, twice daily, etc) plus any additional or special reports required. The plan includes a format for internal reports, with two types:

(I)
Action (act) - the addressee is requested or required to take a certain action, as detailed in the action report.

(II)
Information (infor) - the adrressee is given the current situation and the reporter's plan.

Warning, action and information reports may be combined into a standard situation report (sitrep) as the following representative format illustrates:

Date / time group.

From (sender)

To (action addressees)

Info (information addressees)

Sitrep (report number)

Pullution incident (identify the case)

(i) situation.

(ii) action taken.

(iii) future plans and recommendations

(iv) case status (pends / closed etc.)

Addressee action required.

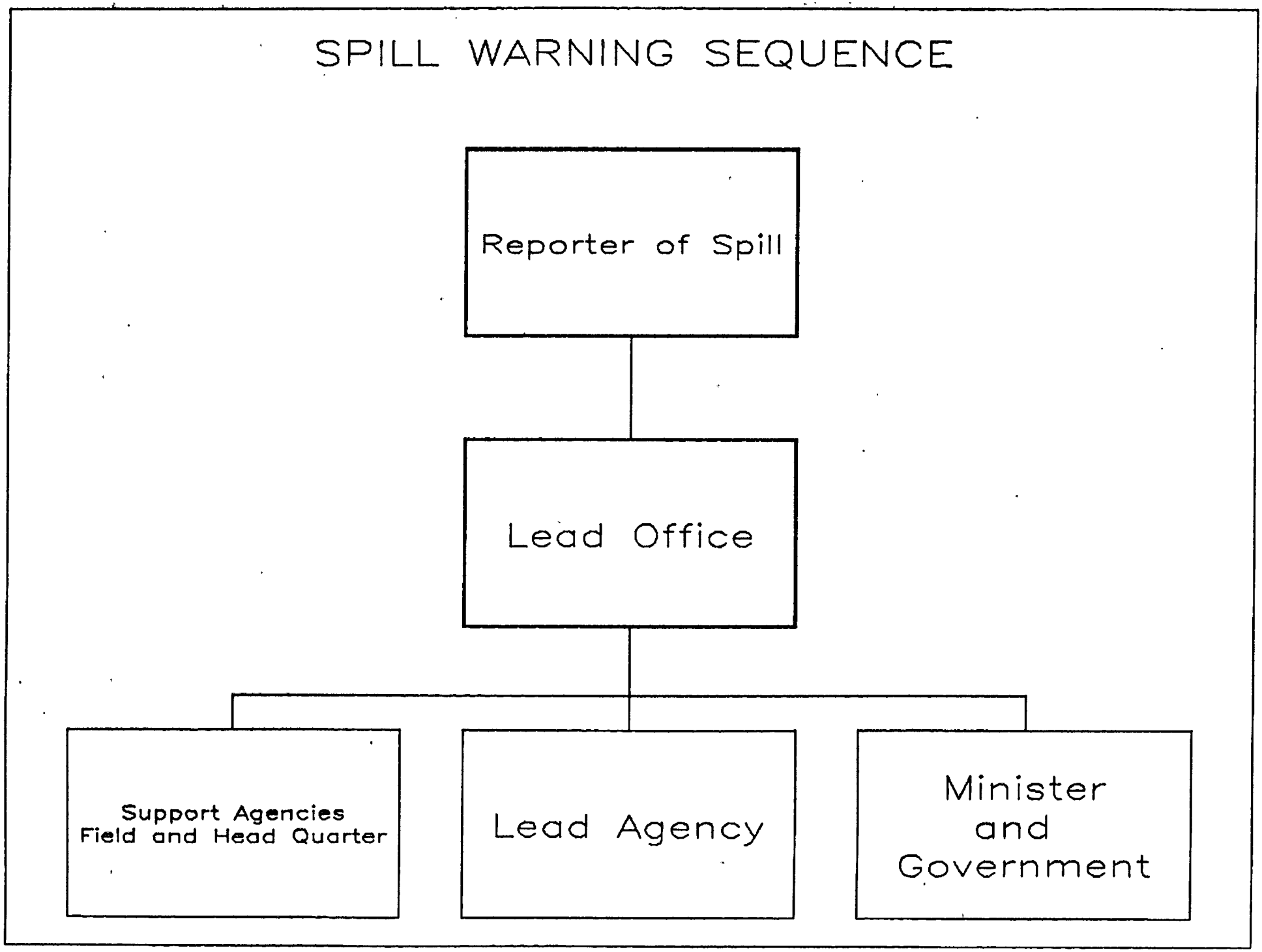
Considerations of intervention.

However, the purpose of the Contingency plans is for those cases where the polluter and industry cannot conduct the necessary clean-up operations and the Government must take over to protect the interests of its people.

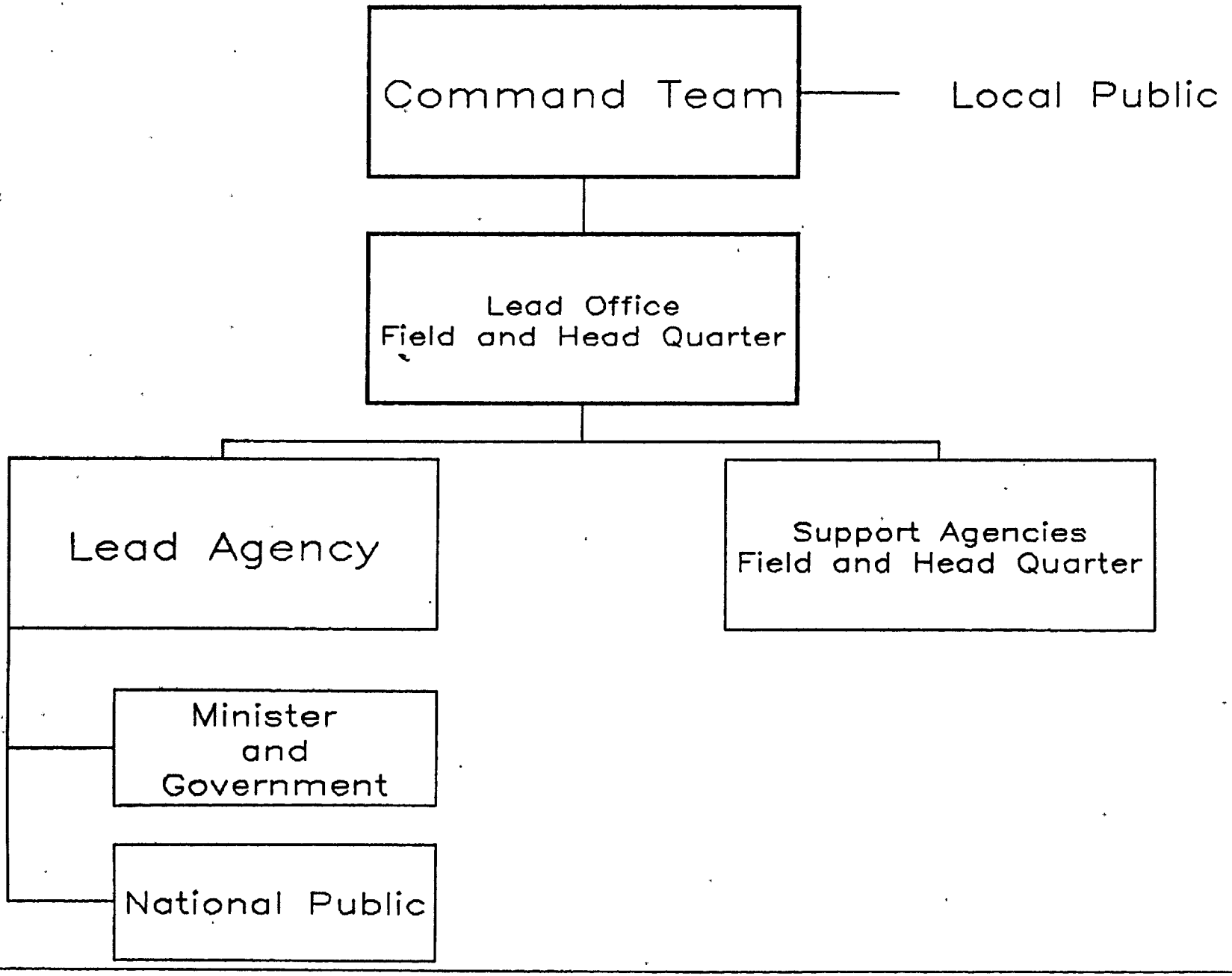
(b) Existing schemes for cost recovery

The avenues of recovery of clean-up expenditures come under the International Convention on Civil Liability for Oil Pollution Damage, 1969 and the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971 or the industry's TOVALOP and Cristal schemes.

SPILL WARNING SEQUENCE

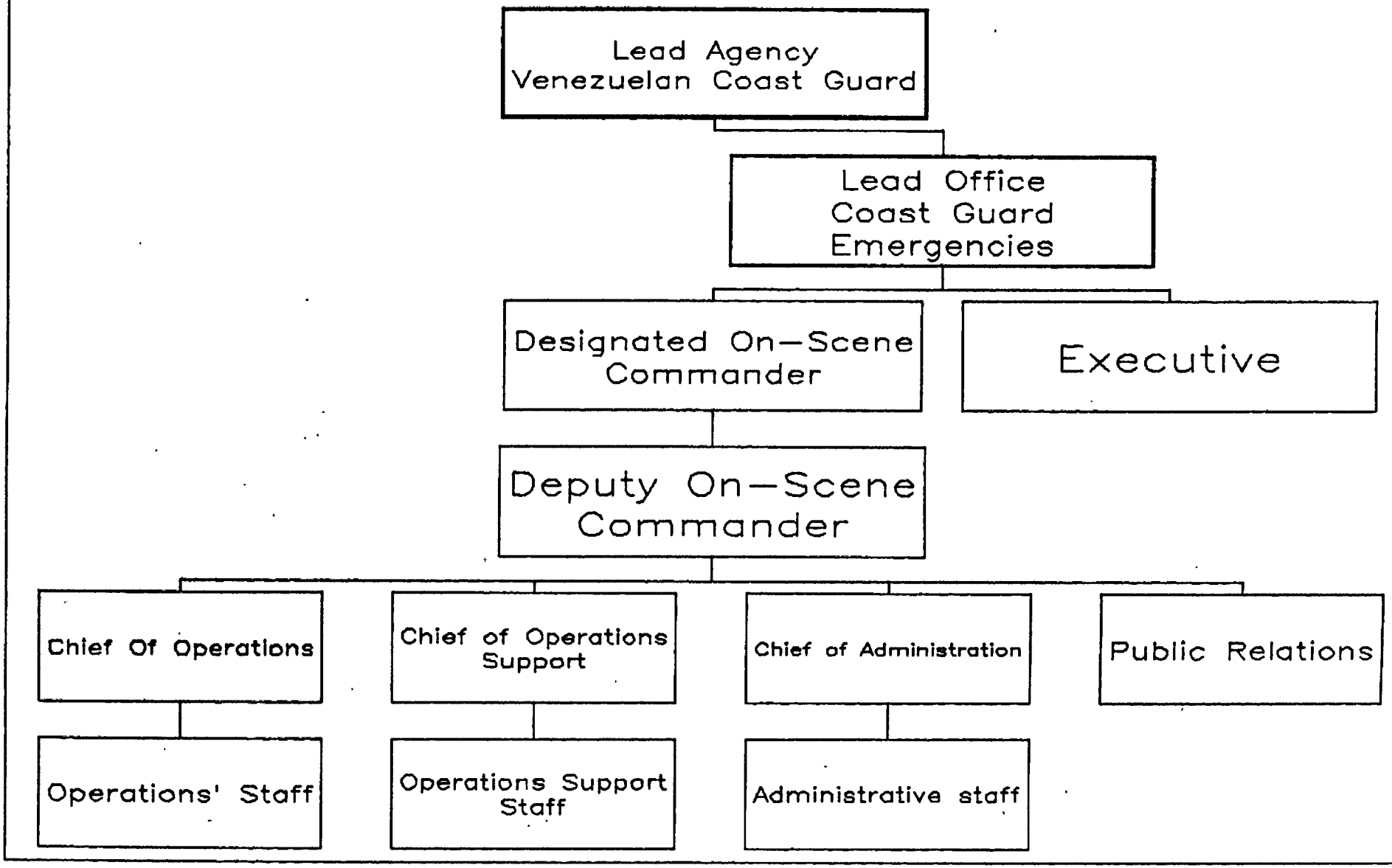


OPERATIONAL REPORTING SEQUENCES



Venezuelan Organisational Chart of the Command Structure for major clean—up operation

VENEZUELA GOVERNMENT



V-5. I.M.O. CONVENTIONS AND PARTICIPATION

Organisation, Objectives and Funtions

IMO is an excellent forum in which member states can express their views directly. It uses three different instruments: Convention, resolution and codes. Once the Convention is ratifed, by a state, its provisions become mandatory to the state, while the resolutions are only treated as recommendations and codes are safe practices to be followed.

The main functions of IMO are:

- Promotion of maritime safety abd efficiency of navigation.
- Prevention and Control of Marine Pollution.
- Legal matters relating to shipping.
- Facilitation of marine transport, and
- Execution of technical assistance programmes.

The creation of IMO coincided with a period of tremendous change in World shipping and the development of a new shipping industry in the developing world. IMO has since its inauguration in the persuit of its objectives, adopted conventions on a wide range of subjects including the Safety of Life at Sea, the prevention of collision at sea, the facilitation of maritime traffic, load lines, tonnage measurement, the prevention of marine pollution from ships, compensation for victims of pollution damage, safe container, fishing vessel safety, maritime search and rescue, special trade passenger ship agreement and standards of training and watchkeeping for seafarers.

In addition the organisation has adopted a vast number of protocols, amendments, codes, and recommendations.

As regards the position of Venezuela, the Government has ratified the following safety and marine pollution conventions:

- The IMO Convention itself. Date of ratification: October 27, 1975

- International Convention for the Safety of Life at Sea, 1974. Date of ratification: March 29, 1983.

- International Regulations for Preventing Collisions at Sea, 1972. Date of ratification: August 03, 1983.

- International Convention for the Prevention of Pollution of Sea by Oil, as amended in 1962 and 1969. Date of ratification: December 12, 1963.

- International Convention of Load Lines 1966. Date of ratification: October 15, 1974.

- International Convention on Tonnage Measurements, 1969. Date of ratification: July 06, 1983

- International Convention for the Safety of Life at Sea, 1948. Date of ratification (denounced) March 05, 1970.

- International Convention for the Safety of Life at Sea, 1960. Date of ratification: January 23, 1969.

- Torremolinos International Convention for the Safety of Fishing vessels, 1977. Date of ratification: January 16, 1987.

PARTICIPATION IN VARIOUS IMO AND INTERNATIONAL CONFERENCES

Active participation in various sessions of sub-comittees, committees and conferences of IMO is of utmost importance for proper understanding of the evolution of IMO standards and their implications for the national economy. It should be realised that a Convention can be expensive and may

have considerable effects on the economy. Therefore the persons nominated by the government must be appropriated proffesionals with sufficient experience, understanding and capabilities who can analyse the Conventions clearly. If necessary they should hold dialogues with other participants and convince the Committee in order to mould a Convention towards the needs of the developing nations, this only being possible through active participation. Nevertheless, the member States should have a compromising attitude towards the World Maritime Community as a whole. The most important of all is to participate actively rather than just in the meetings as observers.

Such active participation would further ensure the following:

1.- The needs of developing countries, as regards technical assistance and the attendant funding assistance, are not only made known but are recognised by all countries.

2.- Additional Knowledge and experience gained by their officials through discussions and consultations during the sessions, both formal and informal.

3.- Personal contacts are established with their colleagues from other countries, leading to better understanding and co-operation.

4.- The relevant standards are the "highest practicable", taking due note of the situation in different developing countries, and not the "highest conceivable".

5.- Wherever and whenever possible alternatives to sophistication, which can be met by developing countries by utilising indigenous resources, skills and systems, are also provided for.

6.- The relevant standards do not, even unwittingly,

tend to prolong indefinitely the dependence on external sources, except by choice, if so desired.

7.- The relevant standards are justifiable on the grounds of safety and /or pollution prevention and not motivated by other considerations.. In this connection it deserves to be mentioned that even through the history of I.M.O.
Meetings / Sessions has been commendable as regards the spirit of compromise and sense of accommodation exhibited by the Representatives of Governments present, it would not be an exaggeration to State that the non-participation by most of the developing countries would have denied to all concerned the benefit of making know their own views and limitations.

It is highly recommended the preparatory meetings for detailed examination of the subject matters to be held among nominated representatives before sending such representatives to attend international Sessions and that proper national briefs are prepared for the international meetings. This would certainly be helpful when participating in various sessions.

On the other hand non-participation in this type of international deliberation can have negative effects on the national maritime activities and may isolate the country from such an organization.

V-6 PROCESS FOR IMPLEMENTATION OF ANY INTERNATIONAL MARITIME CONVENTION

PHASE 1	PHASE 2	PHASE 3
a) Ratification/Accession b) Prepare Nartional Le - gislation (primary & Subsidiary) c) Documentation. d) Prepare the Executive Order Instructions to Officials concerned. e) Develop appropriated and adequate Maritime Administration infraestructure.	Implementation of National Legislation through the exercising of appropriated functions by the officials of the Maritime Administration.	Certification of ships/seaferers and Issuance of Clearances to ships to proceed to sea.

Footnote: Establishment/ Administration of Maritime Affairs in Developing Countries by professor P.S Vanchiswar. Volume 1 Chapter III pag 30.

PART TWO

GUIDELINE RECOMMENDATION FOR THE DEVELOPMENT OF THE MARITIME SAFETY ADMINISTRATION

CHAPTER I

DEVELOPMENT OF MARITIME ADMINISTRATION INFRASTRUCTURE

II-1 DEVELOPMENT OF MARITIME ADMINISTRATION INFRASTRUCTURE

Maritime Safety and Maritime Administration are so closely interrelated that one cannot deal with the latter in isolation without first talking about "Maritime Safety".

The Maritime Safety Administration is:

- That part of the Maritime Administration that deals with safety matters, or

- Depending on the maritime maturity of the nation, a public organisation charged with the duties of providing safety at sea through the development of various schemes and parameters through which safety standards - for the design, construction and operation of sea-going vessels or any fixed and mobile installations likely to be exposed to the different perils of the sea or navigable waters will be ensured.

It is clear from the above that countries involved in the shipping matters have three basic obligations which they must fulfil:

1.- They have to ensure that ships flying their flag fully comply with the minimum standards prescribed in the International Maritime Conventions.

2.- In order to achieve compliance with (1) above, the national statutes, Merchant shipping act/Maritime Code,etc, must be suitable to enable the government authorities responsible for shipping to frame rules and regulations for inspections, surveys, certification, etc ; and

3.- Establish an organisation which will be capable of dealing with all maritime matters (Maritime Administration). In general the object of a Maritime Administration Organisation within the framework of a Country's overall maritime activities is to provide the Government with the Machinery which would enable it to satisfactorily and efficiently undertake those functions which

are embodied within the Country's Merchant Shipping Legislation (i.e., National Maritime Law). These functions would include the implementation of the requirements of International Maritime Safety Conventions, and National Rules and regulations framed under the Authority of the Merchant Shipping Act.

In pursuing its activities in the development of the maritime field, the appropriate gorvernment authorities would, therefore, need to have an efficient administrative machinery to advice them on the adoption and implementation of the National Legislation and other Regulations required for developing and operating the maritime programme of their country and for discharging the obligations of the government under International Conventions which may be applicable.

This machinery can best be provided through a well organized Maritime Administration as mentioned before.

Such an Administration will also be responsible, for providing and organizing the appropiate facilities for the Survey and Certification of ship's masters, engineers and other maritime personnel.

In more details it is important to understand what are the broad areas which the Maritime Administration is required to deal with.

These could be said to cover:

1.- General superintendence and co-ordination.

2.- Registration of ship and related functions.

3.- Surveys, inspections and Certificates of ships.

4.- Port State control of foreign ships.

5.- Inspections and detention of unseaworthy/unsafe ships.

6.- The conducting of examinations leading to, and the issuance of the appropiate certificates of competency and/or proficiency to various categories of seaforers.

7.- Manning of ships.

8.- Conducting inquires/investigations into shipping casualties.

9.- Dealing with matters pertaining to prevention/control/combat of marine pollution.

10.- Crew matters.

11.- Registration of seamen.

12.- Wrecks.

13.- The adoption and implementation of International Maritime Conventions.

14.- Advice to government on maritime matters.

While up-to- date Merchant Shipping Legislation is a condition precedent to maritime development and the effective enforcement of appropriate Maritime Safety Standards, the primary objectives of such legislation of Venezuela needs to be (a) developmental, (b) regulatory, and (c) in conformity with relevant international law/conventions. Accordingly, the primary functions of the Maritime Administration in Venezuela would also have to be both developmental and regulatory.

The developmental functions can take the form of participation in the process of formulating the policy of the Government as regards maritime development and deciding upon the activities to be undertaken in connection with such development. Such functions are essentially contributory to the overall economic policy decisions to be taken by the Goverment through the Finance and National Economic, commerce and Plannning Ministres and may include.

a) The appropiate analysis/assessment of the most suitable types and number of ships required to meet the scale of development planned.

b) Development of the manpower needs of the shipping industry.

c) Development of ship-building and ship-repair capabilities.

d) Development of (marine) ancillary industries.

e) Development of the (marine) manpower needs of the ports, and

f) Development of employment opportunities for national seafarers.

The regulatory functions are expected to ensure:

a) Safety of lives, ships and property, and

b) Protection of the marine environment.

These in turn are expected to ensure in the context of development and economy:

a) Maximum efficiency in the operation of ships, with consequent economic advantage.

b) Creation, development, protection and preservation of national maritime skills.

c) Conservation of national property.

d) Reduction in the maintenance costs of ships.

e) Conservation of foreign exchange.

f) Avoidance of disasters and consequent loss of (or damage to) lives, property, marine resources and heavy expediture.

g) Maintenance of marine insurance premia at an advantageous level.

h) Provision of overall impetus to maritime development, and

i) Projection of the image of the country in very favourable light in the maritime world.

On the basis of the objetives and criteria, including funtions described previously, it is now proposed to deal with:

A.- The types of officials required.

B.- The desired qualifications/experience of the officials concerned.

C.- The organisation structure, as regard the Maritime Administration for Venezuela.

A.- Types of officials / staff required

i.- Statutory officials.

a.- Director General or Director (+ Deputy or Assistant)

b.- Registrar / s of ship.

c.- Surveyors (Nautical or Engineer) of ships (+ supervisory official/s).

d.- Examiners of seaferers (+ chief examiner/s).

e.- Shipping accident investigator (+ supervisory official/s).

f.- Shipping Master/s.

g.- Seamen employment officer/s.

h.- Receivers of wrecks.

ii.- Other Officials

a.- High level professional advises to the Government if required.

b.- Support officials as necessary for purely administrative and accounting work.

iii.- General Staff

Adequate provision needs to be made for necessary secretarial / electrical staff and messengers/orderlies.

The overall infrastructure of the Administration would naturally depend upon the nature and extent of the duties and responsibilities involved, which in turn would depend upon the current stage of maritime development in Venezuela and its plans for future maritime development including the pace at which the future development is to proceed.

The following are important considerations in deciding upon the number and levels of various officials to be appointed in the Administration:

i.- The quantum of work involved in each branch/section.

i.i.- The level of responsibilities to be assumed in each branch/section.

i.i.i.- The vital need for such officials to be capable of assuming multiple roles (the development of not only such multiple role capability in marine officials of the Maritime Safety Administration in developing countries,but also high standards of performance in such roles is one of the primary aims of the World Maritime University referred to earlier and further on).

II-1.2 Qualifications and Experience required for the professional staff.

1.- Director

The Director should possess the following qualifications/experiences:

i.- Master Science degree in Maritime Safety Administration, or Extra Master's Certificate or Extra first class Engineer's Certificate or equivalent.

i.i.- Master (captain) or chief Engineer of Merchant ships engaged in international trade.

i.i.i.- A surveyor of ships with a Maritime Safety Administration for a period of about five (5) years.

iv.- An examiner of sea-faring officers for a period of about five (5) years.

v.- Experience in accident investigation for a period of about five (5) years.

vi.- Experience of about three (3) years in a senior supervisory/management capacity in a Maritime Safety Administration responsible for a sufficient quantum of ships engaged in the International Trade.

vii.- A wide knowledge of International Maritime Conventions and Maritime Safety Standards.

viii.- Experience in preparation and administration of rules/ regulations relating to maritime matters.

ix.- Experience in contributing to government Maritime Policies.

x.- Experience in high - level Government negotiations.

xi.- Experience in Government procedures and financial control.

2.- Nautical Officer / Surveyor - Essential qualifications / experience

i.- Master (foreign going vessels) certificate of Competency.

ii.- Five years experience in the Deck Department of ships engaged in the international trade, which should include at least a period of one year as Chief Officer.

iii.- Experience in a Maritime Administration.

iv.- Experience in government procedure.

3.- Mariner Engineer / Surveyor:

i.- First class (steam and motor) engineer's Certificate.

ii.- Five years experience in the engine department of ships which should include at least a period of one year as second engineer.

iii.- Experience in a Maritime Administration.

iv.- Experience in government procedure.

4.- Shipping Master - Essential qualifications

i.- A degree in Maritime Law or a Certificate of Competency as Master or chief Engineer (foreign going vessels).

ii.- Experience in dealing with crew matters either in a government office or in a shipping company.

Job Description.

i.- Deal with all matters pertaining to the registration, engagement and discharge of seamen.

ii.- Adjudication into disputes between seamen and their employes under the Merchant Shipping Act.

iii.- Assist the Director in dealing with crew matters.

iv.- Any other matter specified from time to time.

5.- Registrar of Ships - Essential qualifications and experience.

i.- A dregee in Maritime Law or a Certificate of Competency as Master or Chief Engineer (foreign going vessels).

ii.- Experience in registration of ships.

foreseeable future, in spite of all national efforts.

iv.- If it is considered as a present days situation of delegating to classification societies the statutory functions relating to surveys and inspections and attendant certification of national ships, either necessary or desirable to still delegate such functions.

II-1.3.- The Organization structure:

Having dealt with the functions and duties to be performed, the types of officials required, the desired qualifications and experience of the officials concerned, the following model of Organization Structure is suggested for the Maritime Administration in Venezuela, in the form of Organization Chart.

This Organization Structure that is expected to be required for a Maritime Safety Administration in a developing maritime Country, whose maritime development is expected to be substantial in order to enable it to carry out all the necessary functions.

The chart projects types of officials required, as enumerated previously and indicates the chain of command. The chart also incorporates therein the positions of part-time officials such as "Receiver of Wreck" and other with delegated functions such as "Classification Societies".

The chart indicates the manner in which the different posts can be combined and the circunstances under which such combination would be possible and desirable. Depending upon (i) the professional expertise available in the organization and (ii) the nature and extent of the functions / duties to be performed in one's country, the different posts at (a), (b), (c), (d), (e), or (f) and (g) can be combined in the manner most suitable and cost-effective.

Thus, the charts provide options within themselves.

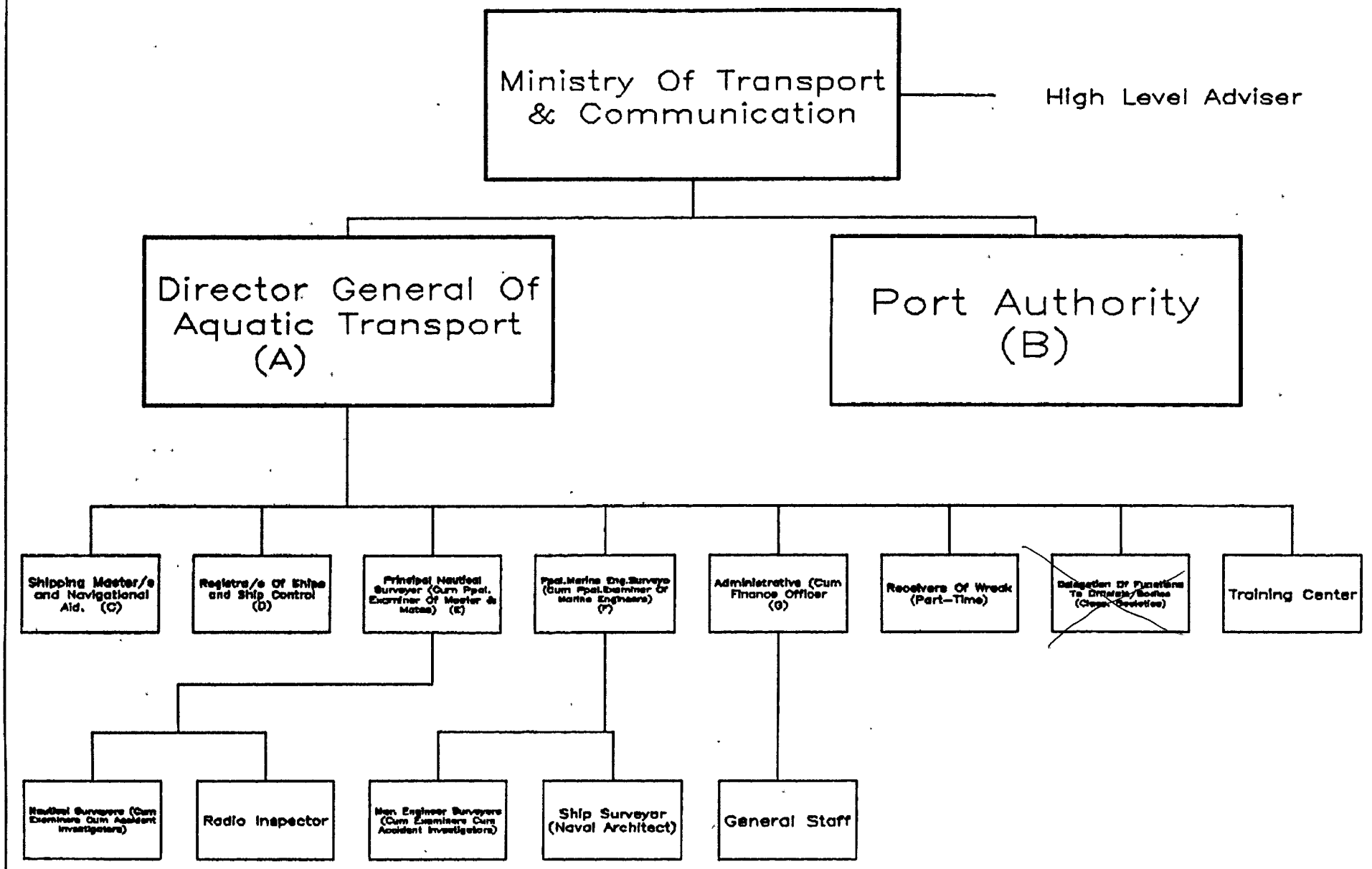
However, this chart is based on the concept that the substantial funtions would be carried out by the officials of the Maritime Safety Administration itself.

Reference and Footnotes:

Establishment Administration of Maritime Affairs in Developing Countries. Volume I, by Dr. P.S. Vanchiswar.

(1) Development of Maritime Administration Infrastructure. Vol. 1 1984, pag 97, 98, 99, 100, 101, 102, 104.

ORGANISATIONAL CHART FOR THE MINISTRY OF TRANSPORT AND COMMUNICATION OF VENEZUELA.



CHAPTER II

THE STATUS OF THE MARITIME LEGISLATION AND PREPARATION OF SAFETY REGULATIONS

GOALS FOR MARITIME SAFETY

When formulating goals for the Safety and Developing requirements for the system of Maritime Safety:

- The standards of, Safety shall take into account the level applied in developed countries.

- The ambition concerning the level of safety can not aim at a higher level than the shipping industry is given possibilities to growth and development.

- The wished level shall be achieved at the lowest cost for the Maritime Transport System as a whole.

II-2 THE STATUS OF MARITIME LEGISLATION.

The maritime navigation policy code must encompass a body of laws adopted and framed to control maritime activities. The extent to which these laws are expected to cover such activities will be dependent upon the degree of maritime activities in which Venezuela is involved. Nonetheless the basis of maritime law is generally of an international nature and the application of these laws to local situation should be of a pure national nature in order to meet a specific local condition . However it is desirable to follow those international standards of Maritime Safety Legislation which could help the officials concerned to understand and make the same interpretation of any matter likely to be covered and internationally agreed upon within a short time.

In the case of Venezuela which, as a sovereign state has jurisdiction only over its own territories, the legislation is primarily territorial. This, therefore leads to the general rule that the law applies to all things and acts within its territories including its waters and ships of its flag on high seas and foreign private ships within its territorial waters. This rule of International Law has to be clearly brought out in the Venezuelan Merchant Shipping Act.

It thus would be clear that Municipal Law can be effectively enforced by Municipal Courts not only in relation to nationals and their ships but also in relation to foreign flag vessels when in national or territorial Venezuelan Waters.

In general terms the aforesaid laws might be called the Merchant Shipping Act and cover articles and general provisions subject to specified condition and confers legal power to the ministry responsible for maritime affairs, enabling him to make rules covering the part of the primary legislation.

In short the legal regime of Merchant Shipping should be established with the help of clear and precisely worded law which has effective sanctions, a helpful Law-abiding atmosphere and regular Municipal Courts of Law to adjudicate and administer the Law.

This is all in addition to the facility provided by the International Courts of Justice and the Commercial arbitration which are of profound significance in the maritime field to settle any dispute.

The promulgation of such a national Act would be necessary for Venezuela.

The process of producing a new act is recognised to be a very lengthy one because there is, in general, time available to debate cases. For this reason it is undesiderable to produce, if it can be avoided, very detailed atcs that are likely to be in need of change after a short time. Nevertheless detailed legislation of some sort is necessary for most fields of human activity.

The problem may be solved by what may be called "Enabling Acts". These acts may, for example enable the ministry responsible of maritime affairs to make regulations subject to specified safety condition and thus avoid the necessity of producing a lengthy Act in view of the detailed regulations they have authorized.

These latter regulations may be called the Merchant Shipping (name of matter which is to be covered) Regulations.

Such regulations may be modelled in accordance with IMO resolutions which are adopted during each assembly (biennium) which are considered as recommendation but it was shown that there are some of them can take later the form of requirement under the appropiate convention, in this context it would be enough to note the list of the assembly resolutions which are embodied in the amendment 1981 to the SOLAS 1974.

" The reader of the Draft merchant shipping (fire appliances) amendments rules and the merchant shipping (cargo ship construction and survey) rules, can notice that Ressolution A. 481 (XI): the revised regulation 62 of the chapter II of the SOLAS 74, dealing with Inert gas System and Ressolution A.211 (VII): recommendation on safety measures for periodically unattended machinery spaces of cargo ship additional to these normally considered necessary for attended machinery spaces have been implemented since 1981 into some country legislations whereas internationally these two recommendations will be requirements when the aforesaid amendments came into operation e.i. 1st of September 1984.

These two examples illustrate the role of an appropriate marine administration which gives only the opportune time to formulate national rules and regulations for effective implementation of IMO standards and the marine industry to comply so early with them in order to gain more experience and economy of scale.

The purpose here is to show the Venezuelan maritime organization how to harness the international standard and utilising it approprially to the maximun national advantages and to assign high priority of the work programme of IMO either because they are parts of implementation process for the Organization instruments or because serious problems require early multifareous solutions.

It is important to note that in addition to the preparation of the Merchant Shipping Legislation (both Primary and subsidiary), all of the required and appropiate documentation (the necessary certificates, form, etc.) needs to be prepared and be available to all concerned at the same time as the Legislation enters into force.

II-2.1 ENFORCEMENT.

No rule, regulation or law can be effectively kept unless provision for enforcement has been made. Similarly, no law enforcement mechanism can be effectively carried out unless a special body sufficiently knowledgeable in the legal aspects and implications of the law has been officially appointed and entrusted with the functions of enforcement.

With regard to marine safety, the Maritime Safety Administration Division of the Maritime Administration is usually entrusted with the responsibility of enforcing the safety regulations of the Merchant Shipping Act.

The complementation machinery needed for the enforcement of the Merchant Shipping Legislation are:

a) Legal and (b) Administrative.

The problem of enforcement of the Rules and Regulations which establish a legal regime is indeed basic because if the machinery for the enforcement of the Law is weak and defective, it is clear that necessary respect of Law would tend to be undermined and the legal regime would at once face irregularities and illegalities, to rectify for which there may be neither sanctions nor remedies. It is, therefore, necessary to examine the instrumentalities for the enforcement of Law on which the regime comes to rest.

preparation of subsidiary laws or enabling acts necessary for further explanations or clarifications. The contents of the Act will include the following:

1) Ship Registration and Mortgages.

- Ownership and application for Registration, procedures for registration, Registration record and particulars to be entered, Surveys and measurements, markings.

- Certificate of registration and waivers, provisional certificates, name of vessel, etc.

- Change of ownership or master, registration of alterations, or changes of ownership, transfers and trasmissions, voluntary and forced transfers, prohibition of transfers.

- Mortgages, status, rights and discharge, bankruptcy, transfer of mortgages.

- National character of flag - Nationality and flag, unlawful assumption of national flag, concealment of character, or assumption of foreign character, penalties - flag violation, etc.

2) Masters, Officers, Seamen and Apprentices.

- Manning Certificated Officers - Grades, Certificates of competency, forms of Certificates, Examinations, Loss of Certificates, suspension of Certificates, Certificates by other governments, Power to make regulations for examinations.

- Seamen and Apprentice - Classification and duties of shipping masters, Fees, Assistance for apprenticeship, provisions and contract, Seamen's employment offices, Disputes, Illness and death, etc.

- Passenger vessels - regulations for carriage of passengers, etc.

3) Safety.

- Definitions, Surveys, Inspections, controls.

- Safety and Loadline Conventions.

- Construction of ships - Approval of plans, etc.

- Inspections, and surveys for safety, passenger vessels and various surveys, Cargo ship construction survey, Life-saving and Fire-fighting appliances, Reports.

- Issue of Safety Certificates, production of Certificates while proceeding to sea, Non-convention ships.

- General safety precautions and Responsibilities, qualifications of crew, Distress signals, obligation to assist in distress, Reporting of Accidents.

- Prevention of Collisions, Assistance in case of collisions, inspections for enforcing collisions regulations.

- Loadlines and loading, Submersion of load lines, powers to make regulations and compliance with regulations, Renewal and/or cancellation of Certificates, periodic surveys, inspection of foreingn ships.

- Carriage of grain and authorization to issue detailed regulations.

- Dangerous Goods, Definitions and authorization to issue ditailed regulations.

- Unseaworthy ships, obligation of owners to crew with respect to seaworthiness, Detention of unseaworthy ships, liability for costs, Unreasonable detention.

- Miscellaneous, power to make regulations for the Protection of Longshoremen powers to exempt.

4) Wrecks, Salvage and Casualty Investigations.

- Powers to appoint receivers of wrecks, fees and expensive of receiver, Duties and powers of receiver, immunity and obstruction of receiver, Owner's right to wreck, power to sell unclaimed Wreck, discharge of receiver, Removal of wreck.

- Salvage, Amount of salvage, costs, valuation of property, Detention of Salvage property and disponsal of detained property - Limitation of time.

- Shipping Casualties, Inquires and Investigations, Preliminary inquiries and formal investigations, Power of court of investigation to inquire into charges, Power of Government (Maritime Administration) to direct inquiry into charges of incompetency, Power to arrest witnesses and enter ships, Different reports of courts to Government Power of court to censure master, mate or engineer, or detain or suspend certificates, Power of Government as regards such detentions, etc.

5) Limitation and Division of Liability.

- Limitation of liability, Definitions, variations and tonnage rules, foreign ship's measurement, owner's liability, extension of liability, Dock and harbour owners, Release of ship with security.

- Division of liability - joint and several liability, right of liability, extended meaning of owners.

6) Penalties and Procedures.

- Offences and penalties, procedure and jurisdiction, Dispositions regarding evidence when witnesses cannont be produced, Power to detain

a foreign ship that has caused damage, Power to enforce detention of ships, Notice to Consular representative of proceeding taken in respect of foreign ship, Application of fines, Service of Documents.

7) Pollution, Prevention and Contingency Planning.

- Obligation to clean, Cleaning up by specialised persons and responsibility of polluter.

- Oil exploration/exploitation companies and obligation to establish Contigency Plans, Inspection of such Plans.

8) Para-Maritime Activities.

- Supporting Activities - Definition of domain of activities and competence, responsibility and limitation, etc.

9) Off-Shore Activities.

- Power of Government to make regulations, Installations governed by national regulations, Regulations for installations governed by foreign flags.

- Pollution prevention and contingency plans, etc.

10) Supplemental.

- Protection of persons acting under national legislation, Powers of persons authorized to investigate, etc., Exemption of public ships,

Powers to exempt, Powers to make subsidiary rules and regulations, provisions of such rules and regulations, Powers to constitute comittees to advise on rules, regulations and scales of fees.

- Transitional Provisions, etc, etc.

It is to be remarked that a Merchant Shipping Act, as an umbrella maritime law, by its very nature cannot legislate fully the different areas in shipping. It therefore should make a allowance for complementary regulations to be promulgated to govern the related areas. Such regulations or law instruments are commonly called "Enabling Acts". Considering the vastness of the maritime domain, provision for their existence will on the one hand, prevent the compilation of all related regulations in one document. On the other hand, this will reduce considerably the time it takes such regulations to be promulgated into law, and finally, will permit the Maritime Safety Administration to keep pace at national level with the various amendements of international instruments. A Merchant Shipping Act is therefore a primary legislation under which various rules and regulations (subsidiary legislations) will be promulgated. Whith regard to safety maintenance, the following rules and regulations have to be prepared by the Maritime Safety Administration in the form of "Enabling Acts".

- Rules for the Registration of ships.
- Regulations for preventing Collisions at Sea.
- Rules for the use of Distress Signals.
- Life-Saving appliances Regulations.
- Fire Safety Rules.
- Cargo Ship constructions and survey Regulations.
- Coastal cargo ashiр Safety Certificates Rules.
- Crew Accommodation Rules.
- Passenger ship Construction Regulations.

- Radio installation Regulations.
- Regulations for the carriage of grain.
- Pilot ladders and hoists Regulations.
- Tonnage Regulations.
- Official log-books Regulations.
- Navigational Warnings Regulations.
- Navigational Equipment Regulations.
- Anchor and Chain cable Rules.
- Master Regulations.
- Rules for the Carriage of Deck cargo.
- Rules for the Carriage of Dangerous Goods.
- Rules on Apprenticeship to Sea Service.
- Medical Scales Regulations.
- Loadline Rules.
- Regulations for the Certification of Skippers and Second Hands of Fishing Boats.
- Regulations for the Certification of Marine Engineers.
- Regulations for the Certification of Deck Officers.
- Manning Regulations.
- Pollution Prevention Regulations, etc.

These regulations have to be "shaped" to portray national character and the maritime maturity or level of development of the nation. In most countries of developed market - economy, the scope of such regulations will be wider, consideration being taken of availability of resources for development, equipment, and for the enforcement of laws.

II-2.3 IMPLEMENTATION OF INTERNATIONAL CONVENTIONS.

At this stage of the study, it is necessary to know exactly what a Convention is. A convention then is merely an agreement, enforceable in law, between persons or parties, or between two or more states for the regulation of matters affecting all of them. There exist three main types of Conventions in the maritime field:

(i) The first type consists of treaties which are law-making or which codify existing law. The purpose of such instruments is to supplement existing international law by clarifying certain issues or by restating, consolidating, and codifying legal rules which might already be applicable, for instance in the form of customary law. With regard to this study, the most eminent example of such a Convention is the new Law of the Sea Convention. It is part law-making by setting out new principles relating to the status and the use of the oceans, and in part, of a codifying or consolidating nature (by setting out formally what may have been hitherto customary law or by re-writing and superseding existing conventional law).

(ii) The second type consists of those Conventions which set out certain standards which are to be applied by all states parties thereto. What is in the foreground here is the joint and parallel application of standards by all states concerned with a view to improving international cooperation and relations, and not necessarily the creation of mutual rights and obligations. In most cases the standards set by the Convention are minimum standards, but giving states liberty to set higer standards in their respective municipal legislations, particularly and with regard to shipping, in respect to ships flying their respective flags. Most of IMO's technical conventions - the SOLAS, 1966 LOAD LINES, MARPOL 73/78, SCTW, etc. belong to this category of conventions.

(iii) In the third category fall those conventions which aim at bringing about a harmonization of existing and divergent national laws. They are either related to the mutual rights and obligations amongst states or they may be of a more "private law" character and deal with the relationship among individuals. The goal to be achieved here is the identity of various national laws rather than a common international standard. In this group will fall most of IMOs "legal" conventions, and the following:

- The 1969 International Convention on Civil Liability for Oil Pollution Damage.
- The 1974 Athens Convention on the Carriage of Passengers and their Luggage by Sea.
- The 1976 Convention on Limitation of Liability for Maritime Claims.
- The 1974 International Convention on a Code of Conduct for liner Conferences (UNCTAD).
- The 1978 Hamburg Rules (UN).

The implementation of a Convention is the acceptance of that Convention and the inclusion or incorporation of its provisions into related national legislation. This involves two main stages: Ratification or adherance, and Physical inclusion or assimilation into municipal legislation.

1) RATIFICATION OR ADHERANCE.

Accepting a Convention is signing it, acceding to it (if the instrument is already in force), or adhering to it. This process is called ratification. It is through one of these three processes that a Country becomes party to a particular Convention. This first stage necessitates a lot of preparatory work on the part of the Maritime Safety Administration. A three - dimensional analysis has to be made on the impact of the provisions of the Convention on the following:

- National Maritime Legislation.

- National fleet.

- Supporting activities of Maritime transport (para - maritime sector).

- Maritime and Economic development.

Such a study will permit the Maritime Safety Administration to appreciate the pre-requisites for effective and efficient enforcement of the Convention.

These pre-requisites will include among others, the identification of the following:

a) Technical requirements.

b) Administrative requirements - more resources or not.

c) Organisational requirements.

Consultation of the following private and public bodies will be necessary at this stage:

* Governmental administrations whose lines of activities might include many or certain aspects of maritime transportation or sea in general.

* Shipowners and Agents, and crew members (unions).

* Port Authorities.

* Lighthouses organisation, and similar para-public and private Organisations.

These consultations, in addition to informing those concerned of the existence of the Convention and the likelihood of its provisions becoming part of national law, will permit above mentioned interested parties to start foreseeing the various constraints likely to prevent them, from meeting the requirements of the Convention, and the possibilities of obviating these constraints.

2) PHYSICAL INCLUSION INTO NATIONAL LEGISLATION.

The second stage is the physical or the transformation of the provisions of the Convention into the municipal legislation. The method used here will depend largely on the legal constitution of the Country concerned. Two main methods of implementation are currently used by many countries:

- In the first method, reference is made in the municipal legislation or a subsidiary law on the whole contents of the Convention becoming part of national maritime legislation. Those directly concerned are informed and in certain cases the Convention is multiplied and copies are distribuited. In cases where the Convention makes room for regulations to be made by the Administration (following national needs) to complete certain sections, these references will be made in these subsidiary legislations. It is to be remarked that most Conventions are usually followed by recommendations, which due perhaps to their high standards or lack of a unanimous agreement on their adoption, are not mandatory. Some Administrations, in view of their maritime development, might include - by making reference to specific recommendations - some of these recommendations in their national legislations. Also, certain requirements which are neither included in the provisions of the Convention nor in the recommendations but which are judged necessary considering national maritime maturity, will be included in the subsidiary legislation.

- In the second case, the Maritime Safety Administration incorporates the provisions of the Convention into the national legislation. In very few cases does this incorporation entail the copying word for word or a complete assimilation of the contents of the Convention.
  In fact, this incorporation is a sort of interpretation, explanation or clarification of the provisions of the Convention . In certain cases following the nature of the provisions, detailed references are made. This second method has been considered more appropiated by some countries than the first in as much as the

interpreted form is more comprehensible and thereby more accessible to the users than the real provisions of the Convention. It also permits the inclusion of "local colour" in the legislation and the subsequent use of indigenous resources as alternatives without rendering national legislation incompatible with the international Convention. With regard to recommendations or other complementary provisions which the Administration judges necessary as a completion of the provisions of the Convention, or in the advent of the need for more stringent regulations for national flag vessels, the process is the same as earlier described but with the sole difference that the provisions of the Convention, the recommendations and additional stringent regulations are blended together to make a more coherent and harmonious subsidiary legislation.

Developing countries which find this second option onerous because of lack of qualified personnel, will find a closer alternative in the system where detailed references are made to particular or all the provisions of a Convention. In this case useful Resolutions or Recommendations will have to be picked out and included in the subsidiary legislation as mandatory requirements. It should be remembered that whenever references are made to the provisions of a Convention, a copy of the section referred to and in the language of the national legislation should go along with the subsidiary legislation.

There is need to reiterate here that the process of accepting an International Instrument is always twofold. Ratification of a Convention is thus not an end in itself. The complementary procedure of implementation is very necessary as a completion of the process of acceptance. Many Developing Countries unfortunately have the false conception that the mere ratification of an international convention obliges national flag vessels to comply with its provisions.

3) <u>INTERNATIONAL SAFETY CONVENTIONS.</u>

After discussing the contents of a Merchant Shipping Act and the different procedures for the implementation of

international Conventions, it behooves us here to have a closer look at some of the international Conventions on safety adopted under the auspices of the International Maritime Organisation, and for which she excercises depositary functions. We will only be concerned here with the following Safety Conventions, with emphasis on SOLAS'74:

* The 1974 International Convention on the Safety of Life at Sea (SOLAS'74) and the Protocol of 1978. (as amended in 1981 and 1983).

* The 1966 International Convention on Load Lines.

* The 1972 International Regulations for the Prevention of Collisions at Sea (COLREG).

* The 1978 International Convention on the Standards of Training Certification and Watchkeeping for Seafarers (STCW).

* The 1977 Torremolinos International Convention for the Safety of Fishing Vessels.

* The Mobile Off-Shore Drilling Units Code (MODU CODE) - Guide lines.

* The 1979 International Convention on Search and Rescue (SAR).

* The International Convention for the Prevention of Pollution - 1973/1978.

A) <u>SOLAS'74 AND THE PROTOCOL OF '78</u>.

The first International Convention on the safety of Life at Sea (SOLAS) was given birth to in 1914 by the Titanic disaster of 1912. From this date, three more SOLAS have appeared before SOLAS'74 and Protocol '78 - in the following years: 1929, 1948 and 1960. With the appearance (entry into force) of a new SOLAS, the provisions of the previous one are superseded between parties.

The 1974 SOLAS CONVENTION consists of thrirteen Articles, an Annex with eight chapters, and an Appendix presenting the different types of Safety Certificates. SOLAS '74 entered into force in 1980.

With regard to the Articles of the Convention, the following are of great importance to Maritime Safety Administrations during the implementation of the Convention:

- Article VI relating to the supersession or denouncement of the provisions of prior treaties or conventions by the adoption of new related Conventions.

- Article VIII relating to amendments. Administrations should therefore make provisions for this in related national legislations.

- Article X relating to the entry into force of the Convention. Administrations should be aware of the fact that the enforcement of the provisions of a Convention (after incorporation into national legislation) will be more effective if the Convention is already in force. Although the ratification of a Convention is not actually a pre-requisite for incorporating some of its provisions into national legislation, it should be noted that one ratification takes the Convention one step towards entry into force.

With regard to Annex, the following topics are treated in the different chapters:

CHAPT.I - General Provisions.

CHAPT.II-1 - Construction - Subdivision and Stability, Machinery and Electrical Installations.

CHAPT.II-2 - Construction - Fire Protection, Fire Detection and Fire Extinction.

CHAPT.III - Life Saving Appliances and arrangements

CHAPT.IV - Radiotelegraphy and Radiotelephony.

CHAPT.V - Safety of navigation.

CHAPT.VI - Carriage of Grain.

CHAPT.VII - Carriage of dangerous Goods.

CHAPT.VIII - Nuclear Ships.

RESUME AND GUIDE LINES FOR IMPLEMENTATION

CHAPTER I - General Provisions.

This chapter consist of regulations on Applications, Definitions, Equivalents, Surveys of Passenger Ships, Surveys of Life Saving Appliances etc. on Cargo Ships, Surveys of Radio Installations, Hull, Machinery etc. on Cargo Ships, Issue and Duration of Certificates, Forms of Certificates, Control of Certificates, and Casualty Investigations.

With regard to Port State Control, this chapter is of vital importance, and should be incorporated in the subsidiary national legislation on Safety. It should be remarked however that this chapter was amended by the SOLAS Protocol of 1978 which entered into force in 1981.

CHAPTER II-1 - Construction: Subdivision, and Stability Machinery and Electrical Installations.

This is divided into three parts: A, B and C, treating respectively Generalities, Subdivision and Stability, and Machinery and Electrical Installations. The first set of Amendments to SOLAS '74 affected Part C, dividing it into three parts: Machinery Installations, Electrical Installations, and Additional Requirements for periodically unattended Machinery Spaces.

The technical details contained in this Chapter, especially in Part B, might pose problems to Administrations

during incorporation. Nevertheless, simplification might be reached by simply making reference to certain Regulations while incorporating others in the preparation of related legislation. In addition, the provisions of this Chapter are extensively covered by Regulations set out by the International Association of Classification Societies which keep a steady surveillance on the construction of sea-going vessels.

It should be noted that the bulk of this Chapter was effected by the 1981 Amendments.

CHAPTER II-2 Construction- Fire Protection, Fire Detection and Fire Extinction.

This section is a very important part of the SOLAS Convention inasmuch as fire has presented a great hazard to vessels especially passenger ships for a long time. In each of the proceeding SOLAS Conventions substantial changes were made with the strengthening of some requirements. Also, fire safety requirements were introduced (by the SOLAS '60) for cargo ships.

The Chapter is made up of six parts which treat:

- Generalities.
- Fire Safety measures for Passenger Ships carrying more than 36 Passengers.
- Fire Safety measures for Passenger Ships carrying less than 36 Passengers.
- Fire Safety measures for Cargo Ships.
- Fire Safety measures for Tankers, and
- Fire safety measures for existing Passenger Ships.

The Chapter was also affected by the Amendments, reducing the sections from six to four, the Regulations from 85 to 63, but with more clarifications.
Since the Amendments are already in force, Administrations shall implement them rather than the text of SOLAS '74.

The concept of new and existing ships appears both in SOLAS '74 and in the first and second sets of Amendments, and should not be confused. In the Convention, a new ship is one whose keel was laid on, or after May 25th 1980. In the first set of Amendments, it is one whose keel was laid on, or after September 1st 1984. In the 1983 amendment it is a ships constructed in or after 1st July 1986 (Reg. 1.1).

Existing ships in the Convention are divided into three groups:

- The keel is laid on, or after May 26th 1965 but before May 25th 1980 (i.e.,one constructed under SOLAS '60).

- The keel is laid on, or after November 19th 1952, but before May 26th 1965 (i.e., one built under SOLAS '48).

- The keel was laid before November 19th 1952 (built under SOLAS '29).

An existing ship in the Amendments will be one whose keel was laid before September 1st 1984. In the control of related Ship Certificates, Administrations should take note of these dates.

Since the general rules of Classification Societies do not usually include detailed regulations on Fire Safety, there is the need for Administrations implementing SOLAS'74 to prepare the necessary national regulations governing fire safety. The best way of implementing the provisions of this Chapter (and probably of the whole Convention) especially for Developing Countries would be to make detailed references to the requirements and subsequent Amendments. Such references would mean of courses that the Convention text must be included in the regulations in the same language.

CHAPTER III - Life Saving Appliances.

This chapter is divided into three parts: Generalities, applicable to both Passenger and Cargo Ships, Passenger Ships only, and Cargo Ships only. Light amendments (Regulations 1, 27, 30 and 38) were made in the first set of Amendments but a complete revised version of the Chapter was adopted by the

Maritime Safety Committee of IMO. These Amendments entered into force in July 1st, 1986.

Most provisions of this chapter apply only to new ships. A limited number of regulations apply also to existing ships. Existing ships (including those ships being built before SOLAS '60 came into force) could then comply with the related provisions of SOLAS'60 or SOLAS '74 or SOLAS '78 or SOLAS '81.

The importance of this chapter cannot be emphatized since in the advent of as serious accident on board a vessel, the only means of escape will be the help of available life saving equipment. It is to be noted that many Administrations have inadvertenly undermined the importance of this chapter and as a result have not efficiently enforced compliance with its provisions on their national flag vessels. In fact, in the Annual Report on the implementation of the Paris Memorandum of Understanding on Port State Control, it is reported that between July 1st 1982 and June 3th 1983, statistics show that most of the deficiences discovered during control were on life saving appliances. Two thousand four hundred and eighty (2480) cases of deficiences in life saving appliances were found, this representing almost 30 % of total deficiencies.

Life Saving Appliances are not covered by normal classification societies rules, and the onus of providing adequate rules and implementing international related instruments will fall on the Administration.

Administrations especially in Developing Countries will be advised here to consider the incorporation in the related subsidiary national legislation of the revised version of this chapter even before its provisions enter into force internationally. They have enteredinto force internationally (1st July 1986). It should be observed that two resolutions adopted by IMO are made mandatory by a reference in the chapter. They are Recommendation on Testing of Life-Saving Appliances adopted by the Organization by resolution A. 521(13), Code of Practice for the Evaluation, Testing and Acceptance of Prototype Novel Life-Saving Appliances and Arrangements adopted by the organization by resolution A.520(13). A complete revision is made preparation and will probably be adopted in 1988.

CHAPTER IV - Radiotelegraphy and radiotelephony.

This chapter is divided into four different parts dealing with Applications and Definitions, Watches, technical Requirements and Radio Logs. It was also affected by the first set of Amendments, but a complete revision is under preparation in connection with the introduction of the MGDSS. Those amendments will probably be adopted in 1988.

CHAPTER V - Safety of Navigation.

This Chapter consists of one section with provisions on Danger Messages, Meteorological Services, Ice Patrol Services, Routeing, Signalling Lamps, Shipborne navigational Equipment, Aids to Navigation, Search and Rescue Life Saving Signals, Pilot Ladders and Hoists, Use of Automatic Pilot, Nautical Publications and International Code of Signals etc.etc. These provisions were effected not only by the 1981 Amendments but also by the Protocol of '78, which made provisions for one mandatory radar for all ships of 1600 gross tons and above but less than 10000 gross tons, and two mandatory radars for all ships above 10000 gross tons. Some of the provisions in this chapter will be discussed in a later chapter.

CHAPTER VI - Carriage of Grain.

It consists of two parts, one on General Provisions and the other on the Calculation of assumed heeling moments. It was also effected by the first set of Amendments which replaced Regulation 1 on Application, and amended the second Section. This chapter applies also to ships with a gross tonnage of less than 500.

CHAPTER VII - Carriage of Dangerous Goods.

Part A deals with carriage of dangerous goods in packages forms or in solid form in bulk.

That part contains provisions on Classification, Packing, Marking and Labelling of Dangerous Goods, Relating Documents, Storage Requirements and the Carriage of Explosives in Passenger Ships. These provisions are of a very general nature and Contracting Governments are asked to issue detailed instructions for the Safe Carriage of Dangerous Goods.

On the other hand mention should be made of the International Maritime Dangerous Goods Code (IMDG CODE) adopted by IMO which contains detailed requirements for the safe transport of dangerous Goods by sea. This Code unfortunately is not part of the SOLAS'74 Convention, but in view of its contents, Administrations should consider (in fact

many Administrations have already done so) including its provisions - by making detailed or specific references to them - in the Subsidiary legislation dealing with Dangerous Goods. Part A of this chapter makes the IMDG Code and Part of the BC Code semi-mandatory. Parts B and C makes the IBC and IGC Codes mandatory for new ships.
The IBC Code and the BCH Code are mandatory under MARPOL '73/78 for both new and existing ships the same will be the case with the IMDG Code when the Annex III of MARPOL 73/78 comes into force internationally.

For those Administrations which feel the need of more detailed requirements, consultation of the following IMO publications will be of help:

* MSC/Circular 299 of 12.2.81 on Safe Transport, Handling and Storage of Dangerous Substances in Port Areas.

* Emergency procedures for ships carrying Dangerous Goods.

* Medical First Aid Guide for use in Accidents involving Dangerous Goods.

* IMO/ILO Guidelines for training in the packing of cargo in freight containers.

* Recommendations on the Safe use of pesticides in ships.

* The Code for the Construction and Equipment of Ships carrying dangerous Chemical in Bulk ("The Bulk Chemical Code")

* The Code for the Construction and Equipment of Ships carrying Liquefied Gases in Bulk ("The Gas Carrier Code")

* The Code for existing ships carrying liquified gases in Bulk applicable to ships which are delivered on or before October 31st 1976.

It is to be noted here for the sake of Administrations that in the Amendments to SOLAS'74, most of the provisions governing Dangerous Goods have been revised and harmonised. These Amendments provide for three sections:

* Carriage of dangerous Goods in Packaged From or in Solid Form in Bulk.

* Construction and equipment of ships carrying dangerous liquid chemicals in bulk, and

* Construction and equipment of ships carrying liquiefed gases in bulk.

Revised versions of both the Bulk Chemical Code and the Gas Carrier Code are introduced in the last two sections and these Codes will henceforth be known as "The International Bulk Chemical Code" and "The International Gas Carrier Code".

These Amendments entered into force (July 1986); Administrations - parties to SOLAS'74 should take the necessary measures for implementation. Also, since existing gas codes carriers and chemical tankers are not within the scope of the two Codes, the responsibility of legislating safety measures will fall on the various Administrations.

CHAPTER VIII - Nuclear Ships.

This Chapter consists of one section with twelve regulations relating to Radiation safety, Operating manual, Surveys, Certificates, Control and Casualties with regard to safety maintenance on board nuclear ships.

PROTOCOL to the 1974 SOLAS Convention.

In 1978 two instruments - the Protocol to the MARPOL'73 Convention and the Protocol to the SOLAS'74 Convention - were adopted by the International Conference on Tanker Safety and Pollution Prevention (TSPP). New requirements appeared in three main sections:

1) Definition of New Ship.

New tankers were either tankers whose bulding contract was made after June 1979, tankers whose keels were laid after January 1st 1980, or tankers which were delivered after June 1st 1982.

2) Inspections and Certifications.

With regard to inspections and Certifications, changes were in the following:

- Administrations were urged to institute mandatory annual surveys or unscheduled inspections in addition to the periodical surveys of SOLAS'74, and are obliged to guarantee the completeness and the efficiency of the inspections.

- In the advent of defects and deficiencies the inspecting authority must ensure that corrective action is taken.

- As regards safety equipment certificates, the two-year period survey required by SOLAS'74 was brought down to an annual survey for tankers of ten years and bove.

- An intermediate Cargo Ship Safety Construction Certificate was required for tankers of ten years or more. The maximum period of validity of Cargo Ship Safety Construction Certificate would be five years. This was not provided for in SOLAS'74. Ship Safety Construction Certificate survey requirements are extended to include cargo pumping, piping, and venting arrangements.

- Redefinition of the obligation to maintain ships and their equipment in a satisfactory condition and

adoption of more explicit requirements for reporting accidents and deficiencies and action to be taken by Administration.

3) Equipment.

- Inert gas system (IGS) for protection of cargo Tanks.

While SOLAS'74 limited the IGS to new oil tankers over 100.000 dwt and new combination carriers over 50.000 dwt, the Protocol made it mandatory to all new tankers over 20.000 dwt and all existing crude oil carriers over 20.000 dwt, and all existing product carriers over 40.000 dwt (*), all existing tankers of 20.000 dwt and above fitted with high capacity (60 cubic meters per hour and above) washing machines, and all tankers where a crude oil washing is fitted.

- Steering Gear.

Provision for special requirements relating to control communication and local operation Gear for new and existing tankers of 10.000 dwt and above and testing of steering gear at stipulated intervals.

- Radar and Collision Avoidance.

* All ships between 1600 and 10.000 grt must have a radar while all ships of 10.000 grt and above will have two radars, each capable of operating independently of the other.

* IMO was asked to develop before July 1st 1979 performance standards for collision avoidance aids. (ARPA)

* Regulation 12 of chapter V contain now a complete set of requirements in respect of shipborne navigational equipment. The provisions in ARPA has periods of grace for various types of ships, the longest period ends 1st September 1988.

(*) Provision for exemption of carriers between 20.000 and 40.000 dwt if retrofitting is judged not reasonable and practicable by Administration.

B) THE INTERNATIONAL CONVENTION ON LOADLINES.

The safe carrying capacity of a ship is indicated by lines marked on its sides the position of which is determined by the watertight integrity and geometric propierties of the ship. These lines are called Load Lines. In 1966, an International Convention - a revision and updated version of a similar Convention adopted in 1930 - was adopted on Load Lines applicable to all ships engaged in international voyages with the exception of ships of war, ships solely engaged in fishing, pleasure yachts not engaged in trade and ships solely navigating the Great Lakes of North America and the St. Lawrence River.

The Load Lines Convention consist of thirty four articles, three Annexes of fifty - two Regulations.

Annex I deals with Regulations for determining loadlines and is composed of four chapters treating Generalities, Conditions of Assignment of Freeboard, Freeboards, and Special Requirements for Ships assigned Timber Freeboards. Annex II deals with Zones, Areas and Seasonal Periods. Annex III is a presentation of the International Load Lines Certificate.

The Convention entered into force in 1968, and has been amended three times (1971, 1975 and 1979). None of these Amendments apparentely is in force internationally.

The main objective of the Convention is to ensure structural strength and stability of ships by establishing minimum freeboards. In other words, ships falling under the scope of the Convention shall have adequate reserve buoyancy to remain afloat under the different weather conditions to be encountered at sea.

Administrations, parties to this Convention, are expected to implement the Convention by the promulgation of Regulations and Rules (in the appropiate part of their national maritime legislations) covering the regulations of the Convention. As international conventions on safety usually give the minimum practicable requirements, many Administrations have provided, in their national regulations on loadlines, for more requirements than the Convention demands. Such complementary requiremements usually govern only their national flag vessels.

Most Developing Countries relegate to Classification Societies, the functions of determining the correct freeboard of national flag vessels, and the related inspections and surveys. It should be noted that there are no technical scientific principles for determining the correct freeboard of a vessel. In fact, in most cases the freeboard of a ship is determined by comparing the geometrical particulars of the ship with those of a standard ship of the same length. Nevertheless, a complete and proper assessment or assigned freeboard must include a thorough appraisal of hull strength and stability. Classification Societies will therefore be more qualified for these functions in the advent of inavailability of qualified surveyors.

C) THE COLLISION RULES.

The Convention on the International Regulations for preventing Collisions at Sea (COLREG) adopted in 1972 is a revised edition of the 1960 Collision regulations which were annexed to the final Act of the 1960 SOLAS Conference. This revision was called for by the various changes registered in the sizes and characteristics of modern vessels, particularly tankers. In 1979, on the demand on many states contracting parties (France, The Netherlands, the German Democratic Republic) certain amendments were made, particularly to Rule 10. Further Amendments are still under consideration since more states have expressed dissatisfaction with regard to some of the Rules. The Convention came into force in 1977 and the Amendments in 1983.

The Convention consists of five parts dealing with:

* Application of Rules and responsibility to obey them, and Definitions.
* Steering and sailing.
* Technical details on lights and shapes.
* Sound and Light Signals, and
* Exemptions,

and four Annexes treating inter alia positioning and technical details of lights and shapes, navigation lights for the ensurance of uniform colour intensities, additional signals for fishing vessels fishing in close proximity, standardisation of signals, technical details of sound signals appliances, and Distress Signals.

The main objetive of this Convention is the ensurance of safe navigation. In other words, the rules are meant to regulate the behaviour of vessels at sea - consideration being taken of bad weather resulting in reduction in visibility - and the need to prevent collisions.

The extent to which Administrations implement this convention and the additional requirements they may include in related national regulations will depend largely on the traffic on the waters over which the have sovereing rights and the exercises some duties in return. For instance, vessel - traffic management requirementsb around the Suez and Panama canals, and in the English Channel will be very stringent considering the heavy traffic. With regard to normal implementation for a coastal state party to the Convention, it should be mentioned that in most cases Port Authorities (Developing Countries), Coast Guards (North America), Maritime Administrations and para-public Organisations (OECD countries) are in charge of the placement of acoustic and luminous signals necessary to prevent collisions or groundings, and the determination of sea-lanes especially where heavy traffic is expected.

THE INTERNATIONAL CONVENTION ON STANDARDS OF TRAINING, CERTIFICATION AND WATCHKEEPING FOR SEAFARERS.

Whatever advancements are made in automation and inanimate control, the human factor is likely to remain of prime importance and the personal element will continue to play its specially vital role in life at sea. Human error has been the main cause of major accidents at sea. If on the one hand, it is impossible to control or prevent natural human errors (fallibility of human nature), it is possible on the other hand to prevent through training the occurrence of those errors which result from lack of knowledge or inadequate training.

One of the Resolutions taken during the 1960 SOLAS International Conference "called upon Governments to take all practicable steps to ensure that the education and training of seaferers in the use of aids to navigation, ship's equipment and devices, was kept satisfactorily up to date". The IMO and the International Labour Organizations (ILO) were requested to liaise together to achieve this end. Pursuant to this recommendation, IMO and ILO stablished a joint Committee on Training which met in 1964 and prepared the "Document for Guidance 1964" which provided guide-lines on the training of masters, officers and seamen in the use and operation of aids to navigation, life saving appliances, devices for the prevention, detection and extinction of fire, etc.

This document underwent two amendments (1975 and 1977), but the need to strengthen and improve standards was still felt. A decision was taken to convene a Conference which met in 1978 and adopted the International Convention on Standards of Training Certification and Watch Keeping for Seafarers 1978, from a draft Convention prepared by the Sub-Committee on Standards of Training and Watch Keeping. This was the first time global minimun professional standards for seafarers were stablished since the custom had been for individual governments to extablish national standards on training without any obligation for harmony and of course irrespective of the international nature of shipping.

The 1978 STCW Convention as it is commonly called, consist of seventeen articles, an Annex of six chapters of twenty-five regulations. The conference also adopted twenty three resolutions. The regulations of the Annex deal with the following:

* General Provisions.
* Master-Deck Department.
* Engine Department.
* Radio Department - Radio Watch Keeping and Maintenace.
* Special requirements for tankers, and
* Proficiency in survival craft.

The Convention entered into force in April 1984 and presently has about fifty-six member states.

The main objective of the Convention is to set out prescribe minimum international Standards which Countries are obliged to meet or even exceed.

Many renowned scholars have asserted (and rightfully too) that the hidden objective of the Convention "is to strike a balance between the demands of the industrialized maritime power and the ability or willingness of the Developing World to meet them". It would have thus been aberrant to adopt standards which would be too high to be met by some nations, or too low to endanger safety at sea. This explains why in established maritime countries, standards are averagely higher than those stipulated in the Convention.

It is to be pointed out, and still in the line of diversities, that the presence at the Conference of many delegations and the subsequent or expected divergence of opinion strongly militated against the exhaustive treatment of certain key subjects. For example, the depth of study needed to qyualify as officer or mate is not explicity specified in the Convention, Paragraph 3 of the Appendix to regulation III/2 says:"Every candidate shall posses theoretical knowledge in the following subjects..", without specifying the depth of such knowledge although it is implicitly understood that the "Knowledge" should be such as to satisfy the Administration. Such shortcomings or weaknesses of the Convention were recognised by the Delegations but considered relatively minor when compared with the objetives and achievements of the Convention. It has been agreed nevertheless that comprehensible training programmes in the form of Recommendations will soon be published by IMO, particularly for the guidance of Developing Countries.

Closely related to the problem of training of seaferers is that of the manning of vessels which is keeping pace with recent technological developments in the construction and automation of vessels.

The implementation of the STCW Convention is very important, particularly to Developing Countries, since this Convention is generally regarded as the second most important (after SOLAS) international treaty ever adopted as far as maritime safety is concerned. Most Developing Countries as earlier said, are presently training their sea-

going personnel in either national appropriate institutions or regional maritime academies. In both cases it will be easy to implement the Convention while specifying the various disciplines to be taught. With regard to Certification, implementation, will be easier at regional or sub-regional levels. The preparation of an appropiate national legislation (in the form of an "Enabling Act" as earlier suggested) on Training and related subjects like "manning" will be a pre-requisite to this implementation. Those Developing Countries which depend largely on foreign aid through which their nationals are trained abroad in institutions owned by friendly developed market-economy countries, have to make sure such trainings in comnformity with the provisions of the Convention. Provisions will have to be made in the related national legislation on the recognition of out-going Certificates issued by above-mentioned institutions.

E) THE 1977 TORREMOLINOS INTERNATIONAL CONVENTION FOR THE SAFETY OF FISHING VESSELS.

The various dangers and perils associated with the sea do not discriminate between cargo vessels and fishing vessels. They strike with impunity and without compunction whoever gives them the occasion to do so. Statistics will show that the number of fishing vessels and their crews lost at sea largely surpasses that of cargo vessels. Between January 29th and February 4th 1968,i.e. in the space of eight days, three UK Fishing Vessels with a total of fifty-six men were lost at sea!

The problem of safety of fishing vessels became a major international concern in 1962 when the International Labour Organisation, ILO (Committee on Conditions of work in the Fishing Industry) convened a meeting to study certain aspects of working conditions of fishermen. The outcome of this meeting was the Recommendation to create a practical International Code dealing with navigational, operational and accupational aspects od safety of Fishing Vessels.

The Food and Agricultural Organisation (FAO) together with ILO and IMO were urged to liaise together each within her field of specialty in the establishment of such a Code. With IMO treating safety of life, Vessels and equipment at sea, FAO treating fisheries in general, and ILO charge of labour in the fishing industries, a draft Code of two parts, A and B, was established.

Part A was to deal with Skippers and Crew and Part B with Fishing Vessels builders and owners. A final text of Part A was adopted by these three organisations in 1968. In 1974, another tripartite meeting was held to study the possibility of amendments of Part A in order to harmonize it with Part B which covers Safety and Health requirements with respect to the construction and equipment of Fishing Vessels. It was recommended also that the three Organisations should continue to cooperate with a view to establishing voluntary Gidelines for the design, construction, and equipment of Vessels of less than twenty four (24) metres in lenght since Part B of the Code only dealt with vessels of twenty four (24) metres in the length and above.

In 1977, and pursuant to a decision taken by the Council of IMO in 1976, a Conference was held in Torremolinos, Spain, and the "International Convention for the Safety of Fishing Vessels" was adopted.

In 1979, the "Guidelines" which IMO, ILO and FAO had been asked to prepare in 1974, were approved by the three Organisations.

The Torremolinos Convention for the Safety of Fishing Vessels which is not yet in force consists of:

* Articles of the Convention.

* An Annex of ten chapters with a total of 154 Regulations.

* Two Appendices on Certificates and Specification.

* The Torremolinos Convention publication has four attachments on:

  - Summary of Survival Craft and Rescue Boat Equipment.

  - Recommendations by the Conference.

  - Resolutions by the Conference.

  - Understanding of the Conference.

In a brief run down, the chapters treat General provisions, Constructions, Watertight Integrity and Equipment,

Stability and Associated Seaworthiness, Machinery and Electrical Installations and Periodically Unattended Machinery Spaces, Fire Protection, Fire Detention, Fire Extinction and Fire Fighting, Protection of Crew, Life-Saving Appliances, Emergency Procedures, Musters and Drills, Radiotelegraphy and Radiotelephony, and Shipborne navigational equipment.

The main objective of the Convention as earlier stated is to provide minimum international standards for the Safety of Fishing Vessels of 24 metres in length or above. The main objective of the "Voluntary Guidelines" is to provide a generally applicable code of safe practice for the desing, construction and equipment of fishing vessles below 24 metres in length.

Although the Torremolinos Convention is not yet in force, there is the need for Developing Countries to implement the provisions of the Guidelines, and those of the Convention, and consider ratifying it. It is only through such implementation that the Maritime Safety Administration can effectively ensure the safety of national fishing vessels and the crews.

It is of importance here to emphasize on the following surveys stipulated by the Convention:

(i) Initial Survey before the vessel is put into service, or before a Certificate is issued for the first time. This survey includes structure, stability, machinery, materials, electrical installations, radio installations, life-saving appliances, fire detecting and extinguishing systems, and navigational equipment.

(ii) Periodical Surveys

- Every four (4) years with respect to structure and machinery.

- Every second year with regard to equipment related to watertoght integrity and stability and equipment related to machinery, fire protection, protection of crew, life-saving appliances and navigational equipment.

- Every year with respect to radio installations and radio direction-finder.

With regard to Venezuela, frequent periodical unannounced controls should be made to ensure the availability of life-saving appliances.

SUMMARY OF CONTENTS OF PART "A" OF CODE OF SAFETY FOR FISHERMEN AND FISHING VESSELS - SAFETY AND HEALTH PRACTICE FOR SKIPPERS AND CREWS

This Code consists of eleven chapters and six Appendices. The chapters deal with the following:

- General Provisions - Definitions, Responsibilities, Purpose and scope.

- Navigation - Navigational equipment and aids to navigation, Safety of navigation, Weather and danger information, Signals, Radiotelephone procedures.

- Safety of the Vessel - Anchors, Cables and chains, Freeing porto, Opening and closing appliances, Stability.

- Safety on Deck - Gangways, stairways, ladders etc., Deck lighting, Precautions against falling overboard, Ropes and lines.

- Safety in fishing operations - Trawling, Purse seining, Danish seining, Long line fishing, Tuna pole and line fishing, Fish and Ice handling.

- Safety in Machinery spaces and of mechanical equipment.

- Special safety precautions - Eye protection, Protective clothing and equipment, Painting, Dangerous work, Live and Fish oil boilers.

- Life - Saving Appliances - Life boats, Emergency man over board/rescue craft, Life rafts and life-jackets, Emergency procedures and musters.

- Fire precautions and fire-fighting - Smoking, Fire prevention and precautions, Fire fighting.

- Shipboard facilities for personnel, Safety organisation and Conditions for Employment - Sanitation, Lighting and ventilation, Firts aid, Safety and Health organisation, Conditions for employment.

- Abandoning vessel, Survival and Rescue - Abandoning vessel, Survival when adrift, Precautions against sharks and other biting fish, Landing and survival ashore, Survival in polar regions.

The Appendices are on:

- Information required in Danger Messages (Reg 3 of Chapter V of SOLAS'73).
- Radio Telephone procedures.
- Recommendations for skippers of skippers of Fishing Vessels etc. on ensuring Vessel's Endurance in Conditions of Ice Formation.
- Recommended Contents of Fishing Vessels.
- Artificial respiration, and
- Information on Hypothermia.

F) CODE FOR THE CONSTRUCTION AND EQUIPMENT OF MOBILE OFF-SHORE DRILLING UNITS (MODU CODE).

The MODU Code makes provisions for an international standard for mobile offshore drilling units of new construction. Its application will facilitate international movement and operation of these units and ensure them and the personnel working on board a high level of safety.

The MODU Code consists of 14 chapters treating inter alia: Construction, Strenghband materials, Sub-division, stability and freeboard, Machinery Installations for all types of units, Electrical installations for all types of units, Machinery and Electrical installations in hazardous areas for all types of units, Machinery and Electrical installations for self-propelled units, Periodically unattended machinery spaces for all types of units, Fire Safety, Life-saving Appliances and Equipment, Radiocommunication installations, Lifting devices, Helicopter facilities, and Operating Requirements.

Administrations implementing this Code should be aware of the fact that it does not prohibit the use of existing units if their design, construction, and equipment are not in compliance with the requirements of the Code. Administrations should be guided, when confronted with existing units, by the operating history of the units and the local environmantal conditions. Nevertheless, such units must comply with the safety requirements which the Administrations of the coastal state consider necessary for the intended operation and for the safety of the units and the personnel on board.

In the drafting of a national legislation to govern off-shore activities Admnistrations should also be aware that their legislation can only govern to a certain extent foreign flag platforms and that fixed installations should be governed by their legislations. As earlier said, depending on the policies of the country, the need might be felt to create another Administration which could deal exclusively with off-shore activities. In such a case, the borderline between such an Administration and the Maritime Safety Administration should be made clear and areas where the two Administrations have to cooperate should be well defined.

Coastal Developing Countries, especially those along Latin America and the Caribbean Island, should start making plans towards the acquisition of local expertise necessary for the various technical controls and surveys. In most of these Countries, Shipping is controlled by the Ministry of Transport and off-shore activities by the Ministry of Mines and Power. Close cooperation between these two Departments can at least create in the short run, a Board or Committee of experts from the two Ministries who will take care of the safety aspects in the offshore industry. It is only when experts from the two Ministries meet that a comprehensive legislation relating to

the safe practices in exploration and drilling for submarine petroleum resources can be drawn up without friction or misunderstanding. Cooperation between neighbouring Countries could also be advocated inasmuch as the petroleum explorers and exploiters are more often than not, foreign companies which will like to keep safety standards at a minimum.

National Regulations governing this sector should include inter alia the following broad heading:

* Introductory provisions - Definitions, exemptions, scope etc.
* Reconnaissance vessels and aircrafts.
* Drilling Platforms.
* Emergencies.
* Pollution Prevention.
* Drilling.
* Fire Prevention.
* Telecommunication.
* Transportation systems.
* Protection of workers.
* Diving Operations.

C) INTERNATIONAL CONVENTION ON MARINE SEARCH AND RESCUE 1987

One of the oldest traditions of the sea is the obligation or duty to render assistance to persons in distress. This tradition has survived through time and the duty of assistance has been made mention of by many international conventions. The "1910 Convention for the Clarification of Certain Rules of Law relating to Assistance and Salvage at Sea" says in its Article II:

"Every master is bound, so far as he can do so without serious danger to his vessel, her crew and her passengers, to render asistance to every body, even though an enemy, found at sea in danger of being lost". Again in the '74 SOLAS Convention, Regulation 15 of Chapter V on Safety of Navigation takes up this point in the following words:

> a) Each contracting Government undertakes to ensure that any necessary arrangements are made for coast watching and for the rescue of persons in distress at sea round its coasts...".

Despite this outcry for assistance and the various efforts put by different governments to render assistance at sea, many weaknesses have been recognized. As a matter of fact, coordination and control are of prime importance when rendering assistence at sea. Unfortunately individual countries have different systems and national organisational plans have been developed along different lines. These differences give rise to many difficulties in joint search and rescue operations.

In 1970 IMO published the Merchant Ship Search and Rescue Manual designed as a guide to seaferers called upon to conduct SAR operations during emergencies at sea.
IN 1979, the IMO Search and Rescue Manual had been adopted. This manual consisted of Guidelines for Governments wishing to establish or expand their Search and Rescue Organisations, and for those who would be directly involved in the provision of search and rescue services.

While these two manuals were being prepared, IMO recognising the need to introduce an international search and rescue policy, convened a meeting of experts to prepare a draft convention. This was adopted in April 1979 by a Diplomatic Conference held in Hamburg and the 1979 Search and Rescue Convention came into being. The preamble of this Convention states that the main aim of the Convention is to establish a "plan responsive to the needs of maritime traffic for the rescue of persons in distress at sea."

The SAR Convention consist of Articles, and an Annex of five Chapters. The Conference also adopted eight Resolutions. The Annex deals with:

* Organisation - arrangement for provision and facilities, establishment of rescue coordination centres, designation of rescue units.

* Cooperation between states with aeronautical services.

* Preparatory measures - information requirements, operating plans or instructions, preparedness of rescue units.

* Operating procedures:

  - Information concerning emergencies.

  - Emergency phases, procedures for rescue coordination centres and sub-centres during emergency phases.

  - Coordination when two or more parties are involved, termination and suspension of search and rescue operations, on-scene coordination of serch and rescue activities, designation of on-scene commander and his responsibilities, designation of coordination surface search and his responsibilities, initial action, search areas, search patterns, search successful and search unsuccessful.

The objectives of the SAR Convention will include:

- The standarisation of procedures to the maximim possible extent.

- The facilitation of direct contact between SAR services of different states.

- The ensurance of efficient cooperation between surface and air units participating in search and rescue operations.

- The provision of guidance for the development of SAR service, where needed.

There are two outstanding features in the Convention. In the first place, it combines both air and sea in the services. In the second place, it relies for its effectiveness on the cooperation between neighbouring states.

The effective implementation of this Convention will be best done at regional level depending on the situation of the countries involved. this has been the case in many regional areas where the countries involved have established regional arrangements which have so far operated successfully.

H) INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION '73 AND PROTOCOL OF '78.

Strictly speaking, the 1973 Marine Pollution Prevention Convention and its Protocol of 1978 both considered as one instrument, is not a Safety Convention. Nevertheless, this Convention is inextricably linked to other Safety Convention in that:

* Its main objective is the protection of marine environment.

* Pollution of the sea by oil becomes a major obstacle to the carrying out of some major activities in the sea - fishing for example.

* It is a threat to most marine living resources (oil, dangerous substances.)

* It reduces to a great extent safety. Most navigational aids will be blackened by oil in the case of heavy pollution and will nor perform their function well

* Most birds whose source of nutrition comes from the sea not only die of starvation but are stifled to death immediately they get in contact with the oil.

It is therefore necessary here to give a brief run down of MARPOL '73 / '78.

In 1954, The International Convention for the Prevention of Pollution of the Seas by Oil was adopted. Despite two major amendments to this Convention (1962 and 1969), the shortcomings could not be erased as expected. The Convention and the 1962 Amendments reposed on the philosophy that oil could be discharged if the vessel was proceeding en route and outside the prohibited zone of fifty miles, but at a rate not exceeding sixty litres per mile travelled, and that the total quantity of oil discharged during a ballast voyage may not exceed 1/15.000 of the total cargo carrying capacity of the vessel. Neither the Convention nor the two amendments provided for pollution resulting from the discharge of noxious substances from ships. Instead of having a third Amendment, it was decided after long deliberations to adopt a new Convention in which the shortcomings of the 1954 Oil Convention would be rectified. The International Convention on the Prevention of Pollution from Ships was accordingly adopted in 1973.

The MARPOL'73 Convention consists of Articles, two Protocols dealing with reports on incidents involving harmful substances, and arbitrations and five Annexes containing:

* Regulations for the Prevention of Pollution by Oil.

* Regulations for the Control of Pollution by Noxious Liquid Substances.

* Regulations for the Prevention of Pollution by Harmful Substances carried by Sea in Packaged Forms, Freight Containers, Portable Tanks or Road and Rail Tank Wagons.

* Regulations for the Prevention of Pollution by Sewage from Ships.

* Regulations for the Prevention of Pollution by Garbage from Ships, and an Attachment of 26 Resolutions.

Annexes I and II mandatory, whereas Annexes III, IV and V are optional.

The requirements for entry into force were ratification by fifteen (15) states with not less than 50 % of world gross tonnage of merchant shipping. Up to 1977, many states were reluctant in ratifying the Convention because of certain flaws and shortcomings. especially with regard to reception facilities and the discharge requirements for chemical tankers. To remedy these loopholes, the International Conference on Tanker Safety and Pollution Prevention (TSPP)was held in 1978 and two Protocols (one on Safety and the other on Pollution prevention) were adopted. While the Protocol of the SOLAS'74 Convention was treated as a separate instrument from the parent Convention, the '78 Protocol to the MARPOL'73 Convention incorporated and merged with the parent Conventionand the two are henceforth considered as one instrument, hence the appellation of MARPOL'73/'78. In view of the major changes introduced by the '78 MARPOL Protocol, the decision to defer the implementation of Annex II for three years after the date of entry into force of the protocol, or that longer period decided by MEPC was taken. MARPOL'73/'78 came into force in October 1983, the implementation of Annex II came into effect from 6th April 1987.

Some of the changes brought in by the Protocol of '78 will include inter alia with regard to Annex I:

* Segregated Ballast Tankers (SBT) which are now required on all new tankers of 20.000 dwt and above, and their protective location (cf. MARPOL'73 - new oil tankers of 70.000 dwt and above) (*).

* Crude Oil Washing (COW) for all new crude oil tankers of 20.000 dwt and above. The cargo itself, instead of water, is used in washing the tanks. This process is more effective and solves the problem of operational pollution resulting from using water in cleaning tanks and discharges the water mixed with oil. It also helps to get more cargo out of the cargo tanks. COW is accepted as an alternative to SBT on existing tankers while remaining and additional requirement on new tankers.

(*) SBTs are tanks which are reserved exclusively for the carriage of ballast water. They have separate pumping and piping arrangements and since cargo is never loaded in these tanks, there is no mixture of oil and water resulting from ballasting cargo tanks. The risk of operational pollution is therefore decreased. The Protective Location of SBTs requires that SBTs must be arranged in such locations as to provide protection of cargo tanks against rupture in the event of grounding or collision.

* Dedicated Clean Ballast Tanks (CBT) is another alternative for existing crude oil tankers or product carriers but in the case of crude oil tankers only for a period of two to four years after entry into force of MARPOL'73/'78. This process consists of dedicating certaing cargo tanks for the carriage of ballast water and is relatively cheaper than the SBT since it utilises existing pumps and pipes. But the risk of operational pollution is not discarded since cargo pumps and pipes will be used for ballast water.

During the last ten years, the Marine Pollution Prevention Convention has played a decisive role in the design and construction of tankers. In addition this Convention has revised, updated and strengthened the requirements of the 1954 Oil Pollution Convention. These improvements can be recapitulated as follows:

- The discharge of all types of oil (from crude to products) except petrochemicals treated in Annex II is prohibited except under well defined Load on Top (LOT) Conditions.

- Discharge of any kind (operational) must be done outside special areas Baltic Sea, Black Sea, Mediterranean Sea, Red Sea,* Middle Eastern Gulf Areas.*

- Total quantity of permissable oil discharge is 1/15.000 of carrying capacity of existing tankers and 1/30.000 of carrying of new tankers.

- Tankers must have a continuous oil discharge monitoring and control system and a set of slop tanks, except under certified exemptions.

- Pipelines for discharging authorised effluent except in specific cases, must lead to the open deck or to the ship's side above the water line for visual observance of effluence.

- The introduction of the concepts of SBT, COW and CBT.

- Detailed Oil Record Book, cargo Record Book and an International Certificate of Marine Pollution.

---

* Implementation date to be established by IMO.

- The retention for consumption on board or disposal to shore-based Reception Facilities of oil residues which cannot be discharged in compliance with requirements.

Since MARPOL '73/'78 has far-reaching effects with respect to implementation, IMO has prepared a number of guidelines to help Administrations in the process of implementation. These will include:

* Guidelines on ensuring the Provision and maintenance of Adequate Reception facilities in ports.

* Recommendations on International Performance Specifications for Oily-Water Separating Equipment and Oil Content Meters.

* Guidelines for the approval of Oil discharge monitoring and control systems.

* Various Documents on Authoritative interpretation of the provisions of Annex I of MARPOL'73/'78.

These documents will be of inmense help to Administrations for the implementation of the MARPOL '73/'78 Convention.

II-2.4 RECAPITULATION OF SURVEY AND CERTIFICATION REQUIREMENTS.

There is need here, by way of conclusion, to recapitulate the Survey and Certification requirements of most of the Safety Conventions we have just briefly discussed since flag states have the responsibility to ensure that ships flying their flags are constructed, equipped and maintained to comply with the Standards laid down by the Conventions. The SOLAS, LOADLINES and MARPOL Conventions provide for the following surveys:

- Initial survey before issuing a certificate for the first time.

- Periodical survey at intervals not exceeding five years for construction, two years for safety equipment

and one year for radio installations.

- Intermediate survey to be effected at least once between periodical, and

- Annual survey.

Satisfactory completion of initial and periodical surveys warrants the issue of the following Certificates:

a) SOLAS '74 and Protocol '78.

- Passenger ship safety Certificate for a period of twelve months.

- Cargo ship safety Construction Certificate for a period not exceeding five years.

- Cargo ship safety Equipment Certificate for aperiod of two years.

- Cargo ship safety Radiotelegraphy (or Radiotelephony) Certificate for a period of twelve months.

b) LOADLINES Convention.

- International Load Lines Certificate for a period not exceeding five years.

c) MARPOL '73/'78.

- International Oil Pollution Certificates (IOPP Certificate) for a period not exceeding five years (Annex I).

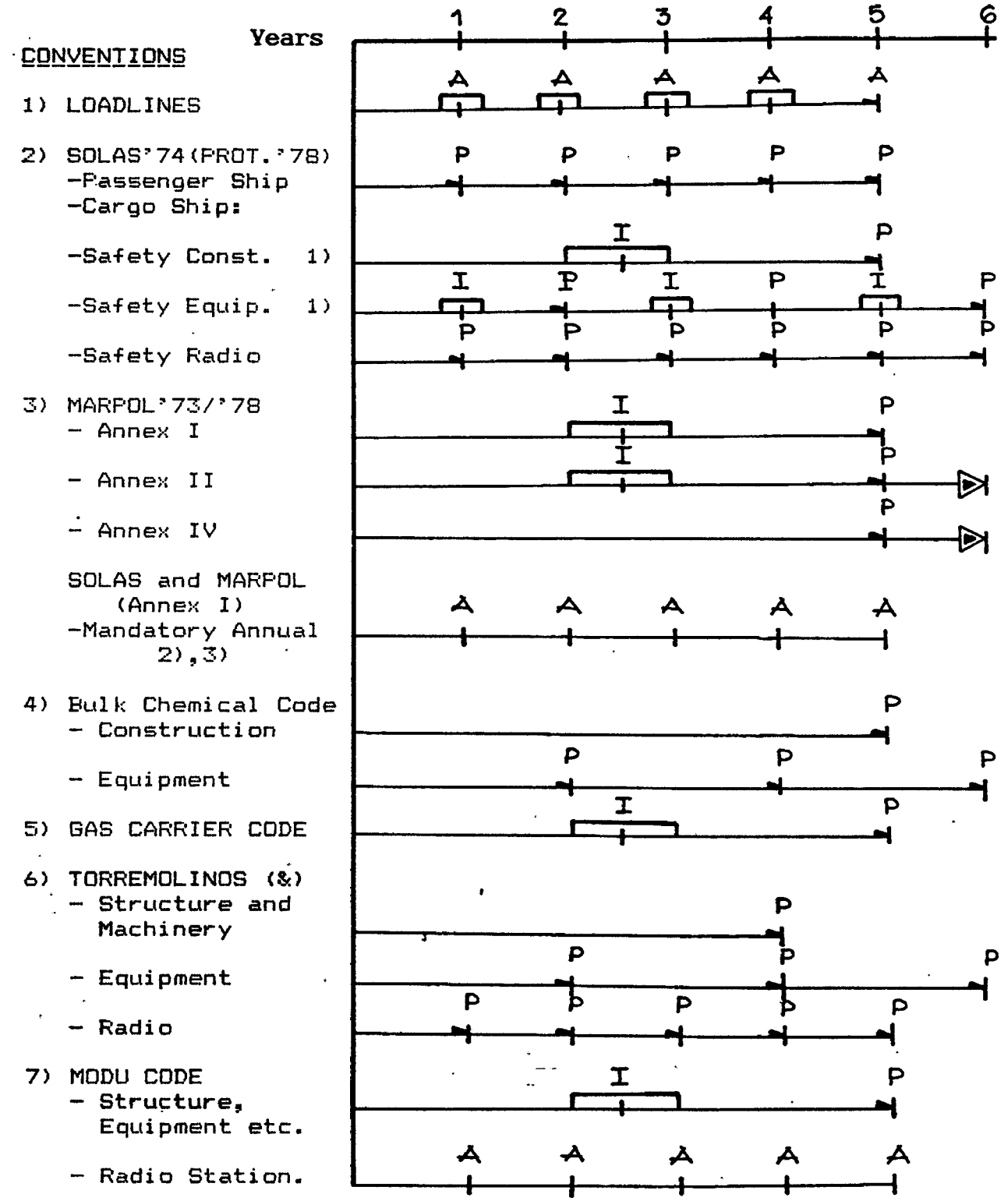
- International Pollution Prevention Certificates for the Carriage of Noxious Liquid Substances in Bulk for a period not exceeding five years (Annex II).

- International Sewage Pollution Prevention Certificate for a period not exceeding five years (Annex IV).

The following table will recapitulate these survey procedures:

TABLE 5

RECAPITULATIVE TABLE OF SURVEY REQUIREMENTS IN CONFORMITY WITH PROVISIONS OF SAFETY CONVENTIONS.



NOTES: 1) Intermediate Surveys for tankers of 10 years of age and more.

2) The Protocols do not specify any allowed period within which surveys should be carried out.

3) Unscheduled inspections could be carried out in the place of mandatory annual surveys.

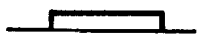
(&) Instruments not yet in force.

KEY: P = Periodical survey (Certificate is renewed)

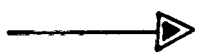
I = Intermediate survey.

A = Annual survey or inspection.

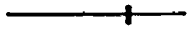
Date on or before which periodical survey is to be held.



Period within which survey is to be held.



Date until which extension of survey is allowed.



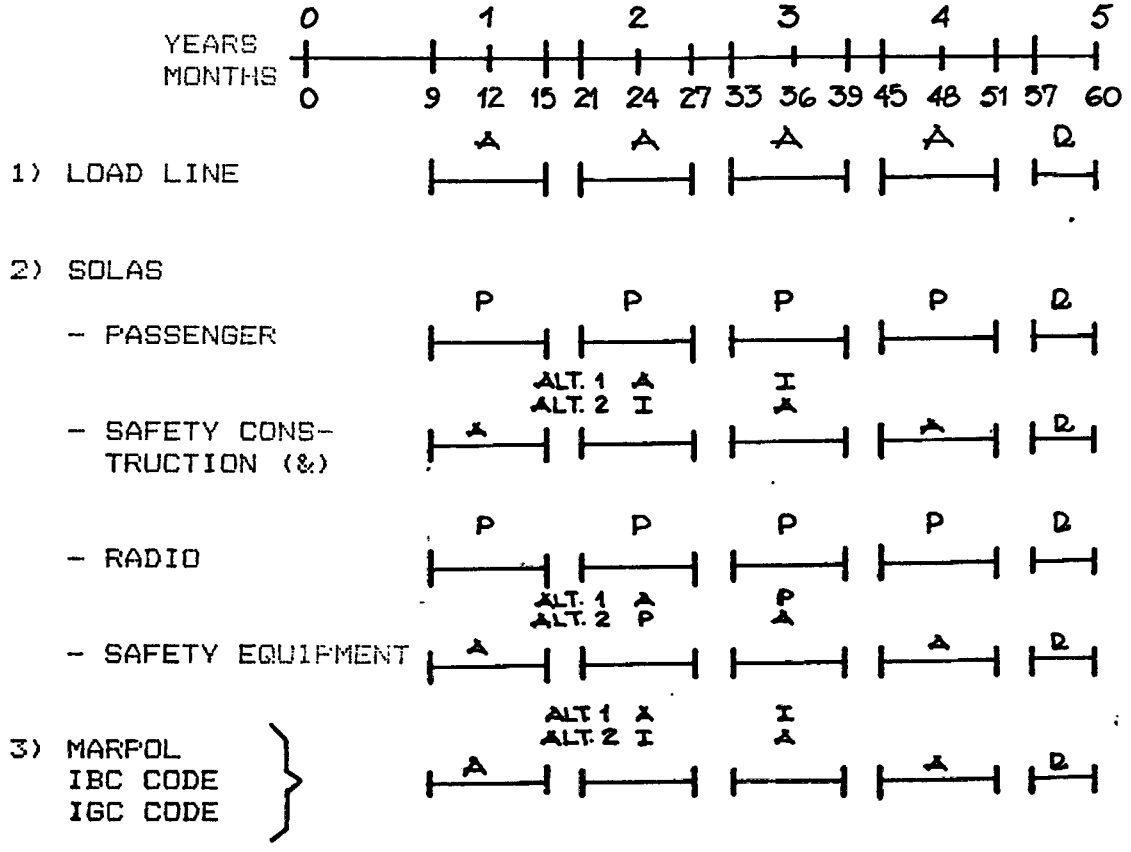
Date on which survey is due.

After each of these surveys has been satisfactorily carried out, the appropriate Certificate is delivered in conformity with the requirements of the different Conventions or Codes.

The existing discrepancy between these survey systems and the periods they are supposed to be carried out has given Administrations many difficulties in effecting them.

In answer to a general plea by Administrations for a harmonised system, the IMO (the Maritime Safety Committee) is presently working on a system which, when finalised, will be similar to the following table with regard to the SOLAS, MARPOL and LOAD LINE Conventions.

This harmonised system will simplify the survey requirements since all the surveys will take place between the same range of time and reduce the burden on the Administration (or her representative) while giving shipowners sufficient time to have their vessels available for inspection.



(&) This does not include inspection of outside of ship's bottom and related items. As a matter of fact, at least two such inspections are necessary within Certificate's period of validity with no more than 36 months between them.

KEY: P = Periodical, I = Intermediate, A = Annual, R = Renewal of Certificates. Alt.1 and Alt.2 = 1st or 2nd Alternative i.e., if alternative one applies first, alternative two can only apply the following year, and vice versa.

The effective implementation of safety Conventions especially with regard to SOLAS, LOADLINE , and MARPOL will warrant concerted action from Governments (Maritime Safety Administrations) and Industry (Shipbuilders, shipowners, manufactures and Classification Societies). These two bodies have to study, understand and appreciate the technical and administrative implications of the Conventions.

The Industry has to:

* Develop and manufacture equipment complying with Convention requiremnts and related guidelines and specifications developed by IMO.

* Arrange for construction or conversion of ships and installations of equipment to comply with the requirements of the Conventions.

* Develop procedures for the operation of ships to meet the requirements of the Conventions.

* Train personnel on board and familiarise them with the functions and operations of newly developed and manufactured equipment on life-saving, and fire-fighting appliances, and pollution prevention etc.

The Venezuelan Governments Maritime Safety Administrations have to:

* Take necessary legislative procedures to ratify and implement the Conventions.

* Establish systems of surveys and certification of ships.

* Develop and administrative structure through which the maintenance of records of ships flying the

national flag will be ensured, on the one hand, and through which on the other hand, consistent coordination will be maintained between her work and that of the Industry.

* Develop systems and procedures for the ENFORCEMENT of Convention provisions especially with regard to:

  - Inspection of vessels in ports and terminals.

  - Detention of unlawful discharges of oil and establishment of penalties to be imposed.

  - Investigation of casualties and submission to IMO of reports on causes of accidents and the need perhaps to make amendments on Convention provisions, etc.

II - 2.5 COMPLETION OF MERCHANT SHIPPING ACT.

In the preceeding chapter, the nature of a typical Merchant Shipping Act was discussed and there is need to reiterate here that this Act is a sort of umbrella legislation under which subsidiary legislations in the form of "enabling acts" will be promulgated to legislated the numerous aspects of safety in particular and shipping in general. These duties of the Maritime safety Administration considered a sort of enforcement of the Law on herself, constitute some of the main functions of this Administration and will include:

a) Registration of ships and related functions.

The registration of a ship is used as evidence of the right to fly the flag of a state as well as the right of ownership and of mortgages. It is only through this process that a ship acquires a nationality. A resgistered ship or share therein can be made security for a loan or other valuable consideration. Registration also provides an excellent means of identification especially in court matters or actions.

Prior to registry a vessel must undergo tonnage measurement by a Government measuring Surveyor or an appointed Classification Society in order to ascertain its gross and net tonnage (*). Depending on the related provisions in the national regulation, certain vessels might be exempted from registration.

In many Countries, there is no penalty for failure to effect registry. However, in practice it becomes essential to do so because of the advantages. For example, an unregistered vessel loses flag state protection, transfer of ownership will be difficult, and she will have a lot of problems getting underwriters for her hull or the cargo she is carrying.

Closely linked to registration in the discharge of statutory functions relating to attendant matters such as mortgages, tranfer of ownership, etc.

The matter of registration does flow from international law. The 1982 Law of the Sea Convention says in its Article 91:

> "Every state shall fix the conditions for the grant of its nationality to ships, for the registration of ships in its territory, and for the right to fly its flag..."

Articles 92 and 94 respectively on "Status of Ships" and "Duties of the Flag State" go to consolidate the provisions of Article 91 and to lay out the duties and responsibility of the flag state with regard to ships flying her flag. this obligation by international law to register ships and give them nationalities is taken over by the Merchant Shipping Act, and the onus of preparing appropriate national regulations under which ships will be registered and the physical registration of ships in compliance with these regulations falls on the Maritime Safety Administration.

(*) The terms "gross tonnage " and " net tonnage " refer not to weight, but to capacity. Under old tonnage regulation (e.g. the 1947 Oslo Convention) One ton being considered equal to 100 cubic feet. "Gross Tonnage" is a measure of the internal volume of enclosed spaces in the ship. "Net Tonnage" is the residual tonnage after various allowances (for propelling power, crew, spaces, navigation spaces, etc.) have been deducted from the gross tonnage. Under the 1969 International Convention on Tonnage measurement of ships the unit "Ton" is abolished. Under that Convention gross tonnage is the volume of all enclosed spaces in cubic meter multiplied by a coefficient, and net tonnage means the measure of the useful capacity of a ship determined in accordance with the provisions of the 1969 Convention.

b) Registration of seamen and Regulations governing their employment.

In most Developing Countries, seamen do not belong to a Union. Ratings are picked here and there for recruitment and their remuneration neither reflects the risks being run while performing their duties, nor the conditions under which they are obliged to work (retention on board whether on duty or not).

It is therefore the duty of the Maritime Safety Administration in Venezuela to consider,

* The risks to which seamen are exposed.

* the need for their safety, and

* The fact that in deciding to go to sea they are not merely doing a temporal piece of work but have chosen a profession, a career,

to put forth a machinery through which seamen will be registered, controlled, and given the necessary benefits demanded by the very inherent nature of their work. This machinery will entail the issuing of appropiate regulations which will include among others:

* Conditions of registration - Documents to be produced, minimum age for registration, etc.

* Keeping of undated record of all effective (operational) national seamen, Rotation Rosters following demands from employers, etc.

Closely related to the registration of seamen are the duties or functions relating to Crew matters, Discipline, personal safety, health, wages and welfare, etc. which the Maritime Safety Admnistration has to legislate and enforce.

II - 2.6. FUNTIONS RELATING TO OPERATIONAL MATTERS.

These aspects of the duties of the Maritime Safety

Administration consist of the performance of those functions which ensure the maintenance of safety standards. These functions will include:

* The inspection and survey of ships to ensure that they are operated and maintained in a seaworthy condition, and the issuance of appropiate inspection and survey certificates.

* The conduction of examinations leading to, and the issuance of appropiate Certificates of competency and/or proficiency to all categories of sea-going personnel (masters, mates, engineers, able-bodied seamen, life-boatment, etc.) serving in merchant ships.

* The holding of inquires / inventigations into shipping casualties.

* Marine Pollution Prevention and Control.

* Sea-lane traffic control, and the establishment and maintenance of navigational aids.

* Port and Coastal State Controls.

A) SURVEYS AND INSPECTIONS OF SHIPS.

All the Safety Conventions that make provisions for the construction and equipment of vessels (passenger, cargo, fishing, off-shore units) also provide for mandatory surveys to ensure compliance with the Convention requirements and the ability of hull, machinery etc., and equipment to render the vessel seaworthy. These surveys will include, as earlier stated, initial surveys, periodical surveys, intermediate surveys, annual surveys, and unscheduled surveys. As provided for by the Conventions, these surveys must be carried out by officers of the Administrations, that is surveyors of the Maritime Safety Administrations.

(i) INITIAL SURVEYS.

Initial surveys will include a through examination of a ship and its equipment in conformity with the provisions of the related Convention (SOLAS'74 and Protocol of '78, MARPOL '73/'78, LOAD LINE, TORREMOLINOS, and MODU CODE), before the relevant certificates, as required by the related Convention, are given. In general terms, the initial survey will consist of:

- Type approvals, examination of plans, specifications, and any other technical documentation to ensure compliance with relevant requirements of the related Convention or Code.

- Confirmation of the presence on board of required certificates, books, manuals, and other documents as specified by the provisions of the related Convention or Code.

- Survey of the condition of the ship and its equipment to make sure their constructions and installations conform with the approved plans, specifications and other technical documents. The construction and workmanship of the vessel must in all respects be satisfactory.

(ii) MANDATORY ANNUAL SURVEYS.

Generally, these surveys, meant to permit Administrations to ensure that the condition of the ship and its equipment are being maintained in accordance with the provisions of the related Safety Convention or Code, should consist of:

- A certificate examination and a visual examination (to a sufficient extent) of the ship amd its equipment, and of certain tests to confirm that their conditions is being properly maintained.

- A visual examination to ensure that no unapproved changes or modifications have been made to ship structure or equipment.

(iii) INTERMEDIATE SURVEYS.

These surveys are to be conducted at least once during the period of validity of the certificates required by the different safety and pollution prevention Conventions. In case where only one intermediate survey is required, this should be done when the certificates' period of validity is half-way gone.

Broadly speaking, intermediate surveys consist of a thorough examination, extensive enough to enable the Administration to ensure, with regard to:

* SOLAS'74 and Protocol of '78: The good condition of hull, machinery and equipment of tankers of ten years old and above, that life-saving appliances and other equipment of tankers of ten years old and over, are in good condition.

* MARPOL '73/'78: That the equipment and associated pumping and piping systems, including oil discharge monitoring and control systems, crude oil washing systems, oily-water separating equipment and oil filtering systems are in good working order and comply with the applicable requirements of the Convention.

(iv) PERIODICAL (RENEWAL) SURVEYS.

In almost all the safety conventions (with the exception of the TORREMOLINOS CONVENTION) the period between periodical surveys is set at five years. (The Torremolinos Convention requires four years). These surveys consist of a through and complete examination of the ship together with the relevant tests (as specified by the conventions). This examination in a way is similar to that performed during the initial survey of the vessel with the exception however that there are no plans examination. At the completion of periodical surveys the relevant certificates (as specified by the different Conventions) are renewed for another period of five years.

In many Countries especially Developing Countries - and considering the technical nature of these activities - surveys are entrusted to recognised Classification Societies which are equipped with more expertise with regard to such technical

matters. Although these Societies have contributed invaluably to the maintenance of safety at sea, Administrations should think twice before entrusting to them all the surveys which they are is supposed to carry out. The following considerations have to be given deeper thought:

(i) Since the construction of a ship is usually done under the surveillance of an appointed Classification Society and since the initial survey of the ship is in a way the inspection of the joint work of the builders and the Classification Society, it will look completely abberant to have the Classification Society inspect its own work, and expect it to disapprove of certain aspects by reporting defects or non-compliance with regulations in force. There is therefore the possibility of having some deficiencies overlooked and unjustified Certificates of compliance issued.

(ii) Since the decision to carry out unscheduled surveys is taken by the Administration, surveyors of Classification Societies might not be available - considering the relevately short time between the decision to inspect and the actual inspection - when they are needed.

(iii) When Classification Societies are entrusted with all the surveys the Administration is expeted to carry out, the cost of such services will be higher than if surveyors from Classification Societies were assisting surveyors from the Maritime Safety Administration.

Despite these disadvantages, it has been noticed that even if a Maritime Administration is so developed that the Maritime Safety Administration can boast of large resources, a certain amount of expertise from "outside" (and which will be very expensive if completely employed by the Administration) will be needed to perform some technical evaluations related to ship safety. In these cases, the services of a Classification Society should be sought for under precise written agreements. In no case should the Classification Society be allowed to dictate or prescribe the provisions of

such an agreement simply because of the indispensable nature of the services to be bought.

The Administration should not therefore rely completely and blindly on the Classification Society. The staffing on the Maritime Safety Administration with technical personnel (surveyors and inspectors) is therefore a sine qua non for the avoidance of such dependence since in addition to these surveys, there are also inter-related functions connected with the drawing up of technical national regulations which Classification Societies, whatever the case, should not be asked to perform.

The contract between the Government and a Classification Society should consider the following provisions:

* Compulsory reports to be submitted to appointed government officials (that is the Marine Safety Administration) after every survey operation. Such reports should be accompanied by objective comments from the Classification Society and also possible remedying action. After the Maritime Safety Administration has taken the action necessitated by the reports, these reports should be filed for future use or reference.

* No secrecy as far as defects are concerned are to be shown by the Classification Society. Without completely exonerating the Administration of the responsibility she has towards the maritime community as a whole with regard to the maintenance of agreed safety standards on vessels flying her flag, the Classification Society will be given some responsibility which when not kept or exercised (reporting of deficiences) will act negatively on its international character as a renown Classification Society.

* Free copies of Classification Society Classification rules to be given to the Maritime Safety Administration.

Finally, it is to be mentioned that a government should maintain some consistency in the choice of Classification

Societies . Jumping from one society to another might result in conflicts between Classification Societies, and such conflicts might repercuss negatively on the work done.

By and large, when the atmosphere within which Governments co-operate with Classification Societies is devoid of strain, mistrust and misunderstanding, the work achieved- not only with regard to surveys but also in the development of new standards through research - will contribute immensely to the ensuring of safety in shipping and related areas. A good example of such cooperation will be that existing between the Norwegian Maritime Directorate and "Det Norske Veritas" the Norwegian Classification Society.

The following are some of the areas which a government might seek assistance from Classification Societies:

* Plan approvals and surveys related to the 1966 Load Line Convention.

* Tonnage Measurement.

* Plan approvals and surveys related to SOLAS'74.

* Plan approvals and surveys related to MARPOL '73/78.

* Plan approvals and surveys related to IMO Codes and Guidelines.

B) CONDUCTION OF EXAMINATIONS AND THE ISSUANCE OF APPROPIATE CERTIFICATES.

The 1978 Convention on Stardards of Training, Certification and Watch Keeping of Seafarers (STCW) have made provisions for the following requirements:

* REGULATION II/2: **"Every master and chief mate of a sea-going ship of.....shall hold an appropiate Certificate."** (Regulations III/3 on the chief engineer officer and IV/1 on the radio officer have similar requirements).

* REGULATION III/2,& 2D): **"Every candidate for cerfification shall.... have passed an appropiate examination to the satisfaction of the Administration."**

An Administration is therefore responsible for ensuring that the crews of vessels flying her flag hold the appropriate certificates required for the vessel they are manning. These certificates have to be delivered after the necessary examiniations (as required by the Convention and other national regulations) have been conducted to test the qualification, and ensure the competence of the crew. The conduction of these examinations is one of the main tasks of the Maritime Safety Administration.

According to her systems of training sea-going personnel, each Administration will have a particular systems of examinations for testing. Some Administrations conduct examinations after every three months, others after every six months. With certain systems, examinations are only conducted once a year, that is at the end of the academic year. Generally, the frequency in conducting examinations will depend on the number of candidates to be examined at each session.

By and large, whatever the prevailing training in Developing Countries is, the problem of examining sea-going personnel, issuing them appropiate certificates, recognising and homologating foreign certificates which are in conformity with the provisions of the STCW Convention, must be looked into carefully and organised. It should be remarked here in passing that the Convention (Regulation I/2) insists in the Certificates being issued in the official language used is not English, a translation into English of the text of the Certificate must be included.

C) HOLDING OF INVESTIGATIONS INTO SHIPPING CASUALTIES

Despite the numerous standards the maritime community as a whole has developed to avoid accidents at sea, many serious casualties still occur either through human error or through the failure or malfunctioning of any of the many devices (equipments) used in navigation. This failure might be attributed either to a mishandling or misuse (by the crew) of the device, or to an inherent defect, pure and simple. Such accidents usually result in the loss of life, the ship and her cargo and damages to the environment.

As a measure of improving safety (avoidance of future similar occurrences) the maritime community demands that all Administrations investigate into the causes of such casualties. This investigation is also one of the main functions of the Maritime Safety Administration.

However, in many developed market-economy countries where the Maritime Safety Administration has developed to the extent of owning and operating a fleet of a considerable size for its various activities, conflicts have arisen and partiality has been suspected in the investigation of casualties where one of her vessels was involved. Many accusations of bias have therefore been levied on some Maritime Safety Administration (during the performance of Casualty Investigations) because of their vested interests or the previously determined positions they have had to defend.

It has thus been thought wise to re-assess the functions of casualty invenstigations to a special competent public organisation. The work of the maritime Safety Administration then would simply be that of coordinating the activities and taking action on the various reports and suggestions received. We will therefore examine Casualty Investigation more throughly in II - 2.3 where the functions of the Maritime Safety Administration will be limited to coordination, study of reports and proposals, and their possible implementation.

D) SEA-LINE TRAFFIC CONTROLS AND ESTABLISHMENT AND MAINTENANCE OF NAVIGATIONAL AIDS.

Regulation 14 of chapter V on Safety of Navigation of the SOLAS'74 Convention says:

> "The Contracting Governments shall undertake to arrange for the establishment and maintenance of such aids to navigation including radio beacons and electronic aids as in their opinion the volume of traffic justifies, and the degree of risk requires, and to arrange for information relating to these aids to be made available to all concerned."

The establishment of aids to navigation, artificial seamarks external to the vessel and so placed as to warn the navigators

of natural dangers and also to assist him in the determination of the position of the vessel, begun in the very early days of shipping. With the introduction and development of electronic aids, "aids to navigation" have ceased to be considered as always being external to the vessel.

An Administration party to the SOLAS'74 Convention is therefore responsible for the safety of navigation within the area where she excercises sovereign rights,as well as in ports' approaches, and has to provide and install aids to navigation in order to ensure prevention of accidents and particularly of their possible consequences on pollution. Basically, this ensurance of safety will necessitate:

* The implementation of routing measures.

* The organisation and management of Vessel Traffic Services and Traffic Separation Schemes.

* The provision of visual aids (luminous and / or acoustical) and of radio navigation systems.

The development and putting into effect of such safety ensurance and enhancement systems will ential a lot of research through which the social costs of marine accidents will be highlighted when juxtaposed with the cost of providing navigational aids.

The responsibilities which befall an Administration with regard to the provision of navigational aids are entrusted to the Marine Safety Administration for implementation. The general situation prevailing in coastal states presents many disparities inasmuch as the extent of involvement of the Maritime Safety Administration in the establishment and maintenance of navigational aids will depend or many variables amongst which could be mentioned:

* Size of coastline.

* Accessibility to ports and existing natural hazards.

* Size and development of the Maritime Safety Administration (a translation of the maritime maturity and development of the Administration).

Most countries of developed market-economy like Sweden, Canada, the USA, France, the UK and the USSR etc., have carried out extensive research geared towards the elaboration of objective methods for the analysis of the efficiency of aids to navigation systems.

In most Developing Countries, the Maritime Safety Administration is not sufficiently equipped. In addition, the budget of this Administration does not permit her to get actively involved in the provision and maintenance of navigational aids. As a result, these functions are often carried out "in protest" by the respective Port Authorities, since they can at least recover some of their expediture from port charges.

Vessel Traffic Services, a more sophisticated type of shore-based navigational aids, are particularly appropriate in the approaches and access channels of a port in areas having one or more of the following characteristics:

* High traffic density.

* Traffic with noxious or dangerous cargoes.

* Navigational difficulties.

* Narrow channels.

* Environmental sensitivity.

Since the Maritime Safety Administration more often than not exercises functions of coordination with regard to Vessel Traffic Management, this subject will be given a more intensive examination in II - 2.3.

With regard to sea lanes designation in the territorial waters, and pursuant to Article 22 of the 1982 Law of the Sea Convention, the Maritime Safety Administration is responsible wherever needed for indicating on charts sea lanes and traffic separation schemes, and for giving such indications due publicity. In so doing, account must be taken of:

a) Related Recommendations made by IMO.

b) Any channels customarily used for international navigation.

c) The special characteristics of particular ships and channels.

d) The density of traffic.

E) MARINE POLLUTION PREVENTION AND CONTROL.

For two obvious reason, safety of international shipping with regard to the grave dangers of pollution from shipborne substances particularly oil, is now in the limelight of international shipping concerns:

1) During the last two and a half decades, ships plying the oceans have undergone a dramatic change in both size and number. In 1959 for instance, the oceans were sailed by about 36.000 ships (of about 100 grt or more) with a total of about 125 million grt. Today, the oceans count more than 70.000 ships (i.e., double the number in 1959) totalling more than 400 million grt (more than thrice the 1959 figures).

   Couple with this increase in size, tonnage and number, is the quantity of oil now being transported by sea. Twenty-five years ago, about 250 million tons of oil were being transported. Today, this quantity ranges between 1.700 millions to 2.000 million tons of oil representing an almost vertical increase, graphically speaking, of more than 700 %.

2) The fact that ships today are so much larger than they were one quarter of a century ago means that the consequences of accidents (especially those involving crude oil tankers) will be potentially much greater. The Torrey Canyon incident of 1967 and the Amoco Cadiz incident of 1978 will certainly not belie this. Experience, as will be susbstantiated by the figures in the table below, shows that tanker disasters (Actual and Constructive Total Losses) (*) can have serious negative effects on the environment and marine life, damaging such important resources as fisheries and tourism for long periods.

TABLE 6

TANKER TOTAL LOSSES RANKED BY CAUSE, AND RESULTANT SIZE OF OIL SPILLS BETWEEN 1964 AND 1977.

RANK	CAUSES OF LOSS	NUMBER OF LOSSES	QUANTITY OF OIL SPILLED (IN TONS)
1)	FIRES AND EXPLOSIONS (Engine rooms, cargo tanks, others)	84	247.000
2)	STANDINGS/GROUNDINGS	48	478.000
3)	STRUCTURAL FAILURES	36	507.000
4)	ENGINE ROOM FAILURES (Fooding, Engine Trouble)	22	263.000
5)	COLLISIONS AND RAMMINGS	30	282.000
	TOTALS	220	1.777.000

Source: TANKER ADVISORY CENTER, TANKER CASUALTY STATISTICS (New York, September 1978).

It is important to note here as a reminder that pollution of the seas does not only occur during or after tanker accidents. There is of course operational pollution resulting from:

(*) Actual Total Losses are those losses in which the vessel involved sank or was destroyed and not recoverable. Constructive Total Losses are those losses where the vessel was recovered but found to be so badly damaged as to be beyond economical repair.

* The deliberate discharge into the sea of oil residues (wastes) from the process of tank cleaning after cargo has been discharged and before reloading (*) new cargo.

* Pollution resulting from the use of cargo tanks for ballast water (**).

* Pollution resulting from the discharge of oil wastes from machinery spaces (bilge oil and sludge).

(*)

This was before the introduction of COW (Crude Oil Washing) by the MARPOL'73/78 Convention,a tank cleaning process which consist of using crude oil (in high pressure jets) for the washing of tanks which had earlier contained crude oil. Operational pollution is partly eliminated through COW since the oil used for washing is recollected and used.

(**)

Under the OILPOL '54/69 Convention, ballast water (to make up for the cargo discharge and to give the vessel stability) had to be taken into empty cargo tanks. The MARPOL'73 Convention made provisions for SBT (Secregated Ballast Tanks) and was limited to new tankers of 70.000 dwt and above. The MARPOL Protocol of '78 extented this requirements to include all new crude oil tankers of 20.000 dwt and above, and all new product carriers of 30.000 dwt and above. The CBT (Clean Ballast Tanks) concept was also introduced as a temporal alternative to SBT and COW. This concepts consist of dedicating certain cargo tanks for ballast water for tankers above 40.000 dwt. Two years after the entry into force of MARPOL'73/78, i.e. October 2nd 1985 this requirement will cease to apply for tankers above 70.000 dwt, and four years after the same date, i.e. October 2nd 1987,for tankers between 40.000 and 70.000 dwt. For existing product carriers above 40.000 dwt, CBT will continue to apply. The CBT concept is therefore only a temporal alternative of SBT and COW for crude oil carriers. It is to be noted that with the CBT concept, cargo pipes and pumps are used for ballast water.

In view of the aforesaid, many Governments (before the adoption of the MARPOL '73 /'78 Convention) realising the shortcomings of the OILPOL 54/69 Convention with regard to the prevention and control of pollution, had begun the preparation.

and promulgation of more stringent regulations to protect their coast from oil pollution, and their marine resources against the nefarious effects of pollution. With the entry into force of the MARPOL'73/78 Convention (October 2nd 1983) Maritime Safety Administration have had to work hard to harmonise existing related national legislations with the requirements of the Convention. Through this implementation process, Contracting Governments have had to discuss with "Industry" and Shipowners not only expedient measures for short term implementation but also pragmatic measures which will not have long term negative effects on national shipping, national economy, and the protection of the marine enviroment.

Presently, Maritime Safety Administrations in Developed market-economy Countries are engaged in the struggle of ensuring that:

* Different and appropiate schemes are developed in national ports for the avoidance of pollution. The ensurance of pollution prevention here is often relegated to the respective Port Authorities. (This depends mainly on the status of national ports).

* All national ports handling oil or other liquid substances considered polutants are provided with adequate reception facilities to meet the needs of oil tankers using them.

* All oil exploration and explotation companies (off-shore activities) operating in national waters, and all importers of crude oil and dangerous goods classified as pollutants, have put up an approved Contingency plan for the cleaning up process if an accident of pollution should occur.

(i) <u>RECEPTION FACILITIES.</u>

Under OILPOL 54/69 and MARPOL '73/78 discharge into the sea of oil ballast water can only be done under strict conditions and at certain rates. The designation of "Special Areas" where discharge was totally prohibited rendered acute the problem of oily ballast and oil residues (after tank cleaning) which tankers had to dispose of before reloading their cargo.

The sole practicable solution remained the provision of shore-based tanks or reception facilities where the oily wastes after tank washing and Load on Top (LOT)(*) procedures will be discharges and probably retreated.
It was therefore an obligation on Governments (Article VIII of OILPOL'54/69 and Regulation 12 of Annex I of MARPOL'73/78 to ensure the provisions for the adequate reception facilities in the different national ports and terminals that handled oil for the reception of the residues.

(ii) CONTINGENCY PLANS.

As earlier said, accidental pollution can have far-reaching disastrous effects on the marine environment. Administrations of oil exporting and importing countries, coastal states situated near pollution sensitive areas or tanker routes, have to deploy their energies to put up contingency plans for the combating of pollution in the advent of a tanker disaster or the blow up of a well (off-shore drilling).

The work of the Maritime safety Administration here will consist of:

* Ensuring the availability of approved contingency plans.

* Ensuring the availability of adequate equipment (booms, skimmers etc.) as is demanded by the potentiality of pollution threat (amount of oil handled, sizes and tonnage of tankers frequenting area, etc).

(*) "The load on Top" procedure is operated as follows: After the discharge of the cargo (oil), departure ballast is taken in approximately one-third of cargo tanks. (This ballast is considered dirty) During the ballast voyage the departure ballast is decanted, a process that takes about three days depending on weather conditions. While the decanting procedure is going on, about one-third of cargo tanks are washed with sea water and the dirty water is transferred to slop tanks for retention. Arrival ballast is put in these tanks. The departure ballast is discharge into the sea after the oil mixture on the top layer has been transferrer to slop tanks for retention. In the slop tanks, the oil is separated from the water which is discharged into the sea while the oily mixture is retained on board. Arrival ballast is then discharge at the cargo oil loading port.

* Establishing regional Contingency plans with neighbouring states, or arranging the coordination of the contributions expected from contingency plans organised outside the limits of national territory.

Almost 75% Developing Countries are not completely aware of the aftermath of an oil spill About ten years ago, most of these countries had no national regulations on the protection of the marine environment, the prevention of marine pollution, and the combatting of marine pollution. This fact is substantiated by the negligible number of ratifications international instruments dealing with the protection of the marine environment have received from Developing Countries. It is thus to be noticed that most Maritime Safety Administrations in the developing world are not actively and directly involved in pollution prevention and combatting.

Nevertheless, of recently, the ill-effects of marine pollution have begun to be noticed in port areas due to unauthorized discharges from vessels, and those Developing Countries directly concerned have reacted positively through the preparation of appropriate related regulations and the development of various control schemes. Such reactions could never have materialised without the aid of the International Maritime Organisation within the framework of her technical assistance to Developing Countries.

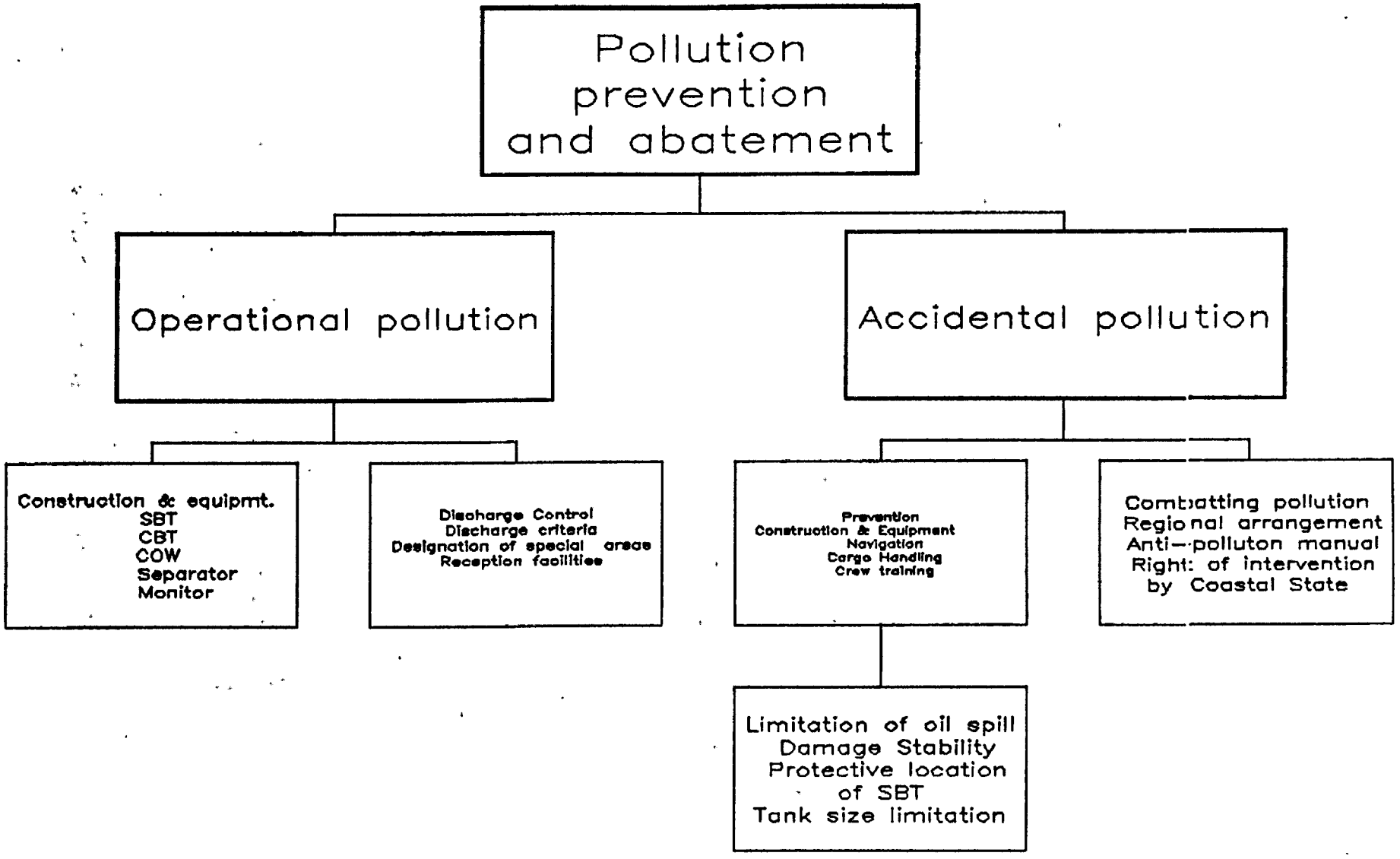
It should be reiterate here that in the establishment of the various schemes (laws and policy) for pollution prevention and abatement, the following have to be taken note of:

- Pollution prevention and fighting does not begin after the occurrence of an incident involving an oil spill, but right at the beginning of the construction of sea-going vessel (design, construction etc.).

- Since in view of the various perils of the sea accidents cannot be foreseen, there is the urgent need to put up adequate contigency plans which will operate without delay as soon as there is an oil spill.

- Since the sea is not stagnant, pollution, wherever it occurs,is of an international nature. There is therefore the need to co-operate at regional or subregional levels in the fighting of pollution (cleaning up operations). This cooperation has to be promoted and effectuated in such a way as to bring together all those concerned for planning in order to prevent friction and conflicts of interest.

The following table will summarise the different types of pollution with the corresponding measures for prevention \ or abatement:



F) SEARCH AND RESCUE OPERATIONS (SAR).

In spite of the numerous safety requirements provided for by national and international legislations, ships at sea still find themselves in great trouble and need help from ashore. This is provided through search and rescue operations which are initiated, organised and co-ordinateb by the Maritime Safety Administration, this pursuant to the provisions of Regulation 15 of Chapter V (Safety of navigation) of the 1974 SOLAS Convention which states:

> " a) Each Contracting Government undertakes to ensure that any necessary arrangements are made for coast watching and for the rescue of persons in distress at sea roud its coast. These arrangements should include the establishment, operation and maintenance of such maritime safety facilities as are deemed practicable and necessary having regard to the density of the sea-going traffic and the navigational dangers and should, so far as possible, afford adequate means of locating and rescuing such persons."
>
> "b) Each Contracting Government undertaken to make available information concerning its existing rescue facilities and the plans for changes therein, if any."

It is therefore an obligation to Contracting States of this Convention to provide rescue services to vessels in distress at sea as soon as distress messages are received.

Search and Rescue operations for information on the SAR Convention, see Chapter IV are most efficiently carried out when jointly organised by the Maritime Safety Administration, and the Navy (Armed Forces or Defense Department). In such an organisation, and depending on the internal policy of the state providing the services, the Navy (Armed Forces) will provide appropriates aircrafts (faster than sea-going vessels) for the picking up of persons in life boats while the Maritime Safety Administration is equipped with appropriated vessels and life-boats for search operations and for the reception of rescued unjured persons picked up by the aircrafts. A formal plan is usually set up beforehand and one of these Administrations (usually the Maritime Safety Administration) is appointed co-ordinator. Responses to distress calls have to be given without delay, in fact,

experience has shown that many sea-going vessels including fishing vessels can sink between five and sixty minutes after sending out a distress call.

Search and Rescue operations are more organised in developed market-economy countries than they are developing world. This is mainly due to the heavy equipments which these services demand. In these countries, on top of the services provided through the joint organisation by the Maritime Safety Administration and the Navy (Armed Forces), voluntary organisations mostly made up of fishermen and owners of pleasures boats assist very often in SAR operations. The pre-requisites for such assistance are asually determined by the State concerned but are based generally on equipment of vessels used (means of communications - radio, life saving appliances etc.) Any expenses incurred or loss suffered by the voluntary services are compensated for by the joint Maritime Safety Administration / Navy SAR Organisation fund (if provision is made for the existence of such a fund) or directly by the public treasury, the source from which these two "Administrations" draw their expenses.

Developing Countries can efficiently organise Search and Rescue Services at regional or sub-regional levels considering the heavy expenses needed for equipment.

It should be reminded here that Search and Rescue Services can only be provided by a public organisations considering the heavy expenses needed for equipment, and the fact that the services rendered are not supposed to be requited.

G) PORT AND COASTAL STATE CONTROLS.

Port and Coastal State Controls are carried out by the Maritime Safety Administration to ensure compliance with the requirements of international Conventions and the maintenance of adequate safety standards through which the ship (her crew, passengers and cargo) while at sea will not be exposed to additional perils other than those resulting from an "Act of God". These controls are essential in that:

* They check the obligation flag states have with regard to enforcing safety standards on national flag vessels.

* They are complementary to, and complete the work of flag state as regards surveys and inspections.

As a matter of fact, many vessels engaged in cross-trading hardly ever call in any of the ports of the state under whose flag they are registered. If the flag state is not vigilant and responsible enough to delegate surveyors in foreign ports or a Classification Society to perform the necessary surveys required by international safety and pollution prevention Conventions, unreliable shipowner, for economic reasons, might neglect the seaworthiness of the vessels thereby rendering them sub-standard and jeopardizing as it were, the lives of the crew, passengers, and other vessels, crews and passengers plying the oceans. The end result of these controls is therefore the elimination of sub-standard vessels considered a threat to human life and to the marine enviroment.

Coastal State controls are usually carried out when there is reason to believe that a vessel sailing in waters over which the coastal state exercises sovereign rights (territorial sea and Exlusive Economic Zone) has violated, or is violating some of her regulations. More often than not, such violations will consist of the discharge of oil or oily ballast water into sea. In such cases, the Maritime Safety Administration, pursuant to the provisions of Article 220 of the 1982 Law of the Sea Convention, may detend the vessel and institute the necessary proceeding in accordance with related municipal regulations. The same procedure applies when incidents of violations involving pollution occur during off-shore operations.

Port State Controls are usually carried out when a foreign flag vessel calls in one of the ports of the coastal state. Such controls will consist of checking the validity of Certificates, and deficiencies likely to render the vessel unseaworthy. These Certificates are those delivered after the different surveys (initial, annual, intermediate and periodical) required by the Conventions and as outlined in II - 2.1.3 on "Survey and Certification Requirements" have been satisfactorily carried out. The requirements of Port State Controls are laid out by the different Safety and Pollution Prevention Conventions.

(i) SOLAS'74 and Protocol of '78.

The requirements for the control of ships under this Convention are provided by regulation 19 of Chapter I on General Provisions. Under this Regulation then:

* Controls are to be limited to the ensuring of the authenticity and the validity of the following Safety Certificates:

  - Passenger ship Safety Certificate.

  - Cargo ship Safety Construction Certificate.

  - Cargo ship Safety Equipment Certificate.

  - Cargo ship Safety Radiotelegraphy Certificate.

  - Cargo ship Safety Radiotelephony Certificate.

  - Exemption Certificate.

  - Nuclear Passenger ship Safety Certificate.

  - Nuclear Cargo ship Safety Certificate.

* Certificates shall be accepted if authentic and valid unless there are clear grounds to believe that the condition of the vessel or its equipment are inconsistent with specifications on Certificates. In such a case, Certificates are to be considered as not being valid and the necessary steps towards the detention of the vessel for the repairs of deficiencies to be effectuated should be taken by the survayors of the Maritime safety Administration.

Generally, the detention of a vessel considered sub-standard will depend on the severity of deficiencies discovered. If, for example, the hull, the machinery, life saving appliances, radio and fire-fighting equipment are considered below standard for one or more of the following reasons:

- Substantial deterioration due to poor maintenance.

- Non-compliance of equipments or arrangements with relevant specifications of the Convention.

- Complete absence of equipments as required by the Convention.

The vessel falls within the category of sub-standard vessels and detention for repairs becomes imperative. Nevertheless, the seriousness of a deficiency is a subjective consideration and only the surveyor carrying out the inspection, guided by his professional experience, competence and judgement is capable of deciding on detention or simply ask the captain to have deficiencies repaired or rectified within a particular period. In exercising such a judgement, due consideration should be given to the circumstances of the intended voyage and the risk of danger likely to be reserved (by deficiencies) to crew, passengers or cargo.

* If the decision to detain the vessel is taken, the Maritime Safety Administration should make sure that the following requirements are fulfilled:

  - Inform in writing the consul, or in his absence the nearest representative of the state whose flag the ship is flying of the circumstances of the intervention.

  - Notify the Authorities responsible for the issue of the Certificates.

  - Notify the International Maritime Organisation (IMO) of the facts concerning the intervention.

* On the other hand, if the vessel is found to be sub-standard but no action is taken, the Authorities of the next port of call shall be duly notified togather with the parties already mentioned above.

* Maritime Safety Administrations should be well aware of the fact that ships unduly detained or delayed for deficiencies they do not present, will be liable to compensation from the port state.

(ii) MARPOL '73/'78 CONVENTION.

The requirements for the inspection of ships and detention of violations under this Convention are laid down by Articles 4,5 and 6 of the Convention and developed by "Guide-lines for the Control of ships under MARPOL '73/78" prepared by the International Maritime Organisation. These Guide-lines consist of six Chapters dealing with the following:

1) Introduction - Definitions of factors which render a vessel a pollution risk, etc.

2) Guidance aimed at ensuring the presence on board of the International Oil Pollution Prevention (I.O.P.P.) Certificate and consistency of condition of vessel - equipment and maintenance - with contents of the Cerificate.

3) Guidance on the gathering of evidence of violation of the discharge provisions prescribed or stipulated in Annex I of MARPOL '73/78.

4) Guidance on in-port inspections of crude Oil Washing (COW) operations including inspection of the inert gas installation (concer by SOLAS).

5) Guidance on control measures of ships of non-parties to MARPOL '73/78.

6) Guidance on the dissemination of information obtained through Port State Control operations.

Five appendices are included and consist of detailed guidance for the attention of officials charged with the performance of above mentioned controls.

Generally, the control procedures under Annex I of MARPOL '73/78 will not be very different from those under the SOLAS Convention. Certificates have to be inspected, and a more extensive control is only necessary:

- When the validity of the Certificates is questionable, or when it simply does not exist.

- At the request of, or on the basis of information provided by another party (Maritime Safety Administration or Authority of last port of call, Fishermen, Pleasure boats or yacht owners, Crew of another vessels, etc).

- On the basis of information provided by a member of crew, a Professional body, an Association, Trade Union, or any other interested party.

When Port State Control under this Convention is being carried out on a tanker, certain installations and operations may have to be inspected. Such operations will include tank cleaning through COW. It is to be noted that the different pollution prevention equipment a ship is supposed to have in order to comply with the requirements of the MARPOL '73/78 Convention will depend largely on the year of build of the vessel and its size, and Maritime Safety Administrations should be aware of the fact that while certain vessels (tankers) will be constructed with Segregated Ballast Tanks, others will only have Dedicated Clean Ballast Tanks.

With regard to action taken when Certificates are not valid or when the vessel presents deficiencies, the procedure is similar to that followed during similar situations under the SOLAS Convention. Nevertheless, the following additional requirements should be noted:

- If the decision is taken to send a sub-standard vessel to a ship yard under the jurisdiction of the Port State, measures should be taken to continue exercising appropriated Port State Control.

- If, on the other hand, the repair yard is under the jurisdiction of another state (other than the flag State) party to the Convention, all the facts relating to the deficiences should be communicated to the competent Authorities (Maritime Safety Administration) of that State.

- Received information on contraventions with regard to unauthorized discharge should be adequately verified.

before serious action is taken against the vessel, and before informing flag state. Such verification will help assess the extent of the contravention, providing at the same time concrete facts to substantiate the action taken.

(iii) LOAD LINES '66/69 CONVENTION.

The requiremtns of Port State Control under this Convention are provided by Article 21 of the Convention. Such a control will not only be limited to ensuring the presence on board of a valid International Load Line Certificate, but in addition, the inspector of the Administration should ensure that:

- The ship is not loaded beyond the limits allowed by the Certificate.
- The position of the load line of the ship corresponds with the Certificates.
- No material alterations have been made (in the hull or superstructures of the ship) and necessitating the assignment of an increased freeboard.

Where there is a valid International Load Line Exemption Certificate on board, the control will be limited to ensuring that the stipulations of this Certificate are complied with.

On the other hand, where neither a valid International Load Line Certificate nor the Exemption Certificate are present on board, and where the absence of, or the invalidity of these Certificates (together with the condition of the vessel) might present a major danger to crew and passengers if the vessel proceeds to sea, action shall be taken to detain the vessel. The procedure of informing competent Authorities of flag state shall be similar to that under the SOLAS Convention.

(iv) MODU CODE AND TORREMOLINOS CONVENTION.

With regard to Conventions not in force and recommendation such as the MODU Code, Port State Control will be based on requirements of related national regulations. Such controls will still be based on the inspection of the Safety Certificates such units may hold.

Concerning he TORREMOLINOS International Convention, this Certificate in the "International Fishing Vessel Certificate".

These units more often than not will be subject to Coastal State Control with the exception of fixed installations (off shore activities) which are governes by Coastal State Regulations.

II-2.7 COORDINATION AND SUPERVISION OF ACTIVITIES GEARED TOWARDS THE MAINTENANCE OF MARINE SAFETY.

The third and last aspect of the functions of the Maritime Safety Administration is that of coordination and surveillance of maritime safety activities carried out by other public, para-public or private organisations. These activities can be classed in three main categories:

1) Functions or activities which the Maritime safety Administration has relegated to another organisation.

2) Functions or activities which demand a lot of investment on equipment.

3) Functions or activities which the Maritime Safety Administration cannot perform any longer because of conflicting nature.

(i) RELEGATED FUNCTIONS.

If the Maritime Safety Administration is in charge of the ensuring of global safety in the maritime domain through

the various functions earlier descussed, there is need here to mention that in certain areas within this domain, the functions geared to the maintenance of safety are delegated to different bodies. Some of these areas will include safety maintenance in port areas, "fishing" industry, and off-shore activities.

With regard to port areas, it should be mentioned that the legal status of ports within a particular country (government owned, owned by the town municipality, or mixed) and the development of the various port infrastructures might be carried out without the direct surveillance of the Safety Administration.

Since ports are contructed not only to receive sea-going vessels but also to handle and store before delivering goods, some of which present a lot of hazards, appropriate laws, following the situation and vulnerability of the ports, have to be made to govern the different activities carried out. These activities will include:

* The construction of storage areas (wharehouses)

* Construction of mobile handling equipment.

* Container terminals and segregation, etc.

* Pollution Prevention schemes (port area) and availability of reception facilities where needed.

The safety laws that govern the above-mentioned areas are usually promulgated by the various Port Authorities in the form of "By-Laws". The function of the Maritime Safety Administration here will be to coordinate the effective carrying out of these functions, and when necessary, to inspect their efficient operation.

With regard to the fishing industry and off-shore activities, the decision to delegate safety maintenance functions to another Administration (public or para-public) will depend mainly on the level of development of these activities. Certain Administrations have found it necessary to create a different public administration in charge of safety and pollution prevention problems in off-shore activities while in the fishing industries, commissions

comprising experts from the Maritime Safety Administration and the Ministry of Anial Breeding and Industries are created for the same purposes. In both cases, the Maritime Safety Administration will, through advisory services and surveillance, ensure that the policies of the different organisations in connection with safety maintenance are acceptable and viable.

(ii) FUNCTIONS DEMANDING A LOT OF INVESTMENT ON EQUIPMENT

In most Countries of developed market-economy, the Maritime Safety Administration is a large Administration employing hundreds of people and operating sophisticated equipment for the carrying out of the functions entrusted on her. In other Countries, this Administration is either of a very small or of an average medium size. The funds this second group will have at its disposal for development and equipment will be correspondingly small. As a result, the Maritime Safety Administrations have to rely on other organisations, public or parapublic, for effectively carrying out some of the functions entrusted to them.

Such organisations because of their quasi-commercial statues, will supply equipment and services in the following areas:

* Search and Rescue operations (Navy (armed Forces), Port Authorities, etc)

* Supply and installation of aids to Navigation and the creation of Vessel Traffic Services (Port Authorities, Aids and Waterways Authority).

* Hydrographic Surveying and the Maritime Safety Administration will be centred on surveillance, control, and coordination.

(iii) FUNCTIONS WITH INHERENT CONFLICTUAL NATURE.

In many Countries (mostly those of developed market-economy) the Maritime Safety Administration is so large that

they control and operate a fleet of considerable tonnage for exercising their various functions. This is the case with the Canadian Coast Guard, the United States Coast Guard and a few Western European Maritime Safety Administrations.

Because of this large fleet, it has been considered appropriated to delegate some of the traditional functions of the Maritime Safety Administration to other specialised ad hoc organisations in view of the conflict of interest which might arise in the performance of these functions. "Maritime or Casualty Investigation" is a typical example of such functions. Here for instance, many incidents have occurred at sea involving two vessels, one of which is owned by the Maritime Safety Administration. The investigation of such an occurrence is likely to be biased and prejudiced if carried out by the personnel of the Maritime Safety Administration.

Since in II-2.2.2 we only cursorily glanced over some of the activities discussed above, we will re-examine a few here with a particular accent on their technical nature. These will be:

- Aids to Navigation and Vessel Traffic Management, and
- Maritime Casualty Investigation.

II-2.8 NAVIGATIONAL AIDS AND VESSEL TRAFFIC MANAGEMENT

When one stands on the shore and looks out into the sea, it is rather difficult to understand why, with so much sea space in which ships can manoeuvre, expensive and highly advanced equipments and systems are required for directing ships into ports. A closer examination of the sea will show that the smoothness of the surface of the sea will not necessarily entail a level bottom. Some areas are therefore deeper than others and a ship has to be "guided" by external aids in order to avoid groundings. The factors which contribute to marine accidents such as groundings and collisions range from human error, bad weather, to lack of equipment or malfunctioning of such equipment. Experience has shown that as a vessel nears land, the probability of these

accidents increases, and it becomes vitally important for the safety of the vessel and the protection of the environment that appropiated systems of Aids to Navigation and Vessel Trafic Management be developed and implemented.

II-2.9 AIDS TO NAVIGATION.

Aids to Navigation can be vulgarly defined as visual, acuostical or radio devices which:

* Assist the captain and his crew to move a vessel safety and easily from one point to another.
* Warn them of major dangers or obstructions.
* Advise them of the location of the best or preferred route.

These devices are either shipborne or external to the vessel - shore-based or placed on the surface of the sea - and will include:

- Navigational charts.
- Compass.
- Log.
- Lead (or echo-sounder).
- Sextant.
- Chromometer.
- Beacons.
- Radio Receives.
- Radar.
- Lighthouses or Stations.

- Buoys.
- Vessel Traffic Services etc.
- Station referenced systems.

Aids to Navigation are either lateral or cardinal.

Lateral aids may be in the form of either buoys or fixed aids. They indicated the location of hazards and of the safest or deepest water by indicating the side on which they are to be passed. Their correct interpretation requires a knowledge of the direction of buoyage commonly known as the "upstream direction", which is the direction taken by a vessel when proceeding from the sea towards the head waters of a river into a harbour or with the flood tide.

When a vessel is proceeding in the upstream direction, starboard hand aids must be kept to starboard (i.e. right) and port hand aids must be kept to the port (i.e left).

Cardinal aids may be in the form of either buoys or fixed aids, and indicate the location of hazards and of the safest or deepest water by reference to the cardinal points of the compass. There are four cardinal marks - North, East, South and West, which are positioned so that the safest or deepest water is to be found to the named side of the mark (e.g., to the north of a north cardinal mark).

The following extract of the ESCAP publication "Guideli nes for, maritime legislation" explains about IALA activities and other activities in order to harmonize the buoyage systems.

International rules have been elaborated by the International Association of Lighthouse Authorities (IALA). IALA'S aim is to encourage the continued improvement of aids to navigation for the safe and efficient movement of vessels. It was worked towards the adoption of a unified system of buoyage and has formulated two sets of rules known a "System A" (the combined cardinal and lateral system - red to starboard) from among the conflicting buoyage systems in use world-wide. The rules for "System A" were approved by IMO and incorporated in the Copenhagen Agreement of 1977, and several countries have adopted them.

In 1980 IALA adopted at its Buoyage Conference held at Tokyo rules for a single buoyage system with two regions designated A and B for lateral marks. The new IALA Single Buoyage System will hopefully be implemented by 1988. IMO's Maritime Safety Committee has approved the new system which will now be incorporated in an agreement to supersede the Copenhagen Agreement. Because of the major differences between the lateral marks in Regions A and B, the Safety Committee stressed the importance, when arranging regional limits, of avoiding a multiplicy of different regions in the same general area. IALA is also working on matters such as the regional harmonization of buoyage, surface colours, caculation of the intensity of lights and the availability and reliability of aids to navigation with a view to making appropiate reccommendations.

In view of the possible need to harmonize rules relating to the sea with those governing the use of inland waters, attention is drawn to two recommendations of the transport committee of the UN Economic Committee for Europe (ECE). In 1972 the ECE adopted a recommendation on the use of signs on inland waterways (usually shortened to SIGNI), such as buoys and beacons but also traffic signs and even traffic lights. In 1962 a recommendation was adopted containing the European Code for inland waterways (shortened to CEVNI). Inter alia, the code contains rules of the road and rules on shapes and signs to be carried on board and on the use of signals. In addition it contains rules of a more general nature, e.g. the obligation to comply with traffic instructions from the competent authority. Together these two recommendations contitute a uniform regime with regard to the signs to be used and on the rules for traffic regulation on European inland waterways. Since their adoption, the recommendation have been amended on several occasions.

FIXED AND MOBILE AIDS TO NAVIGATION.

As earlier seen above, aids to navigation external to the vessel, are either fixed or mobile. Fixed aids are mostly light stations or lighthouses which are fixed structures equipped with a light and located at prominent sites to assist the mariner in fixing his position. They are erected near shorelines or built-up man-made piers in, or near waterways. The main characteristic of these aids is that they serve for identification purposes. They therefore consist of the light colour and flash characteristics by night and the colour and shape of the structure by day (day mark). Other fixed aids will include:

* Starboard day beacons.

* Port day beacons.

* Junction day beacons.

Mobile aids present characteristics similar to those of the fixed aids but with the main difference that they are anchored and are given the generic name of "BUOYS". The following types of buoys, each having a different function, are commonly used as aids:

(i) Lateral Buoys - which indicate the side on which they may be safety passed.

* Port Hand Buoy.

* Starboard Hand Buoy.

* Port Bifurcation Buoy.

* Fairway Buoy.

(ii) Cardinal Buoys - which indicate the location of the safest or deepest water by reference to the cardinal points of the compass.

* North Cardinal Buoy.

* East Cardinal Buoy.

* West Cardinal Buoy.

(iii) Special Buoys.

Generally, these buoys are used to convey to the mariner a variety of information which, while important to him, is not primarily intended to

But very often these activities are delegated to other national public or parapublic Administration.

II-2.10 VESSEL TRAFFIC MANAGEMENT.

In the early 50's, a sort of "port radar system" was introduced in Western Europe with the main function of guiding ships into ports. With the subsequent firm establishment of their values as shipping aids, these radar systems have now been sophisticatedly computerised and are commonly know as:

- Marine Traffic Control.
- Vessel Traffic Service, or
- Vessel Traffic Management.

They have the following main functions:

* The organisation of the movement of ships in order to guarantee an efficient, smooth, unobstructured traffic flow through the entire port at all times, and

* The organisation of the movement of ships in special areas (channels, straits) where navigation might be rendered difficult, or which present one of the following characteristics:
  - High traffic density.
  - Traffic with noxious or dangerous goods.
  - Navigational difficulties.
  - Narrow channels.
  - Environmental sensitivity.

A Vessel Traffic Service may range from single information messages to extensive organisation of the traffic involving national or regional schemes.

Considering the involvement of different parties during the activities involved in Vessel Traffic Management (Shipowners, Masters, Pilots, Port Authority Management), it is to be emphasized that the organisation of vessel movements is done through advice, guidance, control, and management from the Vessel Traffic Services Authority to the captain of the vessel in the port approaches or area, or in one of the special areas mentioned above. The Vessel Traffic Service Authority may be one of the following:

* Port Authority.

* A governmental Administration

* A Pilotage Organisation, or

* A Combination of any of the above authorities.

Despite the diversities in opinion as to the power of a Vessel Traffic Management, the Maritime Safety Administration through the Port Authority Management remains the sole Authority with sufficient overall interest and responsibility to decide what the most desirable Vessel Traffic System should be. These interests and responsibilities will be quited by the following expectations from a Vessel Traffic System:

* That it acts as one more aid to ensure the efficient, safe and smooth movement of ships in and out of port areas.

* That in very busy ports, it should also be an aid to prevent dangerous concentrations of ship movements in a particular port area.

* That it can demand a change in behaviour of individual vessel participating in the total traffic.

* That in case of an accident, it can assist in unconditional traffic control in the interest of calamity containment.

* That it can faithfully relate the main facts behind a major incident involving grounding, collision or pollution.

The Port Authority, as a representative of the national Maritime Safety Administration, has responsibilities which override the singular responsibilities of the other parties involved in Vessel Traffic Management. Such responsibilities will involve:

* Commercial activities with regard to the port's economy.

* Maritime safety in general.

* Operational efficiency in order to be attractive to shipping.

* Enviromental safety (with regard to pollution prevention) to protect the population living in the immedate vicinity of the port.

It is to be noted that within the Port Authority Organisation, a special section which should be directly controlled by the Maritime Safety Administration has to manage directly the Vessel Traffic Service. In other words, the Commercial and Safety responsibilities will be attributed to different "Organisations" within the Port Authority.

In many cases, the commercial organisation of ports has a regional status while safety organisation will always have a national character, hence the need to entrust the management of a Vessel Traffic Service to the hands of an organisation which will be directly supervised by the Maritime Safety Administration. Such an entrustment will be in answer to the main objectives behind Vessel Traffic Service organisation, primarily designed to improve safety and efficiency of traffic and the protection of the marine environment.
Such primary objectives will include:

* Assistance to navigation in appropriate areas.

* Regulation of movements to facilitate an efficient traffic flow.

* Handling of data relating to ships involved.

* Coordination of actions in case of accidents.

* Support of allied activities.

The importance attached to Vessel Traffic Service organisation has been substantied by the amount of literature on the subject, most of which is in the form of Guidelines for organisation. Such literature comes from three main International Organisations:

- The International Maritime Organisation (IMO)
- The International Association of Institutes of Navigation, and
- The International Association of Lighthouses Authorities (I.A.L.A.)

II-2.1.1 CASUALTY INVENTIGATION.

Marine Casualty Investigation is the process of inquiring into, and the collection of facts relating to a marine occurence. These occurrences will include:

- Incidents on board a vessel resulting in serious injury or death.
- Groundings and Collisions which might result in serious damage to the vessel, loss of life (or complete loss of crew and vessel).
- Incidents involving pollution of the sea from ship accidents or oil rig blow-outs.

The occurrence of a disaster at sea will involve many interests, most of the time conflicting with one another, and it has been rather difficult to determine what line a Casualty Investigation should follow. The above - mentioned interests will include those of:

- The Maritime Safety Administration (representing the local Administration and population.)
- The Party (or Parties) directly involved in the accident (shipowners and Insurance Companies, etc).

In many Countries, Casualty Investigation is considered penal in nature. The main purpose of investigating marine casualties in such countries is to impose penalties which might range from suspension of Certificates (Master and Officers) to payment of heavy fines and imprisonment. Such preliminary inquiries are usually carried out under strict rules of secrecy, and the civil liability aspects of the incident are not considered. Another investigation to this end will have to be carried out by appointed surveyors representing the interested parties. It is only when a second inquiry is deemed necessary that the process will be made public with a subsequent Court hearing and judgement.

In other Countries, Casualty Investigation is safety orientated, with the primary purpose of improving safety of lives and property in marine transportation. These investigations are characterised by the following:

1) The investigation system is totally independent of any disciplinary process.

2) The investigating authority does not determine or apportion blame or recommend any type of disciplinary action.

3) The investigating Authority is not prohibited from making objective findings of fact which might lead to the deduction or conclusion that a fault likely to entail disciplinary action was committed, even if such facts give rise to the deduction or conclusion of possible civil liability.

The philosophy behind this group of Countries is in line with the provisions of International Safety Conventions (LOADLINES '66 - Article 23, and SOLAS '74 - Regulation 21) which have both regulated Casualty Inventigation in the following manner:

> **"Each Administration undertakens to conduct an investigation of any Casualty occuring to ships for which it is responsible and which are subject to the provisions of the present Convention when it judges that such an investigation may assist in determining what changes in the Convention might be desiderable...."**
>
> (paragraph one of Article 23 of LOADLINES'66, and of Regulation 21 of SOLAS'74).

In addition, the following Resolutions of the left out have thrown additional light on Casualty Investigation procedures:

* RES. A 147 (Nov. 26th 1968): Reports on accidents involving significant spillages of oil.

* RES. A 173 (Nov. 28th 1968): Participation in official Inquires into Marine Casualties.

* RES. A 322 (Nov. 12th 1975): The Conduct of Investigations into Casualties.

* RES. A 440 (Nov. 15th 1979): Exchange of Information for Investigations in Marine Casualties.

It is to be noted that the obligation that the above-mantioned Conventions provide for participating states to investigate and report to the Organisation (exercising depositary functions for the Conventions, i.e IMO) is conditional upon their sole judgement as to whether or not an investigation may assist in bringing about changes to these Conventions.

A third group of Countries will consider Casualty Investigation from a completely different angle. Here, investigation is considered of an administrative nature, and is conducted to determine the circumstances in which the Casualty ocurred, to reveal its causes and consequences, and to determine those persons to be held responsible. These investigations are conducted by the harbour-master.

By and large, the extent to which a casualty investigation is carried out, and the main objective behind such an investigation, are determined by the related provisions in the different municipal legislations. Nevertheless, the following recapitulative observations can be made:

* The objectives of Casualty Investigation system will vary from strictly penal systems to systems solely

orientated towards safety and pollution prevention. Many variations exist between these two systems.

* The investigation processes as well as the reports and their use are directly affected by the nature of the objectives pursued, i.e. whether for strictly safety purpose, or whether disciplinary or civil considerations are taken into account.

* Most Countries will tend to have two types of inquires: Preliminary Investigations and Formal Investigations or Hearings, and, depending on the number of investigations, some countries will place emphasis on the former and others on the latter. It is necessary here to give a brief run-down of these two types of inquires.

(i) PRELIMINARY INVESTIGATION.

In the advent of a marine occurrence, an investigator is appointed by the responsible officer (representing the Minister of Transport) of the Administration. . This investigator has the right to go on board a vessel or enter any premises, to inspect any part thereof, to compel testimony (this differs following Administration), and to enforce the production of documents.

During the inquiry, the witnesses are interviewed privately, and in camera or with a tape recorder (*). Under certain national laws, the witnesses can be assisted by a lawyer to advise them of their rights.

After the successful conducting of this investigation a report is made. Such a report should contain all or most of the following information:

- A brief outline of the circumstances in which the casualty occurred, including the date, and the outcome.

- Information about the Ships involved - Type and size of Ship(s), Port(s) of registry, Type of propulsion, Place of built and year, Navigational aids, Nature of cargo carried, etc.

- List of witnesses - Name, age nationality, occupation and quialifications.

- Account of the circumstances leading to the casualty.

- Comments on the evidence together with relevant extracts.

- Conclusion as to cause or most probable cause of casualty.

- List of exhibits - Copies of documents may be susbtituted for originals. Most Administrations will demand that these should be duly certified.

- Recommendations which should not be part of the report but simply attached to it.

In most cases, the facts contained in this report are considered facts observed by the investigator, hence the need to include recommendations only as an attachment. Neither the report nor the recommendations are made public. As provided for by the related national regulations, these reports are either sent directly to the Minister or to his statutory representative for exploitation.

(ii) FORMAL INVESTIGATION.

Formal Investigations become imperative when the incident to be inquired into has caused major casualties. The order to carry out this investigation usually comes from the Minister of Transport. In a nutshell, incidents with the following characteristics will warrant a formal investigation:

a) Incidents which cause a considerable degree of concern because of the loss of many lives etc.

b) Incidents where the causes cannot be determined by a Preliminary Inquiry , and

c) Incident where special safety lessons or practices should be brought to the attention of the industry.

(*) The use of these two equipments is not common with all Administrations. In certain cases, the witnesses, when confronted with them, tend to withhold useful but probably compromising information.

Formal Investigations are carried out by a Commisioner (usually a judge) who has the following powers in most Administrations:

a) Powers to suspend or revoke officers' Certificates or to criticise the conduct of a party, or to propose disciplinary measures.

b) Powers to assess cost against a party - officers, pilots, shipowners etc.

This commissioner heads a commision counsel which in certain countries is appointed by the Minister of Justice. In others, this responsibility befalls the Ministry of Transport. This commission usually consists of four to six members.

After the investigation and hearing, the commissioner prepares a full report for the intention of the Minister or his statutory representative. This report in many Countries, will includes:

- The findings of the commission.

- The causes of and the contributory factors to the casualty.

- Decision of a commissioner relating to proposals with regard to disciplinary measures which might include the suspension or revocation of an officer's or engineer's Certificate, or of a pilot's licence.

- List of Recommendations on action to be taken in order to promote safety of life and property at sea. This action might either be geared towards the strengthening of existing legislation (both at national and international levels) or the need to expand related existing legislation to include areas which hitherto had not been considered.

Although Formal Investigations usually require long hearings which are often very costly to all those involved, they help nevertheless to clarify many obscure areas to be observed after a casualty. These areas will include the following:

- The fact that the process of Formal Investigation is used extensively, although indirectly, to help resolve civil liability issues for some of the parties involved.

- Very often, the proceedings, because of their wide-ranging nature, are used as an extensive discovery process since the parties involved usully present their evidence in the most favourable light for their private interests.

II-12 CONCLUSION.

In the foregoing sections, We have started from a given base from where we have run to the north, east, south and west (inter-linking as it were these different points) in an endeavor to explore the whole range of the activities of a typical Maritime Safety Administration, first in an utopic situation where the NEEDS of the various countries involved in her organisation will be completely similar, and secondly, in a more realistic and pragmatic situation where these NEEDS are not only a decisive factor in determining what face or structure are suitable for this Administration, but are also, to a very large extent, dependent on the "local colour" of, or the prevailing conditions in the various countries to be considered.

In so doing, we have examined the various situations prevailing in countries of developed-market economy, not necessarily because such situations are the best and should be copied, but mainly to compare different philosophies or ways of looking at the same thing.

The examination of such situations has thus been instrumental in an objective appreciation of the mixture of the different available resources for organisation. These situations, though not serving as the perfect example, should nevertheless orientate coastal Developing Countries towards the main pre-requisites for effectively organising a Maritime Safety Administration, and the use of indigenous resources as alternatives to "sophistication" which their apparently meager financial resources cannot meet.

In discussing the various Safety Convention the main aim has not been to give a resume of these instruments, but to:

* Highlight their importance and far-reaching effects.

* Discuss the various possible procedures Maritime Safety Administrations in Developing Countries could or perhaps should use for effective implementation. These procedures, though similar to those prevailing in countries of developed-market economy, will be different when indigenous resources are employed.

With regard to organisation, it should be mentioned that it is rather difficult to prescribe a particular organigramme for a Maritime Safety Administration since many variables and parameters have to be taken into consideration. Such will include:

- Political structure of country.

- Financial potential of country.

- Maritime maturity of country, and

- Structure of mother Ministry.

Generally speaking, the organisation or structure of a Maritime Safety Administration will, depend largely on the different posts to be created, these in turn will depend on the extent of the functions which this Administration has been asked to carry out.

Then, by way of conclusion, to give a recapitulative reiteration of the atmosphere within which the Maritime Safety Administration should be effectively organised in Venezuela so as to give a positive response or feedback to the objectives behind its creation.

The raison d'etre of this Administration must always spring from the contribution to national growth - economy expansion and development - that is expected from the various activities carried out on or in the sea or in/on interior navigable waters. Such activities will include:

* Sea transportation.

* Fisheries.

* Off-shore activities.

In organising this Administration, the relevant pre-requisites - equipment and the development of human resources - must be critically appreciated, taking into consideration local conditions.

The training of personnel in the sector of marine transportation as a whole will be more beneficial to the nation if undertaken by the Government since it stands in a better position to:

- Assess global national needs and to plan for and ensure the availability of such man-power both in quantity and quality.

- Harness such man-power and use it appropriately to maximum national advantage (shipping Companies and the Maritime Administration).

- Monitor international developments affecting existing or future marine personnel.

- Fight international pressures regarding this domain in general and seafarers in particular.

The end result of this responsibility is that the Goverment will find itself in a position where it can control the personnel in the whole maritime domain, and following national needs, can transfer personnel from a public administration to a para-public one, and vice versa. Such tranfers will enable the gap left in the Maritime Safety Administrations of Venezuela by the inavailability of trained technical personnel (inspectors, surveyors etc.) to be filled.

Finally, mention should be made of the role, as we have seen throughout this study, the "Industry" can play in fostering the development of the Maritime Safety Administration through the following contributions:

* Developmental funds.
* Services of technical personnel.
* Assistance with regard to the use of equipment.
* Funding of feasibility studies etc.

It is the belief of the author that if all the above recommendations are adopted Venezuela will have a strong Maritime Safety Administration which will be able to accomplish to a very considerable extent the two very vital functions of this Administration protection of lives, ships and property at sea as well as the protection of the Marine Environment from pollution.

ANNEXES

Annex 1

DISCHARGE CRITERIA FOR OIL IN SPECIAL AREAS

Table 1

Control of Discharge of Oil From Cargo Tank Areas of Oil Tankers

Sea Areas		Discharge Criteria
Within a SPECIAL AREA*		NO DISCHARGE except clean** or segregated ballast.
Outside a SPECIAL AREA	With 50 nautical miles from land	NO DISCHARGE except clean or segregated ballast.
	More Than 50 Nautical Miles from land	NO DISCHARGE except either: (a) Clean or segregated ballast, or (b) when: (1) The tanker is en route, and (2) the instantaneous rate of discharge of oil does not exceed 60 litres per nautical mile, and (3) the total quantity of oil discharged does not exceed 1/15,000 (for existing tankers) or 1/30,000 (for new tankers) of the total quantity of cargo which was carried on the previous voyage (4) the tanker has in operation an oil discharge monitoring and control system and slop tank arrangements as required by Regulation 15 of Annex I of MARPOL 73/78.

* Special areas requirements take effect in the Maditerranean Sea, Black Sea and Baltic Sea areas from the day of entry into force of MARPOL 73/78 and for the Red Sea and Gulfs areas from the date established by IMO.

**"Clean ballast" is the ballast in a tank which has been so cleaned that the effluent therefrom does not create a visible sheen or the oil content exceed 15 ppm (for the precise definition of "clean ballast", see Regulation 1 (16) of MARPOL 73/78.

Annex 2

Table 2

Control of Discharge of oil from Machinery Spaces of all Ships

Seas Areas		Ship Type & Size	Discharge Criteria
Within a SPECIAL AREA$	Anywhere	Oil tankers of all since and other ships ≥ 400 grt	NO DISCHARGE except when: (1) the ship is proceeding en route, and (2) the oil content of effluent without dilution does not exceed 15 ppm, and (3) the ship has in operation oil filtering equipment with automatic 15 ppm stooping device and (4) for oil tankers the bilge water does not originate from cargo pump room bilges or is not mixed with oil cargo residue.
	Within 12 Nautical miles from land	Ships<400 grt other than oil tankers	NO DISCHARGE except when the oil content of effluent without dilution does not exceed 15 ppm.
	More than 12 Nautical miles from land		NO DISCHARGE except when either: (a) The oil content of effluent without dilution does not exceed 15 ppm, or (b) (1) the ship is proceeding en route, and (2) the oil content of the effluent is less than 100 ppm.

$ For application of Special Area requirements see the footnote on Annex 1, Table 1.

Table 2 Continued

Sea Areas		Ship Type & Size	Discharge Criteria
Outside a SPECIAL AREA*	Within 12 Nautical miles from land	Oil tankers of all sizes and other ships ≥ 400 grt	NO DISCHARGE except when the oil content of effluent without dilution does not exceed 15 ppm.
		Other ships < 400 grt	The condition for ships 400 grt apply as far as practicable and reasonable
	More than 12 Nautical	Oil tankers of all sizes and other ships ≥ 400 grt	NO DISCHARGE except when either: (a) The oil content of effluent does no exceed 15 ppm or (b) (1) the ship is proceeding en route, and (2) the oil con tent of the effluent is less than 100 ppm, and (3) the ship has in operation and oil discharge monitoring and control system, oily water separating or other installation re - quire by Regulation 16 of Annex I of MARPOL - 73/78, and (4) for oil tankers the bilge water does not originate from pump room bilges or is not mixed with oil cargo residue.
		Other ships < 400 grt	The conditions for 400 grt apply as practicable and reasonable.

Annex 3
Table 3

SBT, CBT, COW, IGS AND PL REQUIREMENTS

Type of oil tankers	Deadweight (t)	Existing Ship	New ship under MARPOL 73 but existing ship under PROTOCOL 78	New ship under PROTOCOL 78
Crude oil tanker	DW ≥ 70,000	IGS SBT/CTB*/COW	IGS, SBT	IGS SBT PL COW
	70,000 > DW ≥ 40,000		IGS SBT/CBT*/COW	
	40,000 > DW 20,000	IGS**	IGS**	
	20,000 > DW	-	-	-
Product Carrier	DW ≥ 70,000	IGS SBT/GBT	IGS,SBT	IGS SBT PL
	70,000 > DW ≥ 40,000		IGS SBT/CBT	
	40,000 > DW ≥ 30,000	IGS**	IGS**	
	30,000 > DW ≥ 20,000	IGS**	IGS**	IGS
	20,000 > DW	-	-	-

* CBT is an interin measure accepted for a limited period, i.e two years (DW 70,000) or four years (70,000 DW 40,000) after the date of entry into force of Marpol 73/78 For product carriers, CBT is accepted for an indefinite period.

** If fixed high capacity washing machines are fitted.

Annex 4
Table 4

Discharge criteria for noxious liquid substances under Annex II of MARPOL 73/78

Conditions	Substance			
	Category A	Category B	Category C	Category D
Minimum speed of ship: Self - propelled Not self - propelled	7 knots 4 knots			
Maximum concentration of substance at time of discharge	Virtually nil concentration	1 ppm	10 ppm	1/10 of water
Maximum quantity of cargo discharged from each tank	-	1 m3 or 1/3,000 of tank capacity	3 m3 or 1/1,000 of tank capacity	no limit
Minimum depth of water	25 metres			no limit
Minimum distance from land	12 miles			

BIBLIOGRAPHY

BIBLIOGRAPHY

COWLEY, J Dr. — Review of Casualty Investigation Procedures in the U.K Legislation. World Maritime University, visiting professor.

GEORGANDOPOULOS, A — Development of Maritime Infrastucture. World Maritime University.

GRIME, Robert — Shipping Law, Concise College Text London, 1978.

JESTICO — The Design and Concept of Examination for Certification of Competency. (Chief Examinator, UK).

MALIA, Gerald A. — Maritime Law. The need for a Comprehensive Maritime Code.

MOAT. E Cap. and HODGE, G. R — Maritime Training Programme. Paper Inter Regional Sectorial Support Consultans in Maritime Training.

MONSEF, A.A — The Establishing of a National Shipping Industry in a Developing Maritime Country. 1984.

PETERSON, Roger A. Dr. — Maritime Oil Tanker Casualties.

SIGH, G.S Cap. — Maritime Personnel and Maritime Administration. Lecture delivered India, World Maritime University, June 1986.

Compilacion Legislativa (1936-1983) Tomo III Transporte Acuatico, Ministerio de Transporte y Comunicaciones.

South America, Central America and the Caribbean. 1986 First edition of a survey and directory of the Countries of the region.

Norwegian Ship Control Legislation.(Vol. I, II and III), 1982 Edition.

Third United Nations Conference on the Law of the Sea.

International Conference on Ship Safety and Marine Survey. Organised by the World Maritime University and NI 8-9 May'86 Malmoe-Sweden.

I.M.O. Convention and Publications.

Danish Merchant Law.

International Conference on Maritime Search and Rescue, 1979.

I.M.O. Search and Rescue Manual. London 1980.

International Conference on Marine Pollution. 1973 and Protocol of '78.

Regulation for the Prevention of Pollution by Oil. London 1982.

International Maritime Dangerous Goods Code.

Safe Transport, Handling and Storage of Dangerous Substances in Port Areas. London 1981

Guidelines on Survey under 1978 SOLAS. Protocol, London 1982.

International Conference on Safety of Life at Sea, (SOLAS), 1974 Protocol of 1978. I.M.O.

1981 and 1983 Amendments to the International Convention for the Safety of Life at Sea, 1974 London 1982 and 1983.

International Convention on Standards of Training and Certification of Seafarers, STCW-1978, IMO.

International Load Lines Convention 1966.

Torremolinos International Convention 1977

The United Nation Line Code of Conduct. (UNTAD).

Mobile off-shore Drilling Units Code.

Introducing the Maritime Administration (Publication of the U.S. Department of Commerce).

Interview with Rear Admiral Carlos Luengo Romero General Director of Aquatic Transport of the Ministry of Transport and Communication of Venezuela, Caracas, December 1986.

Interview with Captain Luis Fernandez, Director of Navigation (Maritime Safety Administration) Caracas, December 1986.

Interview with Mr. Jose lUis Guerola, Head of the technical Assistance Programme for Latinoamerican I.M.O. London 1987.

GUIDE-LINES FOR MARITIME LEGISLATION.
Second edition (United Nations). Economic and Social Commission for Asia and the Pacific BANGKOK (ESCAP).

Lecture Notes by Professors:

Balmer (United Kingdon).

Houssin (France).

Mathieu (United States).

Monsef (Egypt).

Stubberud (Norway).

Vanchiswar (India).