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Maritime safety administration in Somalia

Mohamoud
World Maritime University

WORLD MARITIME UNIVERSITY

MALMÖ, SWEDEN

MARITIME SAFETY ADMINISTRATION IN SOMALIA

by

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A Paper submitted to the Faculty of the World Maritime University in partial satisfaction of the requirements of the Course on Maritime Safety Administration (Nautical).

The contents of this Paper reflect my own personal views and are not necessarily endorsed by the World Maritime University or the International Maritime Organization.

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I wish to express my deep thanks to the Ministry of Maritime Transport & Ports of Somali Democratic Republic and to the International Maritime Organization (IMO) and World Maritime University, whose joint commitment gave me the invaluable opportunity to be trained at this University.

I would like to thank, particularly, my course professor, Professor P S Vanchiswar, whose deep concern for me, continuous guidance and advice during all of my training period made easier and possible the concrete realisation of this thesis.

To end, I thank all other people who have given their time and effort to produce this work.

ABSTRACT

The establishment of a new Maritime Safety Department in the Ministry of Maritime Transport and Ports will serve to safeguard the national fleet and help it withstand the many risks which can be encountered at sea. In some chapters of this paper, the question of safety for both national and foreign ships is dealt with.

The main topics which are dealt with in detail include:
Maritime legislation, survey and inspection of ships, certification of ships, maritime training and manning, port state control, marine casualty investigation, search and rescue, shipboard safety, adoption and implementation of International Maritime Conventions and the prevention and combat of marine pollution.

Topics which are more briefly discussed include:
Registration and nationality of ships, since both topics are close to public and privat law rather than safety.
Safety of fishing vessels is also discussed briefly.

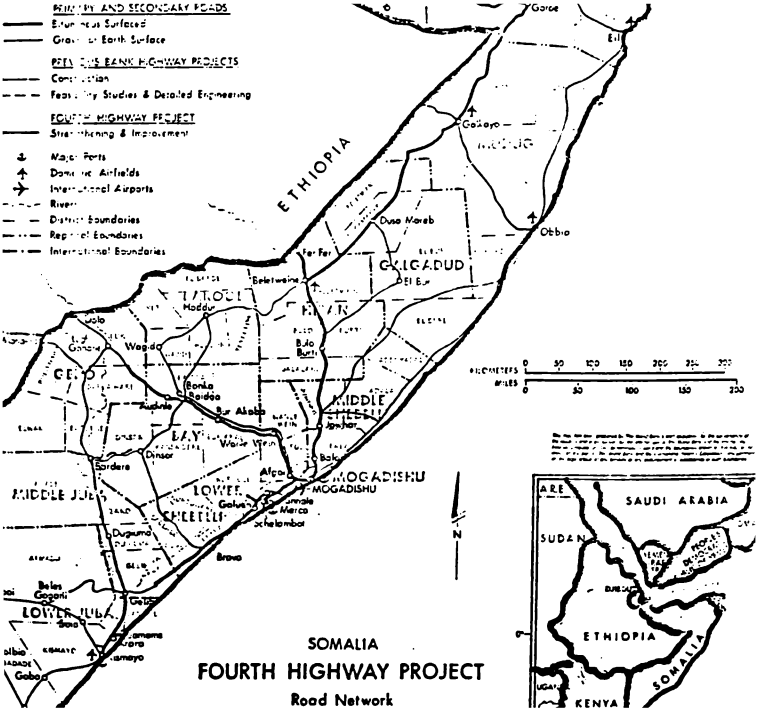
The last chapter draws the conclusion of this research paper and the summary of my recommendations.

PREFACE

Somalia is a big coastal state lying between two of the busiest shipping lanes in the world. A close look at the map shows that the country lies in one of the world's most important maritime cross-roads.
Any ship's officer on a bridge watch passing through the tip of the Horn of Africa - Cape Quardafui, or as mariners call it - Ras-Asir, watches his radar screen change into a bright night sky. Ships coming out of Suez and the Red Sea are steering south to East and South Africa, or sailing ahead to India and the Far East or steering north to the Gulf and Pakistan. Others are coming from those areas and entering the Red Sea. Mamouth tankers from the Gulf are heading south to sail round the Cape of Good Hope.
Somalia, being a young developing nation is still in the process of expanding its maritime fleet to meet the country's demand in trade.

For various reasons ships, their cargoes and crews are at risk while at sea and when in port.

It is also generally recognized that marine pollution has developed into a serious environmental problem.
Thus, it is the responsibility of the Somali Ministry of Maritime Transport & Ports to safeguard the safety of the national fleet, to provide for the safety of foreign ships in Somali waters and to prevent and combat marine pollution.
To fulfill its national and international obligation by tackling these problems, the Ministry must first establish a maritime safety department, which, separately and independently could deal with the questions of maritime safety and marine pollution.



SOMALIA

FOURTH HIGHWAY PROJECT

Road Network

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CHAPTER I

Introduction

History of Somalia

Somalia was known as the "Land of Punt" by ancient Egyptians, who came to Somalia's northern shores for incense and aromatic herbs.

In the 9th or 10th century Arabs and Persians established settlements along the Indian Coast. During the 15th and 16th centuries, Portuguese explorers attempted sovereignty over the Somali coast. Meanwhile the main coastal centers continued to be controlled by Arab merchant families under the normal sovereignty of the Sultanate of Oman, which transferred its seat to Zanzibar in the early 19th century.

After the British armed forces occupied Aden in 1839, they developed an interest in the northern Somali coast. By 1874 the Egyptians occupied several points on the shore, but their occupation was short-lived.

From 1884 to 1886, the British signed a number of "protectorate" treaties with Somali chiefs of the northern area. The protectorate was first administered by the residents in Aden and later (1907) by the colonial office.

From 1898 to 1920, British rule was constanly opposed by the "Darawish war" lead by Sayid Mohamed Abdulle Hassan.

Italian expansion in Somalia began in 1885, when Antonio Cecchi, an explorer, led an Italian expedition into the lower Juba region and concluded a commercial treaty with the Sultan of Zanzibar.

In 1889, Italy established protectorate rule over the eastern territories, then under the normal rule of the sultans of Obbia and of Alula; and in 1892, the Sultan of Zanzibar leased concessions along the Indian Ocean coast to Italy.

Direct administrative control of the territory known as Italian Somaliland was not established until 1905. The Fascist government increased Italian authority by its extensive military operations.

In 1925, the British government, in line with secret agreements with Italy during World War I, transferred the Jubaland (an area south of the Juba River) to Italian control. During the Italo-Ethiopian conflict (1934 - 36), Somalia was a staging area for Italy's invasion and conquest of Ethiopia.

In 1940 - 41, Italian troops briefly occupied British Somaliland, but were soon defeated by the British, who conquered Italian Somaliland and reestablished their authority over British Somaliland.

In 1948, the British government, in line with agreements with the Emperor of Ethiopia, Ogaden (Western Somalia) was given to Ethiopia. However, British administration over the rest of Italian Somaliland continued until 1950, when Italy became the United Nations trusteeship authority.

A significant impetus to the Somali nationalist movement was provided by the United Nations in 1949, when the General Assembly resolved that Italian Somaliland would receive its independence in 1960. By the end of 1956, Somalis were in almost complete charge of domestic affairs. Meanwhile, Somalis in British Somaliland were demanding self-government (independence). As Italy agreed to grant independence on 01 July 1960 to its trust territory, the United Kingdom gave its protectorate independence on 26 June 1960, thus enabling the

two Somali territories to join in a United Somali Republic on 01 July 1960. On 20 July 1961, the Somali people ratified a new constitution, drafted in 1960, and one month later confirmed Aden Abdulle Osman Daar as the nations's first president.

The Horn of Africa had a beautiful environment. It was therefore bound to attract the attention of the desert dwellers of Arabia across the Red Sea and Gulf of Aden. That alone could have secured a profitable trading position for the inhabitants of the Horn of Africa, vis-a-vis their neighbours on the opposite shore of the Red Sea.

The North East coast became commercially renowned very early on in history as a producer of valuable medicinal and aromatic gums and resins. Myrrh and Frankincense, native only in Southern Arabia and the Red Sea coast of Somaliland, were in great demand throughout civilisation and for centuries in the ancient world as two "of the most ancient and precious articles of commerce". Frankincense, "a resin extracted from various species of Boswellia", was used in the manufacture of "incense, perfumes and ointments".

Myrrh, "a gum from the bark of a small tree" also figures in the preparation of these products, and in addition "was an ingredient of Hebrew anointing..., and was also one of the numerous components of the celebrated Kyphi of the Egyptians, a preparation in fumigation, medicine and embalming".

The ancient Egyptians, the Hebrews, the Assyrians, the Persians and the Macedonians were all well known as having cherished these fragrant products. It is conceivable that other peoples of the ancient world similarly regarded these goods with esteem. They paid very high prices for their delivery and periodically even fitted out their own expeditions by land or by sea to Southern Arabia and the Horn of Africa to acquire them at their sources. Though the semi-legendary Akaddo-Sumerian sources referred to suggest maritime relations between the Arabian Gulf and the Horn of Africa, most sources extend ties between Egypt and that part of Africa. At that time

the Gulf of Aden coast of Somaliland was known to the Egyptians as the Land of Punt. Frankincense and Myrrh were so significant for the Egyptian religion and other ritual practices; they not only guaranteed the maintenance of ties between Egypt and the Horn of Africa, but, in times, the Land of Punt acquired in the minds of Egyptians a certain quality of sacredness, as the home of Gods necessary for divine propitation.

Documentation for this commercial connection between Egypt and the Northern Somali coast is plentiful enough to afford a fairly clear outline picture of its chronology and depth. During the reign of early dynasties the trade in incense was largely in the hands of the people of punt, who brought these goods to Egypt. However, by the time of the fifth dynasty - the 26th century B.C., the Egyptians began to fit out their own expeditions which sailed directly to the sources of the merchandise. It might have been simply that both sides at that time reached the peak of their maritime power and in the knowledge of geography and navigation, a stage which precluded any need for dependency upon foreigners for their import and export.

The most authentic piece of historical literature treating the ancient history of Somaliland, and especially its connection with ancient Egypt is found in the diary of an Egyptian commercial expedition despatched by Queer Hatshepsut in the early part of the fifthteenth century B.C. This expedition was sent, like the others preceeding it, primarily for the acquistion of the fragrant gums and resins used in Egyptian homes and especially in their tombs, temples, and other places of religious significance. Hatshepsut's mission has a double importance. First it marks a renewal of contacts between Egypt and the Somali coast severed during the invasion of Egypt by Hyksos about a century and half earlier and the exhaustion in the meantime of Egypt's stores of puntite gums and

Frankincense. In all the expedition consisting of five huge sailboats, each one having aboard one hundred men consisting of crew, soldiers, porters, scribes and artists. Besides, merchandise intended for barter, the Egyptians brought with them a sizeable quantity of presents with which to buy the goodwill of the puntite authorities. Although Somalis are not good fishermen, they are talented seamen. For centuries they sailed with their dhows across the Gulf of Aden, the Arabian Sea and the Indian Ocean. All the trade between Somalia and the Gulf has, up to now, been carried by these dhows owned by Somalis. These are primitively built vessels which have not changed in their design since the days of Sindbad.

Somali seamen ventured abroad and were well known in the British merchant fleet. Most of the present Somali population living in the U.K. are descendants of these sailors.

Geography

Location:
The Somali Democratic Republic lies within the latitudes 2oS and 12oN, and longitudes 40oE and 50oE.

Somalia occupies the entire Horn of Africa with an area of 686.000 square km; and is bordered by Kenya to the southwest, Ethiopia to the west and the Republic of Djibouti to the northwest, and the Gulf of Aden to the north and the Indian Ocean to the east and south.

The coastline of Somalia extends for about 3,330 km from Cape (Ras) Kiamboni in the south to Loyado in the north, and it is the longest in the African continent, with the exception of Apartheid South Africa.

The only two rivers in the country are Juba and Shabelle, both of which originate in the Ethiopian highlands. The river Juba pours its waters into the Indian Ocean at a place called "Gobweyn", while the river Shabelle never reaches the sea, but disappears in depressions near the Haway Valley, in the lower Shabelle region, forming a series of marshes.

Both the Juba and Shabelle rivers provide water for agriculture in a fertile inter-riverine region that may contain as much as 7.5 million ha of potentially cultivable land of which only some 10% is currently cultivated.

The Equator runs across the Somali Democratic Republic at a place called Sunguni, which is 28 miles north of Kismayo - the capital city of the lower Juba region.

Physical features and climate

Basically, the land is divided into belts of different

topography, which are:-

a) The coastal area
b) the Golis Range of mountains
c) the Savana grassland of Sool
d) the Nugal Valley and
e) the main grazing belt of Houd.

The northern region is somewhat mountaneos, with plateaus reaching between 900 and 2.100 metres above sea level. To the northeast there is an extremely dry dissected plateau, that reaches a maximum elevation of 2,450 metres.

South and west of this area, extending to the Shabelle River, lies a plateau, whose maximum elevation is 685 metres. The region between the Juba and Shabelle rivers is low agricultural land, and the area that extends southwest of the Juba river to the Kenya border, is low pasture land.

Somalia has a tropical but not torrid climate, and there is little seasonal change in temperature ranges from about 24°C to 31°C. The plateau region is cooler, while the southwest is warmer.

The periodic winds, the southwest monsoon (June-September), the northeast monsoon (December to March), influence temperature and rainfall.

Rain falls in two seasons of the year:- heavy rains from April to June (spring) and light rains from September to November (autumn). Average annual rainfall is estimated at about 28 cm.

State and Goverment

The state of Somalia came into being when the former British Somaliland (Northern Regions) and the United Nations

Trusteeship Territory of Somalia (ex-Italian colony of the South) obtained independence and united on 01 July 1960. The Democratic Republic of Somalia is a socialist democratic country. The Somali Socialist Revolutionary Party is the only political party in the country. The country has a new constitution, which was ratified by popular referendum in 1979. The People's Assembly, which consists of 171 members, is elected by public ballot for five year terms. The President of the Republic, who is elected by the people for a seven year term, is also the Secretary General of the ruling party. The Council of Ministers is headed by a Prime Minister, who is appointed by the President of the Republic.

Somalia exercises a policy of positive neutrality and is a member of a number of International and Regional Organizations including:-

a) The United Nations Organization
b) The Arab League
c) The Muslim League
d) The Organization of African Unity (OAU)
e) The Non-Alignment movement.

Economy

Somalia's estimated population of 7 million is unevenly distributed with the highest concentration in the Southern Region centred in the capital city of Mogadisho, and in the basins of the Juba and Shabelle rivers. In the Northern Region, the main concentration is in Hargaisa - the second largest city. Approximately 46 % of the population are nomads, 29 % settled farmers and 25 % urban dwellers.
Livestock raising is the main occupation of the people, but agriculture and fishing also play an important role. The total animal population in Somalia is estimated to be 40.3 million heads of which goats amount to 47,7 %, sheep 27,3 %, camels 14,9 % and cattle 10,4 %. It has been estimated that 8.2

million hectares of the total land is suitable for cultivation, which represents 13 % of the total land area. Consequently a large part of the population is engaged in farming. The major crops, which are grown for subsistance as well as for exportation, include:- Sorghum, maize, rice, beans, sesame, groundnuts, cotton, sugar cane and bananas.

Somalia's long coast line comprises the Indian Ocean and the Gulf of Aden, and according to a number of surveys, the potential catch in the Somali waters has been estimated at 1,000.000 tons per annum. Despite this huge potential resources the actual catch in 1984 was recorded as only 18.000 tons. This poor exploitation is due to certain obvious factors, which include:-
lack of fishing boats, lack of jetties, lack of cooling facilities, and the absence of the necessary skills and knowledge.
Livestock and agriculture thus form the main basis of Somalia's economy and are the main sources of income of the majority of the people, both for subsistance as well as for foreign exchange earnings, accounting for about 95 % of export earnings, and 88 % of the gross domestic product.

These two major items are followed by a number of comparatively minor commodities. but which significantly contribute to export earnings and these include:- hides and skins, fish and fishing products, canned meat and incense and Frankincense. Like most developing countries, Somalia is an exporter of raw materials and importer of manufactured goods and consequently records a trade deficit every year. The major import items in terms of value are food (other than meat), mineral fuels and transportation equipment, which accounted for about 45 % of the total import bill in 1982.

The industries mainly serve the internal market and, to a lesser extent, provide for export. The major industries

include:- the state-owned sugar plants at Jowhar and Jilib (which produce sugar and maintain a distilling plant, an oilseed-crushing mill, and a soap factory), the manufacture of crates for packing bananas, the manufacture of corrugated iron, paint, cigarettes and matches, aluminum utensils, cardbord boxes and polythylene bags, and textiles, the cement plant, the plants for milk processing, vegetable and fruit canning, and wheat flour and pasta manufacturing as well as several grain mills.
Local craft industries manufacture sandals and other leather products, cotton cloth, pottery, baskets, and clay or meerschaum vessels.

The maritime situation and the purpose of this project

The maritime situation:-

The Ministry of Maritime Transport and Ports was established in 1977 by virtue of Law No 12 of 03/02/1977 for the development of marine transport and to improve the services connected with the ports of the country. The Ministry is also responsible for promoting and strenghtening local and international navigation facilities, maritime safety matters, registration of ships, maritime training etc.

The two institutions that function under the Ministry of Marine Transport and Ports are:-
The Somali Ports Authority and the Shipping Activities and Maritime Transport Agency.
The Somali Ports Authority (SPA) was originally established in 1962, but was reorganized by Law No 1 of 07 January 1973.
Its responsibilities are:-
to plan, design, construct, maintain and operate all ports and related activities within the borders of Somalia and to represent the nation at all levels of forums and negotiations on port affairs.

Further responsibilities are envisaged in the national public safety laws, which place on management the obligations of introducing acceptable safety practices within its confines and the appointment of SPA management as the designated national competent authority on the handling of dangerous goods.
The Port Authority has regulations (decree No 67 of 15/04/1978) for the implementation of its functions.
It also has the following legislation:-

- port dues, decree No 6 of 03/09/1969;
- procedure for collecting port fees, Law No 26 of 06/03/1975;
- amendment concerning port fees, Law No 41 of 30/09/1978.

The Shipping Activities and Maritime Transport Agency:-

The National Shipping Line was established in 1972 by virtue of Law No 59 of 20 September 1972 as amended by Law No 33 of 24/01/1975. In 1977 a Maritime Transport Agency was established by Law No 69 of 12/11/1977.

The National Shipping Agency was established in 1975 by Law No 22 of 23 February 1975.
In 1978 both these agencies were merged into one agency for shipping activities and maritime transport by virtue of Law No 27 of 01 June 1978, the main objectives being:-

- to perform all activities concerning services to ships and anchoring at Somali ports
- to repair, purchase, sell or hire ships or spare parts
- to perform any auxiliary activity connected with the shipping trade.

Ministry of Fisheries

A separate Ministry of Fisheries was created in 1977 (Law No 17 of 03 February 1977) which is responsible for all fisheries

matters. Its functions include inter alia:-

- to obtain benefits from marine resources
- to develop a programme to make coastal settlements self-supporting
- to organize and operate all fishing schools
- to organize fishing support industries, such as boat-yards to make new types of vessels
- to construct the technical infrastructure such as at ports and cold storage, etc.

The Somali merchant and fishing fleets and main ports

The Somali Shipping Agency and Line has three oceangoing ships with a total tonnage not exceeding 15.000 GRT. There are also three other oceangoing ships, which belong to private owners. However, there is quite a considerable coastal fleet involving about 60 privately owned ships and dhows.
The fishing fleet consists of 22 registered fishing vessels plus a number of fishing boats in the immediate vicinity of the coast.

Somalia has three principal ports, which are:- Mogadisho, Berbera and Kismayo.

a) The port of Mogadisho is under the authority of the port manager of SPA and the activities are organized under 3 services:-
   - operational service
   - mechanical service
   - financial and administrative service.

   The operational service includes cargo handling, traffic and claims, and pilotage.
   The port comprises 6 deep-water berths with a total quay length of 1.000 metres. It has one particular berth, used for loading livestock.

The port can be extended and improved in the future.

There are proposals to divide the operational service into three services:-
- cargo operations
- maritime operations
- technical services.

b) The port of Berbera comprises 2 deep-water berths with a total quay length of 320 metres. The port is presently being extended with two additional berths, and also improvements in the existing facilities are in progress.

c) The port of Kismayo comprises 4 deep-water berths with a total quay length of 620 metres.

The ports are provided with good cargo handling equipment, such as forklifts, cranes and conventional manual cargo handling. These three ports are planned to be provided with bulk (grain and cement) handling equipment.

There are also coastal cities in Somalia, which have small harbours, such as:-
Merca, Bosaso, Bravo, Laskoreh, Qandala, Hobyo, El-Ahmed, Alula, Zaila and Eil. Even though they are small harbours, they have their own importance due to the on-going projects and industries.

The purpose of this project:-

Since a separate department dealing with maritime safety matters in the Ministry of Maritime Transport and the ports of Somalia does not exist, I would like to emphasize in my project "the establishment of a new Maritime Safety Department", which will serve to safeguard the national fleet and help it withstand the many risks that can be encountered at sea.

The main topics which I will be dealing with are:-

- Maritime legislation
- the survey and inspection of ships
- the certification of ships
- maritime training and manning
- port state control of foreign ships
- maritime casualty investigation
- search and rescue
- adoption and implementation of International Maritime Conventions
- the prevention and combat of marine pollution
- a brief discussion concerning the safety of fishing vessels.

Thus, the purpose of this project is to draw the attention of the Ministry of Maritime Transport and Ports to the importance of establishing a separate maritime safety department, for safeguarding human lives and property at sea and the prevention and combating of marine pollution. It could also be used as a guide for all those engaged in the duties of the aforesaid department.

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CHAPTER II

The Ministry of Maritime Transport & Ports

The structure of the Ministry:-

The Head of the Ministry is the Minister and he is assisted by the Assistant Minister.
The Head of the Administration is the Permanent Secretary.
Two separate institutions come under the Ministry, and these are the Somali Shipping Line and Agency and the Somali Ports Authority.
The Ministry has its own departments:- the Marine Department, Planning Department, Finance Department, Telecommunication and Technical Department.
The Somali Shipping Line and Agency and Somali Ports Authority are both composed of separate departments. The structures of the Ministry, the Somali Ports Authority and the Somali Shipping Line and Agency are shown in figures 1, 2 and 3.

The Ministry deals with matters concerning lighthouses and all aids to navigation, training of personnel, overall planning and the telecommunication network along the coast of Somalia. Other functions include the registration of ships and seamen and land development along the coastline.
Harbour Masters come under the supervision of the Ministry.
The Somali Shipping Line and Agency is a ship owning company and at the same time the only shipping agency in the country.
The Somali Ports Authority deals with cargo handling and stevedoring, storage and warehouses, mooring and unmooring, berthing and unberthing the harbour tugs and pilotage. It is evident that safety aspects of maritime affairs are not mentioned in the above functions, which means that this is a discipline which is completely absent from the daily work of our Maritime Administration.

The Ministry of Maritime Transport and Ports

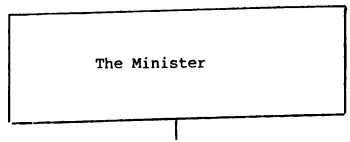
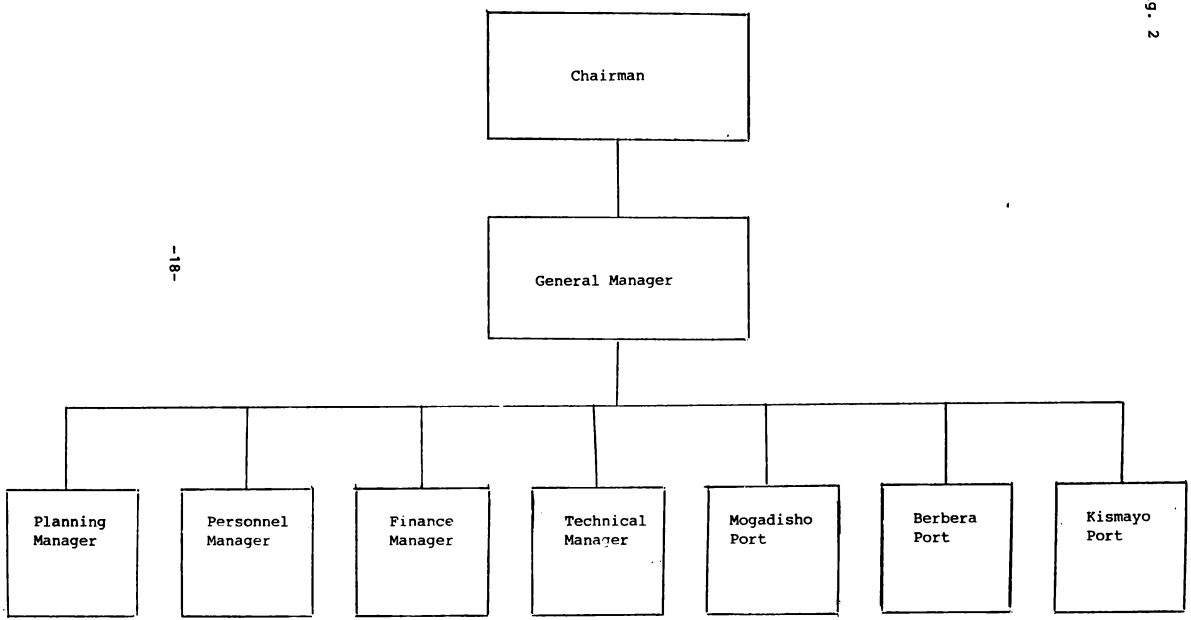


Fig. 1

Somali Ports Authority Organization Structure

Fig. 2




Technical Department
Finance Department
Commercial Department
Personnel Department
Traffic Department
Planning Department

Recommendations for the establishment of a Maritime Safety Department

a) Introduction to maritime safety:-

Continual efforts as regards safety are being made by maritime organizations, classification societies, builders, owners and manufacturing companies to improve the plight of the many thousands who sail the seas, whether it be for work or pleasure.

All the aforesaid bodies are interested in the safety of ships and shipping. They have a considerable responsibility in the field of safety. With the development of technology in shipping, new aspects for ensuring safety arise constantly; therefore, there exists some coordination and cooperation among them.

Disasters at sea seldom fail to rivet the attention of the general public. They are often replete with all the elements that make a great news story: drama, mystery, acts of heroism and cowardice, superhuman efforts and appalling ineptness, and most recently, the possibility and danger of catastrophic pollution.

Until fairly recently the man on the street, or in this latest context we should say, the man on the beaches, could view these maritime accidents with dispassion and sympathy for those involved. The appearance of the supertanker and now the VLCC and ULCC have put paid to those past attitudes.

Those whose livelihood comes from the creatures of the sea, at least in the affected areas, suffer a decrease in their incomes, and the price of sea-food shows an almost immediate effect. That in turn results in hardship on those for whom fish is a staple food on their diet and those involved in its supply. Vacationers may only be inconvenienced, but those who cater to them are hit directly in the pocket.

Shipwrecks still occur despite improvements in the design and

construction of ships, in navigational aids, in the maintenace of a high degree of professional skills afloat and in increasing vigilance of international and government administrations, classification societies and maritime authorities. Capsizing, collision, explosion, fire, heavy weather and stranding all take their toll of ships and men each year. Most maritime casualties can be avoided. This same statement is likely to be as true ten years hence as it was a decade ago. Solutions have been identified, however, and in some cases made mandatory to nullify a hazardous situation and/or reduce error.

A ship at sea is at risk from the vagaries of weather, from collision and stranding, from ineffectual crews, from inefficient construction, faulty machinery, hazardous cargo, bad maintenance and bad management. Crews on board are at risk from all these sources, from health hazards, fire accidents, falling overboard and the faulty operation of safety devices and safety equipment. Passengers also have most of these risks but without the familiarity of the surroundings and the knowledge or skills to survive unaided after disaster. It follows that the judgement of risk must be at a high level of understanding of all the circumstances, and must therefore be made collectively by those having the greatest experience and best resources. Above all it must be authoritative if the degree of risk is to be socially acceptable.

Here emerges an obvious duty for the government and management as the protectors of the work-force and the public. Management, however, also has to bear much of the responsibility and most of the financial burden of the costs of safety. The pursuit of absolute safety must therefore experience an economic brake from time to time in order to consider the costs against the level of safety being achieved and the risks remaining. There is a need for a more self-regulating system providing for safety and health at work. The traditional approach based on ever increasing detailed statutory regulations is outdated,

overcomplex and inadequate. Reform should be aimed at increasing the conditions for more effective self-imposed regulations by the employers and work people jointly. There should be no great difficulty in keeping these principles in mind for domestic regulations and for the interpretations of international regulations.

b) The history of maritime safety:-

Early in history, a nation must protect against smuggling, acts of piracy, and illegal harvesting of oil and gas, mineral and fish resources. Its young merchant marine, of whatever magnitude, plays a crucial role in the domestic and international trade. To protect revenues, legal structures may be devised which establish customs laws and set up agencies of government to enforce maritime law.

Safety of life and property at sea and in port has been a paramount concern. Potential problems areas include: unsafe vessels and incompetent seamen, hazardous waters and weather, unsafe port facilities, hazardous traffic patterns, abuse of seamen by unions, owners and operators, handling and shipment of hazardous cargoes, improper storage of cargoes or fishing equipment, or improper ballasting, inadequate aids to navigation, and limited experience in the prevention and combat of marine pollution.
Safety has always been a subject of concern in the maritime industry and has attracted increased international regulations. Environmental protection is a much more recent concept which has had a market impact on shipping only in the past 25 years, although legislation to control the discharge of oil in navigable waters dates back to the 1920s. It already imposes restraints, costs and duties on management equal to those imposed by safety.
Safety has long been considered a subject in its own right and environmental protection has begun to occupy a similar

position. It is appropriate that this should be so since their complexities demand the application of specialized skills if they are to be understood. They are, nonetheless, by-products of efficient operation and in a commercial enterprise should also be considered in this context. They are closely connected and frequently have to be considered together. The same management philosophies can be applied to each and accidents frequently lead to, or involve, the risk of environmental damage. The standards of performance and the attitudes of mind which lead to a high standard in one, equally lead to a high standard in the other. At the turn of this century there were virtually no international regulations. The first major international legislation resulted from the loss of the Titanic in 1912. The formal investigation of this casualty provided the basis of the current requirements, e.g. fire-proof bulkheads, watertight subdivisions, bilge pumping arrangements, radio and the principle of life-saving appliances for all persons on board.

International conferences in 1913 - 14, 1929, 1930 and 1948 established major pieces of legislation governing safety at sea, and since the establishment of the International Maritime Organization (IMO) in 1958. There have been several further conferences.

The 1974 SOLAS Convention was significant in that it made provision for amending safety standards without holding a conference. The Maritime Safety Committee was given the authority to introduce amendments to the convention by means of the "Tacit Amendment Procedure" whereby regulations agreed at special committee meetings would automatically come into effect, unless objections were lodged by a prescribed proportion of numbers within a predetermined period. The most recent conventions include a "no more favourable treatment" which means that non-convention ships are subject to the conventions' standards when they visit the ports of countries

which have ratified the convention.
The non-mandatory guidance provided by IMO in the form of codes of practice, guidance notes and resolutions are of equal importance for safety at sea as are the mandatory requirements of the conventions. These publications disseminate the best available advice and information to all member countries.
The pooling of all technology and experience of traditional maritime actions covers a range of topics of both specialist and operational nature. A vast amount of relevant information is thus available to developing countries than would otherwise be the case.

Model structure:-

Perhaps the most important step in establishing Somalia's first Maritime Safety Department is the selection of the people who are going to run it. The types of officials and staff required are listed below:-

1. Statutory Officials:-
   a) Director
   b) Nautical Officer/Surveyor/Examiner/Accident Investigator
   c) Marine Engineer/Surveyor/Examiner/Accident Investigator
   d) Shipping Master/Seamen Employement Officer/Wreck Receiver/Registrar of Ships

2. General staff:-
   This will consist of secretaries and clerks. The Maritime Safety Department will replace the present Marine Department through which some safety related subjects are presently fulfilled. It is advisable that all the Statutory Officials should have a good maritime safety background.

   However, the Maritime Safety Department will carry responsibilities of administrative as well as technical import and will be concerned with the safety of all kinds of ships and craft, foreign or indigenous, using

territorial seas, waterways and harbours; also it should be to carry out search and rescue operations successfully and to be able to prevent and combat marine pollution.

This recommended model structure is shown in figure 4.

Duties of the Department:-

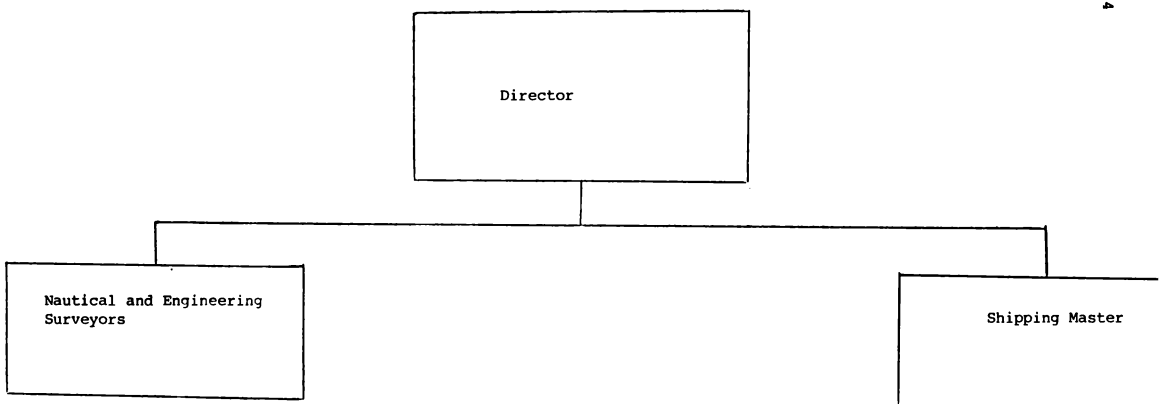
A very heavy responsibility and a wide range of duties will lie upon the shoulders of the department. These include:

1. Maritime legislation,
2. The registration of ships,
3. Systems for surveying and inspecting ships,
4. The certification of ships,
5. The training of seafarers,
6. The manning of ships,
7. The adoption and implementation of International Maritime Conventions,
8. Search and rescue,
9. Port state control,
10. Casualty investigation,
11. Shipboard safety,
12. The prevention and combat of marine pollution.

In the following chapters each of the above topics will be dealt with separately in detail. This will help as a guideline to all those interested in the duties of a future Maritime Safety Department in the Ministry of Maritime Transport and Ports of Somalia.

The structure of the recommended Maritime Safety Department

Fig. 4



- Examination of seamen
- Casualty investigation
- Prevention & Combat of Maritime Pollution
- Search & Rescue
- Manning
- Port State Control
- Shipboard Safety
- Maritime Training
- Aids to Nav. Dredging, Hydrograph surveys
- Adoption & Implementation of Inter. Mar. Conven.

- Registrar of Ships
- Wreck receiver
- Seamen employment officer

Maritime Code:-

General:

The maritime Code does not only deal with certain administrative matters concerning sea-going vessels (nationality, register of ships, measurements, safety of navigation, documents etc.) but is more extensive and covers the whole body of legal norms governing relationships and incidents to the use of the sea and to the exploitation of its resources. With the intensification and the differentiation of forms of human activity in the marine environment, relationships incidents to the use of the sea and to the exploitation of the natural resources of the marine space are no more restricted to the movement and operation of sea-going vessels. On the surface of the sea, as well as above and under its surface, various man-made devices appear, which are deprived of the basic features of a seagoing vessel (floating automatic data-collecting stations, air-cushion vehicles, drilling platforms, underwater constructions and tanks, etc), the operation of which creates complex relationships requiring adequate legal regulation.

Extension of the jurisdiction of coastal states to larger and larger sea areas requires detailed regulations concerning the exploitation of these areas in conformity with international law; in this way, the scope of maritime issues requiring legal regulations undergoes considerable extension. In this situation the law governing merchant shipping, traditionally considered as a transport activity, becomes no more than one of the sections of maritime law.

While up-to-date merchant shipping legislation is a condition precedent to maritime development and the effective enforcement of appropiate maritime safety standards in a developing maritime country, such legislation is outdated in many developing countries. Therefore this deficiency needs to be rectified as a matter of urgency. Accordingly, it is now proposed to elaborate upon the approaches towards the up-dating

of national merchant shipping legislation in developing countries.

The primary objective of the Merchant Shipping Act of a developing country needs to be:-

a) developmental
b) regulatory
c) in conformity with relevant International Law/Conventions.

Besides, the Act needs to be clearly and precisely worded, with effective sanctions and capable of promoting a helpful law-abiding atmosphere.

Somali current maritime legislation:-

Somalia possesses a Maritime Act which dates from 1959 and is modelled on Italian legislation. This Act deals in great detail with questions of private law and state ownership, but technical matters, in particular the safety of ships, are only dealt with in general terms. The technical aspects are concentrated in Book One (Administrative Organization of Navigation), Chapter 5, of which "Administrative Organization of Vessels" specifies in Article 49 "Conditions of Seaworthiness and Procedure for its Determination". In this article it is stipulated that before proceeding to sea, ships must have been issued with "ad hoc" certificates, made out by the Maritime Technical Office. It is stipulated that periodic or unscheduled surveys to which ships are liable shall be undertaken at the expense of the shipowner.

The legislative decree dated 01 November 1966 amending the Maritime Code introduced certain additional clauses in the section of safety. Article 33 of the order concerns "compliance by ship with appropriate standards", and it is laid down therin that "the maritime authority and the registration services shall be empowered to register and issue official documents to

all ships which meet the standards approved by the Minister of Marine Transport".

A revised maritime code was drafted in 1974 by a legal adviser provided for this task by the United Nations in Somalia. The draft contains the following chapters:-

Chapter 1 - Administrative organization of navigation and vessels
Chapter 2 - Ownership and fitting of vessel
Chapter 3 - Operation of vessels and contingencies
Chapter 4 - Procedural provisions
Chapter 5 - Maritime crimes
Chapter 6 - Provisions governing discipline
Chapter 7 - Final provisions

In Article 46 of the draft code it is stated that "Any vessel commencing sailing must be seaworthy, suitably rigged and equipped, for the navigation intended, and according to Somali laws and provisions of the International Conventions adopted by Somali laws.

Recommendations for Amendment:-

As we mentioned earlier, the present maritime code was drafted in 1958. This means it is as old as the IMO. However, during this time the IMO has adopted and amended many international conventions, the volume of the Somali tonnage has changed, the design and construction of ships has considerably altered, a new concept of inspections and surveys of ships was introduced, and new maritime laws were drafted, among them the applauded Law of the Sea.

The International Labour Organization has introduced maritime conventions, and above all the time nature of Somalia has changed from a colony to a sovereign state. Furthermore,

Somalia has extended her territorial waters to 200 N.M. The approaches toward the up-dating of the Somali Maritime Legislation can be to have:

1. Primary legislation (an updated Merchant Shipping Act)
2. Subsidiary legislation (Regulations/Rules).
   The primary objectives of this new legislation should be:
   a) Developmental
   b) Regulatory, and
   c) Conformity with relevant International Laws/ Conventions

After reviewing (up-dating) the primary legislation (Merchant Shipping Legislation/Code) it is necessary to turn to the various regulations and rules (subsidiary legislation) to be promulgated under the aforesaid primary legislation. It is absolutely essential that the necessary subsidiary legislation be issued and implemented to complement the primary legislation. The most important of these rules/regulations include:-

- Rules for registration of ships
- Safety Convention Certificates Rules
- Regulations for preventing Collisions at Sea
- Rules for use of Distress signals
- Navigational Warnings Regulations
- Life Saving Appliances Regulations
- Fire (fighting) Appliances Rules
- Fire protection Regulations
- Musters Regulations
- Pilot Ladders and Hoists Regulations
- Navigational Equipment Regulations
- Official Log-book Regulations
- Radio installations Regulations
- Tonnage Regulations
- Crew Accommodation Rules

- Medical scales Regulations
- Load Line Rules
- Rules for the carriage of Deck cargo
- Rules for the carriage of Dangerous goods
- Regulations for the carriage of Grain
- Cargo ship construction and Survey Regulations
- Local cargo ship safety Certificates Rules
- Passenger ship construction Regulations
- Anchor and chain cable Rules
- Regulations for the Certification of AB's
- Regulations for the Certification of Marine Engineers
- Regulations for the Certification of Deck Officers
- Regulations for prevention of pollution of the sea by oil
- Wreck and salvage Rules.

Apart from this, Somalia has ratified the 1960 SOLAS Convention and the 1966 Load Line Convention.

It is clear that with so many changes and with many others unmentioned, the same code cannot retain its meaning and value and could not cope with the present maritime matters. Thus, I strongly recommend that a new maritime code be drafted in the near future and since shipping is international in character the new legislation should be formulated to suit this.

Besides, Somalia should ratify and implement the SOLAS 1974 Convention since it has superseded SOLAS 1960.

References:-

1. Cahill, Richard A. Collisons and their causes, Fairplay Publication, 1983
2. Lee E.C.B and Kenneth Lee. Safety and Survival at Sea, 1980 W.W. Norton & Company, New York, London
3. Safety at Sea - Proceedings of the Second West European Conference on Marine Technology. London, May 23-27, 1977 Unwim Brothers Limited

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7. Report of Adviser Y. Nicholas' Mission to Somalia

CHAPTER III

The Registration of Ships and related Matters

Article 39 of the Maritime Code defines the term "Vessel" as any craft intended for sea transport, fishing, towage, or any other purpose. Vessels, depending on their technical requisites and type of service which they are called to perform, are registered in:-

a) The Register of Ships
b) The Register of Dhows
c) The Register of Sea Craft

The enrollment of sea craft in their appropriate registers is determined on the basis of their permanent employment in the single ports. Provisions governing ships apply also to dhows and sea craft, unless otherwise stated.

Article 40 states that ships are identified by name, tonnage and the place where the Enrollment Board is located. Dhows are identified by a name and an enrollment number and sea craft by enrollment number only.
The article, however, does not show any dimensional limits between the three different types of vessels. At the same time Article 40 does not make clear whether the same name can be applied to several ships or whether the location of the Enrollment Board should be situated in Somalia.

Nationality of Vessels

Article 41 deals with the question of nationality. It states that any vessel, built anywhere, belonging to Somali or foreign citizens, can be enrolled in the registers, provided that for each net registered ton, the owner of the vessel pays
a) The duty established by law at the time of enrollment,

b) The annual tax established by law. The amount of tax payable remains the same for 20 years starting from the date of the initial enrollment.

Owners of ships and dhows who are not domiciled at the place of enrollment must appoint a representative whose residence therein constitutes, before the maritime authority, the actual domicile. The article defines the word "citizen" as corporations, business enterprises and associations of individuals. Article 42 states that ships, dhows and sea craft enrolled in registers are cleared for sailing and are qualified to fly the flag of the Somali Merchant Marine respectively as under the National Act, permit and license.
The Nationality Act is issued by the Head of the maritime zone and contains the name, type and major characteristics, gross and net registered tonnage, name and domicile of the owner. Dhow permits and sea craft licences are issued by the authority holding their respective registers and contain the name, enrollment number, main dimensions, gross and net register tonnage, name and domicile of the owner, and the enrollment bord. In cases of urgency, the Nationality Act can be substituted by a temporary certificate issued by the Head of the maritime zone to new construction vessels, or the Consular Authority, also prior to enrollment, to vessels flying a foreign flag.

This certificate is also issued to vessels whose Nationality Act has been lost or destroyed. The above authority establishes the validity of the certificate in relation to the time required to issue the Nationality Act, in any event the duration of the validity cannot exceed one year. Dhows permits and sea craft licenses can, in the case envisaged above, be substituted with a temporary permit or license respectively.

The Nationality Act must be renewed when the name, tonnage or type and main characteristics of the vessel are changed.

In addition to these reasons, dhows permits must be renewed in the event of change of the Enrollment Board and number; sea craft licenses must also be renewed in the event of change of owner.

The owner who intends to transfer his vessel from the Somali register to another flag should inform the Board of Enrollment if the vessel is in the territory or to the Consular Authority if the vessel is abroad. The same will be true if a purchaser of a Somali vessel intends to take his ship out of the Somali register.

The Authority receiving the above statement orders the publication of the latter by affixing it in the Enrollment Board and, when this is the case, also by publication of the official Bulletins inviting the persons concerned to exercise their rights within 120 days (in the case of ships) or within 90 days (in the case of dhows or sea craft), and issuing the authorization to abandon the flag.

Nevertheless, if within the term fixed in the preceding paragraph claims are put forward, or if the existence of real or guaranteed rights on the vessel is proved, authorization can be given to the owner only after claims have been rejected by an irrevocable judgement or if the creditors have been satisfied or the owner has complied with the provisions issued by the Maritime Authority in connection with crew wages and with the amounts due to the administratiton under request of the most diligent party, for the guarantee of the creditors' interest.
The Authority delivering the documents authorizing the abandon mean of the flag, withdraws the ships documents.

References:-
1. Somali Maritime Code, 1959

CHAPTER IV

A. System for the Survey and Inspection of Ships

1. Present situation

Article 49 of the Somali Maritime Code deals briefly with seaworthiness conditions and procedures for their determination.
It says that any vessel commencing sailing must be seaworthy, suitably rigged and equipped, for the employment intended. The existence of the above requisites is evidenced by suitable certificates issued by the Maritime Technical Office, which arranges visits and inspections necessary to ascertain and control the conditions of seaworthiness and of fitness, in view of safeguarding human life at sea and of the safety of national merchant vessels.

Certificates and other documents issued by the Maritime Technical Office are valid as long as the contrary is not proved. Certificates issued by legally established foreign agencies are as valid as those issued by the Maritime Technical Office.

The Maritime Authority in the country and the Consular Authority abroad provide for the ordinary, prescribed inspections and visits, at the expiration of the above certificates, as well as special inspections and visits, when they are considered advisable or when accidents have occured which can lessen the seaworthiness of the vessel or the operation of its parts, are made at the shipowner's expense.

Nothing is mentioned in the provision at the above articles about schedules for surveys. At present only the periodical surveys are carried out upon Somali vessels and this is delegated to the classification societies. Most of the private

coastal ships are not classed and nobody controls their safety and seaworthiness.

Somalia has ratified the 1966 International Load Line Convention and the 1960 International Convention for the Safety of Life at Sea.

The most vital functions of the Maritime Safety Administration are those intended to ensure the safety of life at sea, the safety of navigation and the protection of the marine environment.
Such functions take the form of:-
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 four or more of the following certificates to each ship:

a) Passenger Ship Safety Certificate
b) Cargo Ship Safety Equipment Certificate
c) Cargo Ship Safety Construction Certificate and its Supplement
d) Cargo Ship Safety Radiotelegraphy/Radiotelephone Certificate
e) Load Line Certificate
f) Tonnage Certificate
g) International Oil Pollution Prevention Certificate
h) International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk
i) Local Cargo Ship Safety Certificate (for non-convention ships under 500 GRT)
j) Exemption Certificates, where necessary.

Recommended procedure

First of all, Somalia should ratify the International

Convention for the Safety of Life at Sea, 1974; and according to the International Maritime Conventions adopted by the Somali Government and in pursuance of the Somali Legislation, the following surveys should be carried out upon all vessels carrying the Somali flag:-

1. An initial survey must be done before the ship is placed into traffic (as a vessel) under the Somali flag or before it is placed into operation again after significant repairs or changes. The vessels which are already operating must be surveyed when they need a new safety construction certificate. The initial survey contains the inspection of four areas of the ship. These sections are construction, machinery, radio installations and seaworthiness.

Such ships are usually registered by a classification society and, if the society is authorized by the Ministry of Sea Transport and Ports (of Somalia), the inspection of the construction could be done by the society in Somali ports and also in foreign ports. As for the initial survey, inspection of machinery and seaworthiness is always performed by the nominated surveyors.

2. A periodical survey is to be done annually on all passenger ships in international trade and in domestic trade to passenger ships of a grosstonnage of 500 tons or more. To cargo ships in international trade and in domestic trade and to ships of 500 tons grosstonnage or more it is done on safety equipment at two year intervals and on construction at five year intervals. The bottom, however, must be inspected at the latest three years after the previous periodical or initial survey. The periodical survey consists of the same items as the initial survey and regarding construction it is to be done by an authorized Classification Society (if the vessel is classed in a society) in Somali or other ports. The Society can also perform the inspections of machinery and seaworthiness in foreign ports but

this can also be done by nominated surveyors at the owner's request. In Somali ports only nominated surveyors can carry out the inspections of machinery and seaworthiness for the periodical survey.

3. A mandatory annual survey is to be performed annually, except to ships that are due to have a periodical survey. This survey consists of a visual examination of the construction, machinery, radio installations and seaworthiness and it is to be done by surveyors of machinery and seaworthiness together. In foreign ports it can also be performed by an authorized classification society.

4. An intermediate survey. This survey is for tankers of at least ten years of age instead of the mandatory annual survey. It is performed on equipment by surveyors of machinery and seaworthiness applying the instructions of the periodical survey. In foreign ports it can also be done by an authorized classification society. The ship's bottom must be checked outside between two and three years after the previous periodical survey. The bottom can also be inspected before the intermediate survey and is performed by an authorized classification society.

5. An additional survey must be carried out:
- when the Maritime Safety Department demands it;
- when an accident has taken place or a defect has been found which has an effect on the ship's safety or to the efficiency and perfectness of its life-saving appliances or other equipment;
- when significant repairs or renewals have been carried out on board.

As to the extent of the additional survey, the Maritime Safety Department should give instructions from case to case.

The surveys for preventing the pollution from ships

In addition to the surveys for sea safety all ships must be surveyed to prevent the pollution of sea waters. These surveys shall always be carried out when possible, simultaneously with the sea safety surveys. They can also be done separately if necessary.

If these surveys are not carried out at the same time, the surveyor of seaworthiness must not confirm a ship seaworthy before he has checked that all of them are done.

These surveys follow the same intervals as the sea safety surveys and also consist of inspections of the construction, machinery and seaworthiness. On classed ships they could be performed by an authorized classification society.

The present Somali Maritime Code should be revised and a chapter dealing with safety of navigation should be added. Survey duties will come under this section. The future code should clarify when inspections will be necessary. It should also empower surveyors to board any vessel which they suspect of not complying with the necessary requirements.

B. Certification

1. General

Somalia has delegated the inspection and certification of government vessels to the classification societies. However, all private vessels remain unclassed and hence uninspected. As a rule no ship is knowingly permitted to sail from any port without her master being in possession of valid trading certificates, restraint being effected by the expedient of withholding customs' clearance of her papers. Thus it is vital that a full, current and valid set of these documents are

onboard, at her hand-over.

It is normal practice when a secondhand ship transfers from one flag to another, for the former owner to be contractually bound to supply a full set of current trading certificates, perhaps being valid for at least a further three months. It is also commonplace for new flag authorities to recognize and accept the validity of these "foreign" documents on at least a temporary basis. In the case of new buildings where more time is available for such formalities, or in the case of transfer of a trading vessel between owners maintaining a ship's original nationaltiy, the matter is somewhat simpler.

Nevertheless, it seems as though we live in an increasingly document-conscious society, and nowhere is this more evident than in maritime matters. Thus it is as well that a prospective owner has at last a fundamental grasp of the individual nature of these trading certificates, so that he may learn more exactly what documentaion he is obliged to provide.

2. Types of certificates

Trading certificates can be divided into three different but equally important categories, being either certificates of:

1. flag
2. classification, or
3. a general nature

1. Certificates of flag

Flag certificates are issued by the authorities in the country of a vessel's registry, and cover such items as the measuring and marking of a ship's load line, the issuing of a radiostation licence, and the mandatory inspection of safety equipment.

In many cases classification society staff act as agents of the maritime administration of the flag state. If a certificate is out of date, only in exceptional circumstances should the vessel concerned be put to sea.
The usual flag certificate requirements, and the period of validity of the individual documents are as follows:

- International Load Line – 5 years
- Safety construction – 5 years
- Safety equipment – 2 years
- Radio-station licence various
- Safety Radiotelegraphy/ Radio telephony – 1 year
- Tonnage certificate – unlimited.

In some reasonable cases, a short extension of time can be arranged, for example to enable a vessel to perform a safety equipment survey during a forthcoming dry-docking, requiring perhaps an extension of two months over and above the two year limitation. In such circumstances, however, it is commonplace for the registration country's maritime authority (or a classification society acting on behalf of that authority) to insist upon a brief provisional survey, to satisfy themselves that leniency is not being given to a sub-standard vessel.

2. Certificates of Classification

It is not internationally mandatory for merchant ships to be certified as seaworthy and subject to regular inspection (i.e. classed) by a classification society. However, in practical terms it is virtually impossible to trade without a vessel being classified by a classification society, and being subject to that society's rules and regulations. No charterer would wish to employ a ship which was not so classed, and the majority of the charterparties include a stipulation that a vessel is not only classed, but classed to a society's highest

standard, remaining so during the duration of the voyages involved.

Furthermore, it is common practice for underwriters to include a warranty in marine insurance to the effect that the vessel must be classed, and that her class be maintained throughout the period of the policy.

It is quite commonplace for the new owner of a secondhand vessel to leave the classification in the hands of the original, irrespective of any flag alternation, although some owners change to a society of their choice upon the acquisition of tonnage. Should he so wish, an owner may have his vessel classed with more than one society, although the extra cost, inconvenience, and paperwork involved, make this an unusual choice.

Once a vessel has been examined and found to conform to a society's requirements, be that vessel a new construction or an existing "trading" ship, a certificate of class is issued by the society. The ship becomes subject to regular surveys of her hull and machinery, in order to ensure that she maintains her class. If failing to do so, a vessel will be considered to be "out of class", have her certificate "withdrawn" and very likely be unable to trade.

Every four years, a classified ship must undergo a special survey of her hull and machinery, the survey becoming increasingly rigorous and exacting as the vessel ages. If the ship's condition so warrants, an owner may be granted up to one further year of grace, i.e. to a maximum period of five years between special surveys. Because of the time-consuming and expensive nature of this work and of the repairs which ensue many owners elect to place their ships on what is termed a continous survey for either the hull, or the machinery, or both. In such a case, a programme of inspection is worked out

by the owners and the classification society. This results in inspection work being spread as evenly as possible over five years on a continous basis.

Other specific items of equipment are also subject to particular attention from a classification society, and separate certificates are issued in their regard. For example, a vessel may have a refrigerated cargo space which the owner wishes to be "classed" as being in good condition, which he hopes will in turn assist him to draw a potential charterer's attention to the attractive quality of his ship.

Also the tailshaft may need particular inspection to ensure that it remains in good condition. The normal classification certificates required for trading purposes for conventional tonnage are granted after meeting the requirements of the following surveys:-

a) Hull and machinery special surveys - 4 years
b) Dry-docking survey - 2,5 years (until 5 years is possible)
c) Survey of load - 1 year
d) Tailshaft inspection - 5 years
e) Boiler survey - 2 years until 8th year, hence annually.

3. General certificates

Quite apart from certificates demanded by reason of flag or classification, there remain further requirements with which a ship must conform before it can be put to sea and trade without interference. The most important of these are:

a) Cargo gear: - for reasons of safety, a ship's cargo handling derriks or crashes should be frequently inspected and maintained to highest standards. The classification society or specialized cargo surveying organizations carry out detailed surveys every four years, with more curtailed annual inspection

in between. Providing they are satisfied, these organizations issue certificates attesting to the good condition of this equipment. These certificates should be retained with the vessel's other papers.

b) De-ratisation (exemption) certificate:- to ensure the non-existence of vermin onboard, all merchant vessels are subject to six-monthly inspections, usually performed by commercial concerns at a shipowner's expense, at a convenient port of call. Providing no trace of vermin is discovered, a Deratisation Exemption Certificate is issued by or on behalf of the Port Authority.

Otherwise fumigation is carried out to eradicate any infestation, and a Deratisation Certificate is issued once the problem has been brought under control.

References:

1. Somali Maritime Code
2. Paper presented by Mr Pekka Korhonen, about surveying of ships in Finland
3. International Conference on Ship Safety and Marine Surveying, Malmö 1986

CHAPTER V

A. Maritime Training

1. The Importance of Maritime Training

Despite all the improvements in recent years in the hardware of safety - the safe construction of ships themselves and the provision of better and more reliable equipment, we find that casualties still occur, even in modern ships fitted with up-to-date equipment in operative condition. Such casualties are frequently attributed to the "human factor", an expression which covers human failings of all kinds in those who are in charge of the navigation and on board management of ships.

Obviously this factor has always been present, but the tremendous advances in other aspects of safety have made it more conspicious. Furthermore, the steady growth in the size and sophistication of ships, and the increasing worldwide traffic in hazardous cargoes such as oil, chemicals and liquified gases, have introduced new safety problems and imposed fresh demands on owners, operators, officers and crews.

The sophisticated equipment that is provided to help with safety, together with all the safety conventions, protocols, resolutions, recommendations, rules and regulations which are drawn up to keep seafarers out of danger, nonetheless place greater and greater demands on the people who operate ships. In short the capabilities of crews need to keep pace with the capabilities of the ships, and the consequences of human failure have become increasingly disastrous.

There is no doubt that every master and watchkeping officer, both deck and engineer, need to have as a minimum the scope and level of knowledge required for the issue of the certificate he holds. He also needs further training to equip him for the

particular category of ships on which he intends to serve.

Certificates of competency should be seen as providing only the common care knowledge necessary for the safe operation in general, and not as covering the many detailed requirements relating to particular ships in particular trades. The need for adequate and meaningful training has assumed increasing importance in line with the technological development which has taken place in shipping. It is frequently the case that while modern equipment can improve the safety operations and efficiency of a ship if it is used correctly by those who understand its limitations, it can introduce a safety hazard if used by untrained persons or if over reliance is placed on the information provided.

Adequate training in the safe handling of cargo and cargo equipment in tankers is of vital importance, not only to avoid casualties to ships, but also to protect the environment from spillage and subsequent pollution. The human factor is blamed for a high proportion of collisions and stranding casualties and special attention must therefore be given to the training of deck officers in collision avoidance and safe navigational practices.

Automatic Radar Plotting Aids (ARPA) have now arrived on the scene and there is great danger that, if the principles of their operation are not properly understood, or too much reliance is placed upon the information provided by the equipment, the navigator could be lulled into a false sense of security when in reality his ship may be running into a potentially dangerous situation.

There are other aspects of training which help to reduce the risk of human errors at the root of so many casualties and shipboard accidents such as training in management skills and updating training in new procedures and the correct use of new

equipment. We must not, however, forget with all the sophisticated equipment now available, that it is necessary to retain basic knowledge and to practice those skills which would need to be put into effect as fallback procedures on those perhaps rare occasions when a useful piece of electronic equipment fails.

Training is also necessary to provide the knowledge and skills to deal effectively with emergency situations which might arise. Here, it is wise to emphasise, that advances in complexity are not restricted to operational equipment on ships. On the contrary, there is continuing development of safety equipment - the second line of defence.

Now that survival courses are part and parcel of pre-sea training, the opportunity exists for installing the message at an early and susceptible age, and if properly accomplished this will go a long way in ensuring that the lessons are not forgotten.

In any event, no matter how good the basic training, one of the main aims must be to ensure that a proficiency is maintained through further on board training and meaningful exercise, and in this sense management has a large part to play. It serves no purpose to provide a ship with efficient fire-fighting appliances and life-saving equipment if the persons they are designed to assist are unfamiliar with them and ignorant as to their proper use in an emergency. Meaningful exercise and drills must therefore be held regularly in every ship with varied simulated emergency scenarios to stimulate interest. Deficiencies in the equipment and its use in a particular ship are quickly realized in this way, while skill in the operation and use of particulr items is developed and updated.

2. Maritime Training in Somalia

Somalia owns two institutions for the education of seafarers. One is the maritime college in the Polytechnic Institute in Mogadisho and the other is the maritime school also in the capital. Although most of the officers presently manning Somali ships are trained abroad, locally trained people also play a major role in the marine services.

It seems that there is no organized programme for the pre-sea training of these locally trained seafarers. As students they seldom go to sea. It is only after graduation that they can have their first encounter with the sea and it is well known that training in maritime academics always lays behind what is required on board. There are a few reasons for such training job gaps:

- Training in the classroom, even when sophisticated equipment is used, cannot match shipboard reality and experience
- Shipping develops rather quickly. Developments in maritime education and training take place at a lower rate.

The maritime schools belong to the Ministry of Higher Education and there exists a lack of direct contact with the shipping industry.

Maritime education and training has to provide for a wide range of possibilities and not necessarily for a specific type of ship.
Deck and engine room hands have no maritime education background. They are mostly people who struggled from the lowest ranks as messboys, ordinary sailors or wipers up to the higher posts of donkeymen or boatswains. These men are usually tough and so many in number that every shipowner has a wide choice. Since maritime training is vital for the safety and efficiency of operations of the ships, the Somali Government

must provide proper maritime training facilities for the maritime academies, institutes and all kinds of maritime training schools - to fulfill the STCW standards.

B. Manning

The word "manning", used with reference to a ship, means the composition of her crew and refers not only to the total number of her crew but also to each number of persons possessing particular relevant skills. Thus the manning of a ship cannot be adequately described as "30 persons":- it must be described as x navigating officers, y engineer officers, z able bodied seamen, etcetera.

The expression "safe manning" means, for the purpose of this paper, manning that permits a ship to sail on her intended voyages with no more than the normally accepted degree of risk to herself, to those on board and to other ships.
The expression "minimum safe manning", means safe manning that is achieved with the minimum number of crew.

In the provision of the Somali Legislation nothing is mentioned about safe manning. In the office of the director of the registration service, a Seaman's Passbook Unit exists. The aforesaid unit has issued about 10.000 seamen's books but without any follow-up of as to the real use of these. Reports by one of the IMO mission reports state that estimates by the Ministry are as follows:-

- About 1.000 seamen are in regular employment in the merchant fleet (under the national flag or on board foreign-owned vessels) or on trawlers engaged in industrial fishing

- About 1.000 seamen are employed in the harbour craft fleet or on board the small traditional-type coaster vessels (dhows, etc.)

- Approximately 2.000 persons were said to be in intermittent maritime service.

Closely related to the subject of "minimum safe manning requirements" is the subject of "certification requirements" and indeed no specification of safe manning requirements for a particular ship would be complete without due regard to any certification requirements that apply to that ship under the maritime law of its flag state.

Thus, if a ship is required by law to carry, let us say, a certified master, certificated mate, a certificated chief engineer, certificated second engineer and a certificated radio officer, then the complete specification of this minimum safe manning must include these certified personnel, and also any other certificated person, (e.g. certificated life-boat men) that may, under national maritime law, be required and are directly concerned with the operation of the ship.

The question of what is the minimum safe manning for a particular type of ship on a particular type of voyage is one that does not permit an answer in absolute terms and is therefore one that can, and has, generated much controversy. Furthermore, it is one that can, and has, generated high emotions. This is very understandable since the question involves employment prospects, which are very much the concern of seafarers' unions, and involves crew costs, which are very much the concern of shipowners.

The question would not be so controversial under stable conditions of slow technological progress, since then, it is possible to establish reasonably accurate answers based upon experience and statistical analysis. However, technological progress is rapid nowadays and so an answer, that is correct today, is quite possibly incorrect within a short period of

time. The controversy is aggravated by economic considerations such as the effects of monetary inflation on crew costs relative to the other costs of running ships.

Another factor of controversy raised by the question of what is safe minimum manning is that of international competition in an economic climate under which profitable trading is desperately sought. Thus individual shipowners of any given flag state are vey much concerned with national legislation on manning since such legislation could put them at an economic disadvantage in competition with shipowners of another flag state.

The possibility of placing one's own flag ships at an economic disadvantage in competition with ships of other flags must be taken into consideration by any maritime administration and, in the absence of any international agreement, the tendency is towards lower and lower safety standards, since safety costs money. Thus, within limits, the fleets of countries with lower safety standards tend to survive whilst those of countries with high standards tend to become extinct. There are of course other factors which concern a shipping company's survival but the cost of safety standards is a factor which has as much effect as any.

The International Convention for Standards of Training, Certification and Watchkeeping says very litle about the question of "minimum safe manning". The little that is said is said in the vaguest of terms. The reason is that the subject was so controversial and emotional that its conclusion regarding the deliberations leading to the convention would probably have halted all progress towards what is generally regarded as a useful document.

After the convention many discussions were held to attempt to reach an international agreement on minimum safe manning but these immediately ran into trouble.

The only proposition which was accepted, more with registration than with enthusiasm, is the IMO Resolution A 481 (XII). This Resolution, like any other IMO Resolution, is not mandatory and so no party to the STCW Convention (or to any other convention) is compelled to adopt it. It is expected, however, that most parties to IMO Conventions will adopt it since there are advantages in doing so.

The Resolution calls for member governments to take the necessary steps to ensure that every sea-going vessel to which the STCW Convention applies carries on board at all times a document issued by the administration specifying the minimum safe manning required for such a ship.

References:

1. Conference of Ship Operation and Safety, Southhampton, April 07-09 1981
2. Nichlas, Y, IMO Mission Report
3. Project work of M. M. Boss

CHAPTER VI

Search and Rescue

1. General

Seafaring has always been a hazardous occupation and accepted as such by all who choose to face the challenge. Life at sea in earlier times, particularly in sailing ships, created a very tough breed of seamen capable of withstanding extreme conditions. These men could be referred to as the "ironmen on wooden vessels".

The seafarer of today is not called upon to suffer the same degree of hardship, and shipboard conditions are much improved, although it is evident that "living with the sea" brings out undefinable qualities.

It is a fact that seafaring has become a progressively safer occupation over the last hundred years. Man has always had a spirit of adventure - a curiosity to see and to know and a readiness to take risks where experience could be gained and knowledge extended. As a result there are, today, safer ships regulated by strict legislation, which, combined with welltrained crews under effective leadership and improved equipment, means there is a better chance of surviving an accident than there was even a quarter of a century ago.

It is true that "only fools do not fear the sea", and anyone who goes to sea is exposed to a degree of risk. Accidents happen frequently and we hear about ships wrecked, foundered, burnt, collided, grounded, damaged by weather, etc. And in each case human lives and property are lost or endangered.

2. Development of SAR

Under the terms of the Safety of Life at Sea (SOLAS) Conventions, governments are charged with the responsibility "of ensuring that any necessary arrangements are made for the rescue of persons on duty at sea around its coast".

Guidance for Search and Rescue is laid down in the IMO Publication:- IMO Search and Rescue (IMOSAR) manual.
The primary purpose of the IMO Search and Rescue Manual is to assist governments in implementing the objectives of the International Convention on Maritime Search and Rescue, 1979, and of Article 12 (2) of the Convention on the High Seas, 1958, which requires that "every coastal state shall promote the establishment and maintenance of adequate and effective search and rescue services regarding safety on and over the sea and where circumstances so require by way of mutual regional arrangements, co-operate with neighbouring states for this purpose.

The manual provides guidelines rather than provisions for a common maritime search and rescue policy, encouraging all coastal states to develop their organizations on similar lines and enable adjacent states to cooperate and provide mutual assistance.

Taking into account that maritime and aeronautical search and rescue organizations are complementary, the manual has been aligned as closely as possible with the International Civil Aviation Organization (ICAD) Search and Rescue Manual to ensure a common policy and to facilitate consultatiton of the two manuals for administrative operational reasons.

Guidance for ships is laid down in the IMO Publication:- Merchant Ship Search and Rescue Manual (MERSAR).
The purpose of the manual is to provide guidance for those who

during emergencies at sea may require assistance from others or who may be able to render such assistance themselves. In particular, it is designed to aid the masters of any vessel who might be called upon to conduct search and rescue (SAR) operations at sea for persons in distress.

The basis for the Manual is the International Conventions which set out responsibilities for assistance at sea. It is accepted as the normal practice of seamen, indeed there is an obligation upon masters that they render every assistance and within their power in cases where a person or persons are in distress at sea. These obligations are set out in Regulation 10 of Chapter V of SOLAS, 1974.
Somalia presently lacks an organized search and rescue system, and I think it is not advisable for Somalia alone to develop such a large establishment which can cover the Gulf of Aden and the North West Indian Ocean, but regional cooperation could make SAR more effective and less costly. All the countries in the region can unite their rescue capabilities to develop a big SAR force.

To develop such a project the following points are important:-

1. To establish coast radio stations which keep watch on 500 and 2182 KHz and VHF channel 16. A call should be relayed on all frequencies to ships at sea and also to shore authorities by other suitable means of communication. These stations should be able to take radion bearings of the call on 500 KHz. They should keep the Navies informed throughout;

2. The Navies should provide search vessels, aircraft, and helicopters;

3. Air traffic control centres should assist in gathering and relaying search data;

4. Officers of fishery departments should contact the concerned authorities when fishing vessels are overdue;

5. Perhaps the biggest factor in providing assistance is radio watch required to be maintained by vessels of 500 KHz if radio-telegraphy is fitted, and on 2182 KHz with radio-telephony. The watch is to be maintained at all times except when the operator is performing other necessary duties, during which times he should endeavour to keep a loud-speaker watch. Silent peiods are laid down from 15 to 18 and 45 to 48 minutes past each hour, during which the frequency of 500 KHz must not be used except for distress, urgency or safety signals. In the case of radio-telephony the silent periods for 2182 KHz are from 00 to 03 and 30 to 33 minutes past each hour.

During all these silent periods even vessels which do not come under the rule requirements are asked to maintain a watch.

When an operator hears a distress call he must answer it, at the same time allowing a sufficient interval for ships which are closer to the distressed vessel to acknowledge it. He must then inform his Master of the call, whether other ships have acknowledged it or not, and the position of those ships. The Master may then instruct him to repeat the call on the distress frequency, particularly if his own ship is unable to render assistance or if other ships have not acknowledged the initial call. All relevant particulars must be entered into the radio log book.

When vessels are in distress they use the following signals:-

1. SOS in morse code on the radio telegraphy apparatus;

2. The spoken word "MAYDAY" transmitted by R/telephony;

3. The international code flag signal NC;

4. Rockets or shells throwing red stars, fired one at a time at short intervals;

5. A signal comprising a square flag having above it or below it a ball, or anything resembling a ball (this is called the distant signal);

6. Flames on the vessel such as a burning tar barrel;

7. A rocket producing a red flare on a parachute or a red hand flare;

8. The auto-alarm signal in R/Telegraphy or R/Telephony

9. An orange smoke signal;

10. A vertical motion of a person's extended arms.

3. Regional and Global Cooperation in SAR

The whole system of SAR could be harmonized by regional and global cooperation. A good example of the great humanitarian strides that can be taken when nations cooperate is AMVER-automated mutual-assistance vessel rescue.

The U S Coast Guard provides the computer and more than 30 highly-trained men who operate the system. Other governments make existing radio stations available for the free relay of AMVER traffic, and vessels of well over 60 nations participate. AMVER data is available to every recognized rescue centre thoughout the world for emergency use, yet is never disclosed for any commercial reasons.

AMVER is a computerized, worldwide merchant vessel plotting programme, designed to maintain and provide information on vessels for use in search and rescue operations.

To participate in the AMVER programme, a vessel need only inform its sail plan and periodic position reporting. There is no enrollment required and no agreement to sign. AMVER will plot ships anywhere in the world as long as they are able to send their sail plans and position reports to the centre. Participation by a vessel is free of cost to both the vessel and its company.

Surface pictures are provided to any recognized SAR agency in the world for use in saving lives and property at sea.

Vessels participating in the AMVER programme are under no greater obligation to render aid in emergency situations than are nonparticipants.

The AMVER system has worked for years with success but requires discipline from users; which means reports have to be given in due time to avoid SAR-operation if not needed. In the event of an emergencuy it is good knowing that the plot will detail which ships are in the vicinity and that they will be asked to assist according to Regulation 10 Chapter V of the SOLAS Convention.

Apart from the lone yachtsman or pleasure yachts, sailing outside normal shipping routes, there are few ships at sea today whose position is not known by reason of modern communication systems. Shipowners themselves have a good and regular check on the position of their vessels, and this together with ship reporting systems, means that it is unlikely vessels will be lost for very long before their position is known and emergency procedures put into action. Normally a ship in emergency will be able to send a distress meassage saying

what has happened, where and at what time. There are, unfortunately, exceptions to this and quite large ships on regular trade routes have been lost without trace.

More ships now carry Emergency Position Indicating Radio Beacons (EPIRBs) which, in the event of a ship sinking, remain afloat and, being self-activating, transmit on the distress frequencies - 500 KHz, 2182 KHz and/or 121.5 MHz and 243 MHz. Furthermore, we now have satellite EPIRBs which will automatically alert rescue services half a world away. Additionally, there is the extensive cover provided by commercial and military aircraft airborne at any time.

However, even with all these modern aids to initiate an early SAR operation, it is well to remember, that team work, with all parties trained to play their part, is still the key to a successful conclusion in a distress situation.

EPIRBs:

Emergency Position - Indicating Radio Beacons, are stations in mobile service, the emission of which are intended to facilitate SAR operations. According to SOLAS the Survival Craft Position-Indicating Radio Beacons to be carried in the survival craft shall provide transmissisons to enable aircraft to locate the survival craft and may also provide transmissions for alerting purposes.

Survival craft EPIRBs shall, at least, be capable of transmitting, alternately or simultaneously, signals on the frequencies 121.5 MHz or 243 MHz. In other words the EPIRBs should be able to transmit on these two frequencies. However, it is highly recommended that EPIRBs are also able to transmit on 2182 KHz. Ships at sea and coastal radio stations keep a round-the-clock watch on 2182 KHz, so it is obvious that this frequency is vitally important.

Civilian aircrafts listen when they are airborne on 121,5 and 243 MHz when the pilot is not engaged in other duties.

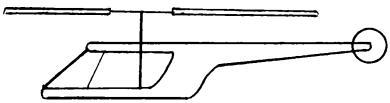
Rescue helicopters in most cases listen on all three frequencies.

Satellites can receive emergency signals on 121.5 and 243 MHz and can calculate the position of the transmitting EPIRB. It should not be forgotten, that as of this day the satellite system is only at an experimental stage in this context as shown in the figure.

References:-

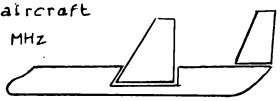
1. Safety at Sea, by Viking
2. Danton, Graham. The Theory and Practice of Seamanship, 1985.

Rescue helicopter
121.5/243 MHz. 2182 KHz.

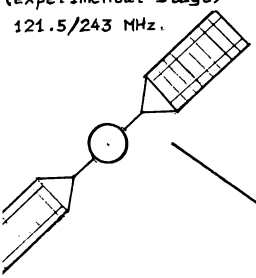


Satellite
(experimental stage)
121.5/243 MHz.

Civilian aircraft
121.5/243 MHz



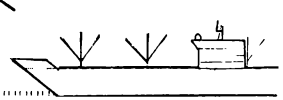
Max.distance 100 naut. miles
at flying height 3000 m



EPIRB

Coastal station
2182 KHz

Ship 2182 KHz
Max.distance 75 n.m



CHAPTER VII

Port State Control

1. General

Under the provisions of the International Convention for the Safety of Life at Sea and the International Convention on Load Lines, 1966 "the flag state is responsible for promulgating laws and regulations and for taking all other steps which may be necessary to give these conventions full and complete effect so as to ensure that, from the point of view of safety of life, a ship is fit for the service for which it is intended".

In some cases it may be difficult for the administration to exercise full and continous control over some ships entitled to fly the flag of its state, for instance those ships which do not regularly call at a port of their flag state. The problem can be, and has been, partly overcome by appointing inspectors at foreign ports or authorizing Classification Societies to act on behalf of the flag state administration.

In order to ensure that the internationally accepted minimum standards in respect of the safety of ships and conditions on board are achieved, national enforcement of international requirements and specifications were restricted almost exclusively to the condition of vessels which posed a threat to the environment.

The prime objective of the regime of the port state control is to enforce the observance of merchant ships (regardless of their country of registration) of the safety standards internationally recognized as the minimum.

Ratifying states are obliged to verify that the condition of ships that call at their ports satisfy the minimum level of

safety declared by international agreements.

2. Substandard Ships

An effective practice for controlling substandard ships is the port state control which, to my knowledge, is not conducted in the region as a whole.

The following instruments include the right and the obligation for the port state to verify that foreign ships and their crews comply with the relevant standards:-

- ILO No 147, Article 4
- SOLAS 74/78, Chapter 1, Reg. 19
- STCW 1978, Article 10
- MARPOL 73/78, Article 5
- LL, 1966, Article 21.

The term "substandard" has been used in many instances in a way giving rise to misunderstanding and misinterpretation.

Referring to Section 3 of the IMO resolution A.466 (XII), a substandard ship could be identified as follows:-

1. If the hull, machinery or equipment such as for life-saving, radio and firefighting are below the standard required by the relevant convention

2. If these evident factors as a whole or individually make the ship unseaworthy and would put at risk the life of persons onboard, if it were allowed to proceed to sea

3. The lack of valid certificates, as required by the relevant conventions, will constitute prima facie evidence that a ship may be substandard and will form the basis of a decision to detain the ship forthwith and to inspect it

4. It is impracticable to define a substandard solely by reference to a list qualifying defects. The inspector will have to exercise his provisional judgement to determine whether to to recommend detention of the ship until the deficiences are corrected or to allow it to sail with certain deficiences which are not vital to the safety of the ship, having regard to the particular circumstances of the intended voyage.

3. Reasons for the Phenomenon of Substandard

No introduction into the complex problem of substandard ships would be complete unless it includes - if only briefly, the reasons behind the phenomenon that substandard ships are operated. Without trying to rank such reasons, and without pretending to draw up a complete and comprehensive list of them, it is a safe assertion to say that the underlying reasons for the phenomenon of substandard ships (respectively, of substandard crews) include the following:-

- the old age of ship
- the lack of (or no) training of officers and/or crew
- the lack of (or no) supervision on the part of the flag state.

4. Responsibilities

The reasons for substandard ships are varied, likewise the responsibilities for combating the phenomenon. The responsibility rests mainly with:-

a) The International Organizations such as IMO and ILO whose tasks include the preparation and adoption of relevant safety standards;

b) The flag state which has the primary responsibility for the effective implementation of the standards embodied in the relevant conventions;

c) The shipowner who must ensure the safe and seaworthy condition of his ship as well as her safe manning (it is provided that the ship's flag state has transformed into national law the provisions of the relevant conventions);

d) The master, who bears the full responsibility for the observance aboard his ship of operational and safety standards;

e) every crew member.

5. The Inspection

The inspection of ships under port state control should be carried out in accordance with special guidelines comprising the following IMO Resolutions:

- Resolution A 466 (XII) emboding "procedures for the control of ships";

- Resolution A 481 (XII) emboding "principles of safe-manning", together with its two annexes entitled "Contents of Minimum Safe Manning" (Annex I) and "Guidelines for the Application of Principles of Safe Manning" (Annex 2);

- Resolution A 542 (13) emboding "Procedures for the Control of Ships and Discharges under Annex 1 to MARPOL 73/78";

- A catalogue of standards under ILO Convention No 147.

In applying a relevant instrument for the purpose of port state control, the authorities will ensure that "no more favourable

treatment" is given to non-conventional ships.

The inspection procedures provide that the inspection will consist of a visit on board a ship in order to check the certificates and documents relevant for the purpose of the Port State Control. In the absence of valid certificates or documents, or if there are "clear grounds" for believing that the ship does not substantially meet the requirements of a relevant instrument - the inspection should be more detailed.

The authorities will regard as "clear grounds", inter-alia:

- a report or notification by another authority;

- a report or complaint by the Master, a crew member, or any person or organization with a legitimate interest in the safe operation of the ship, shipboard living and working conditions, or the prevention of marine pollution, unless the authority concerned deems the report or complaint to be manifestly unfounded;

- other indications of serious deficiencies with regard to the aforesaid Resolution. In selecting ships for inspection, the authorities pay special attention to:-

- ships which may present a special hazard, for instance oil tankers, gas and chemical carriers;

- ships which have had several recent deficiencies.

In the case of deficiencies which are clearly hazardous to safety, health or the environment, the authorities will ensure that the hazard has been removed before the ship is allowed to proceed to sea, and for this purpose take appropriate action; which may include detention.

The authority will, as soon as possible, notify the flag state through its consul, or on his absence, the nearest diplomatic representative or its Maritime Authority, of the action taken.

Where deficiencies cannot be remedied in the port of inspection, the authority may allow the ship to proceed to another port, subject to any appropriate conditions determined by that authority with a view to ensuring that the ship can so proceed without unreasonable danger to safety, health, or the environment.

In such circumstances the authority will notify the competent authority of the region where the next port of call of the ship will be and any other authority as appropriate, as shown in the telex form below:-

Telex form

The telex shall be drafted as follows:-

Date: .....
From: Country ..... Port.....
To: Country ..... Port.....
Re: Deficiencies to be rectified
Name of ship: ..... Type of ship.....
Flag of ship: ..... Call sign.....
Gross tonnage: ..... Year built.....
Departed: .....
Estimated place and time of arrival: .....
Nature of deficiencies: .....
.....
.....
Suggested action: .....
.....
.....
Signed: .....

The authority receiving such notification will inform the notifying authority of the action taken. The authorities will ensure that, on the conclusion of an inspection, the Master of the ship is provided with a document, as shown in the table below, giving the results of the inspection and details of any action taken. The Master should retain his copy of the report for a specified time.

PORT STATE REPORT ON DEFICIENCIES
(issued in accordance with Resolution A 466 (XII).

1. Reporting country: .....
2. Name of ship: ..... Type of ship.....
3. Flag of ship: .....
4. Gross tonnage: ..... Year built.....
5. Date and place of inspection: ..... 19...
6. Nature of deficiency in relation to convention requirements:

(a) deficiency	(b) convention regulation
.....	.....
.....	.....
.....	.....
.....	.....

7. Relevant certificates

(a) title	(b) issuing authority	Date of issue (c) and registry
1.	.....	.....to.....
2.	.....	.....to.....
3.	.....	.....to.....
4.	.....	.....to.....
5.	.....	.....to.....

d) the information below concerning the last intermediate survey shall be provided if the next survey is due or overdue:

1. Date: ..... 19... Place: .....

by: ..... (surveying authority).....

2. Date: ..... 19... Place: .....
   by: ..... (surveying authority).....
3. Date: ..... 19... Place: .....
   by: ..... (surveying authority).....
4. Date: ..... 19... Place: .....
   by: ..... (surveying authority).....
5. date: ..... 19... Place: .....
   by: ..... (surveying authority).....

8. Brief note of action taken:

.....
.....
.....
.....
.....
.....
.....
.....

9. Flag state, classification society and/or next port of call, as appropriately notified, are as follows:

.....
.....
.....
.....

(1) Deficiencies concerning matters not related to the applicable International Convention for the Safety of Life at Sea, and the International Convention on Load Lines, 1966, should be submitted to the flag states and/or the organization concerned

(2) Indicate whether passenger ship, cargo ship, bulk carrier, tanker, ro-ro vessel, fishing vessel, etc

(3) Refer only to the relevant parts or equipment of the ship which are found deficient (e.g. life-saving equipment, machinery and electrical installations, hull, radio installation, fire fighting equipment, watertight integrity, etc.) as appropriate. The detailed deficiency report is to be forwarded to the flag state without delay

(4) Quote the relevant convention regulation (e.g. Regulation 9 (a) (i), Chapter III SOLAS, 1974)

(5) e.g. vessel detained, consul informed, certificate withdrawn/renewed/extended, provisional certificate issued and conditions under which it was issued, next port of call informed, etc....

(6) Quote title and address of administration - and/or classification society.

6. Memoranda of Understanding of 1978 and 1982

The port state method of enforcement envisaged by the SOLAS Convention was implemented in Europe even before the Convention entered into force. In 1978, a block of North Sea coastal states signed the Hague Memorandum of Understanding between certain maritime authorities on the maintenance of standards on merchant ships.

A uniform set of procedural guidelines of port control, a system of monitoring, notification and dissemination of information, the steps which the authorities are empowered to take against sub-standard ships, and the formation of a committee of experts was agreed for an orderly implementation of the regime. The terms of the first memorandum were further improved and expanded by the Paris Memorandum of 1982.

The countries under the new agreement, undertake to inspect

annually twentyfive per cent of foreign flag merchant ships visiting their ports.

7. Regional schemes of port state control

It is submitted that similar regional schemes of port state control, put into operation at strategic ports of the world, would achieve a substantial reduction in the number of substandard ships engaged in foreign-going ventures.

The coastal states of the Indian Ocean Basin could perhaps join forces to establish a regional programme along the lines adopted by European States. Such concerted efforts could greatly improve the general standard of world shipping. Vigilantly administered and supervised, the port state method of enforcement could be an effective machinery for the phasing out of substandard ships of the world.

A great number of problems that exist in the shipping industry today, related not only to safety and seaworthiness of the ship but also to the question of employment and treatment of seamen, are essentially matters which should concern the country with which the ship is registered.

Strictly speaking, there are domestic issues falling within the responsibility of the flag state. However the international character of shipping has rendered them of universal concern, for if countries were left with a free reign and to their own devices, without international supervision, more serious malpractices and flagrant would inevitably arise. International plicing, it would appear, is an effective means by which recalcitrant shipowners may be pressured to observe the international minimum standards of safety. The attainment of maritime safety can be achieved only with the cooperation and combined action of all maritime nations of the world.

References:-

1. Administration and Legislation by Mr. G. Stubberud
2. Maritime Law and Ship Safety by Dr. S. I. Hodges
3. The Role of the Goverment Nautical Surveyor by Mr. Ib Mathiesen
4. Different papers from WMU on the Paris Memorandum of Understanding lectures.

CHAPTER VIII

Casualty Investigation

1. General

Many maritime casualties have occured along the coast of the Somali Democratic Republic in recent years. Foreign ships were involved in almost all cases, but the same could also happen to the national fleet.

Casualty investigations after maritime accidents are being conducted in different ways in different countries.

In accordance with SOLAS each administration undertakes to conduct an investigation of any casualty occuring to any of its ships when it judges that such an investigation is necessary.

Maritime investigations are concerned with:-

a. Violation of:
   - safety regulations
   - marine pollution regulations

b. Accidents:
   - collisions
   - groundings
   - fire/explosions
   - human facilities
   - etc.

2. The purpose of the Investigation

It should first be stressed, very strongly, that it is not a blame - attachment exercise. It is most important that this fact be made quite clear right from the start, because failure

to do so will give rise to the withholding of information by witnesses, or even in some cases, deliberate falsification of evidence, so that the thruth becomes obscurred behind a smoke-screen of lies calculated to mislead the investigator.

The main purpose of an investigation, then, must be fact finding so that the investigator can ascertain what actually happened and to see what lessons are to be learned from what happened. The purpose of accident investigations is quoted below:-

1. to learn about accident causes so that similar accidents can be prevented by mechanical improvement, better supervision or employee training;

2. to determine the "change" or "deviation" that produced an "error", that in turn resulted in an accident;

3. to publicise the particular hazard among employees and their supervisors, and to direct attention to accident prevention in general;

4. to determine facts bearing on legal liability.

An investigation undertaken solely for this purpose will, however, seldom give enough information for accident prevention purposes. On the other hand, an investigation for prevention purposes may disclose facts which are important in determining liability.

3. Carrying out the investigation

To conduct the investigation of the accident, it must first of all be established exactly what happened and it is therefore essential that as many witnesses as possible, and as quickly as possible after the accident or the incident, should be

interviewed; this is absolutely essential as each person will have seen things happen in a slightly different context but in the course of discussion with other witnesses after the accident their perception of what actually happened will change slightly. This change may be just sufficient for the investigator to come to the wrong conclusion as to the cause of the incident. If for some operational reason it is not possible to interview all the witnesses over a short space of time all the persons involved should be instructed to put their thoughts on what occured down on paper so that even if they change their story during the course of any interview at least the investigator has a record of what their first thoughts were, which may assist him to unravel the mystery.

It could be as well at this point to look at the actual procedure for the taking of a statement from a witness to an accident. The investigating officer must always be aware of the fact that whenever an investigation is started, the persons involved immediately assume a defensive posture, since they conclude that, as has so often transpired in the past, someone is about to be blamed for what has happened and that their livelihood may be endangered in some way. It is imperative that their fears should be allayed by the investigating officer as far as possible so that no pertinent points are withheld.

To get the best from a witness is an essential ingredient of an investigation and one way in which this can be done, provided of course time permits, is to try to take any statements either at the witness' place of work or in his own cabin. In this way the investigator is the "stranger" whilst the witness is on his "home ground" and may therefore feel more at ease. Tact and diplomacy are essential for the investigator and a break for a cup of tea or a cigarette during the course of taking the statement can often pay dividends, especially if the witness is in some way emotionally involved, such as may be the case in a fatal or serious injury investigation.

As to witnesses, these are likely to include people ashore as well as the ship's crew:

For example, owner's superintendents, stevedores (if a cargo shift is a possible factor in the incident), search and rescue teams, the pilot who was last on board for an experienced and independent assessment of the ship and how she handled; experts in the concerned discipline; perhaps local residents who may have actually seen what happened if the casualty occured near the shore. In respect of the actual investigation, every good investigator should bear in mind that the investigation must seek to answer four questions so as to meet its objectives:

- What happened?

- How did it happen?

- Why did it happen?

- What can be done to prevent it happening again?

What?

What happened? Spell out in detail, drawn from the witness statements or as recalled by the persons involved. If there are no witnesses or they have been killed in a major accident, then the area must be scrutinised in great detail for any possible witness as to what happened. If, for example, there has been a fire it should be possible to trace it back to its origins by examining the edges of the fire damaged area.

For the simple, common accident which occurs on board ships, however, there is usually little need for any deeper analysis than that which can be done by scrutinising the witnesses' statements and visiting the scene of the accident to see if the

statements are credible as they stand or whether further questions must be askes of the vitnesses.

How?

How did it happen? This is, of course, interchangeable with the previous keyword but is practically relevant when investigating accidents or dangerous occurences which may have several stages of development. It should always be remembered that accidents or incidents very rarely result from a single cause, they are invariably the result of a combination of causes.

Why?

The "whys" of an accident may be very wide and it is essential that the investigator takes a broad view of the situation. It is also essential that any casual relationships be borne in mind so as to allow the investigator to build up a broad picture of the occurence. An accepted convention of accident investigation is that known as the "direct" or "proximate" cause of any accident which is the event of occurence which occured at the point of time nearest to an accident or incident.

What can be done?

What can be done to prevent it happening again? This is main objective of the investigation. Shore and shipboard management and the safety administration of the flag states may now learn a lesson or lessons from the accident and try to prevent it happening again.

4. Reports

The depth of the inspectors inquiries and the extent of his report should be related to the nature of the casualty. In many

cases, particularly those covered by informal inquries, the incident will be straightforward. Its causes will rapidly become apparent, the inspector will not wish to make any recommendations; in such instances both the investigation itself and the inspector's report should be kept brief. On the other hand some casualties, even among those which are quite minor in themselves, will require an extensive search and lengthy investigation: inspectors should remember that the object of casualty investigation is to prevent or at least reduce, the likelihood of a repetition and if points emerge from which valuable lessons may be learnt, these should be fully explored irrespective of the gravity of the original accident.

The way in which a report is set out can have a great influence on the way it is received and the appropriate recommendations to be implemented; attention to the format is then very important.

5. Reports of the preliminary inquiries

In general, the inspector should ensure that the following aspects of a casualty are adequately investigated and reported on as appropriate to the particular accident:-

a) if loss of life occurred, how it was caused;
b) if there were any defects in the hull, machinery or equipment of the ship which may have led or contributed to the casualty;
c) concerning the ship's standard of stability;
d) if pollution occurred, its extent and nature and how it was caused;
e) concerning the adequacy and functioning of the safety appliances with which the ship was equipped and the effectiveness of the precautionary or remedial measures which ship masters are instructed or advised to take, and

in particular whether any injuries or deaths may have been prevented if other appliances had been available or better arrangements had been issued;

f) concerning the operation and efficiency of the ship's radio equipment and navigational aids;
g) concerning the nature of the damage to the ship resulting from the casualty;
h) concerning the prevailing weather conditions including the degree of visibility;
i) concerning the state of the cargo, how it was loaded and whether the ship was overloaded;
j) whether relevant statutory requirements had been complied with;
k) concerning the cause or the probable cause of the casualty;
l) concerning details of any acts of gallantry;
m) concerning rescue services rendered by other ships or any other help given to the ship or survivors.

In a complex case it may take some time to assemble every item of evidence, for example, a full examination of the stability or calculation for alternative stability conditions, results of research, declarations from witnesses who are out of the country, etc., unless such evidence is central to the inspector's conclusions. Submissisons of the report should not be delayed on this account. A supplementary report can always follow the original submission.

The report should be submitted in standardised form; the paragraphs should be numbered using the decimal system. It should be divided into:

a) Summary
The summary is a necessary aid to busy senior officers. It should form the first page of every PI report, and need not normally exceed 300 words. It should contain a short summary of the sequences of events, the inspector's

conclusions as to the reasons for the casualty, and his recommendations as to any action to be taken as a result;

b) Factual report

This section should describe the events leading up to the casualty by reference to the declarations of witnesses and other direct evidence. It should be confined to matters of fact, and should cover no interpretation of the evidence, nor draw conclusions. The sources of all the facts from which the inspector has determined the causes and/or possible causes of a casualty should be identified.

Where an inspector has inspected a ship, its equipment, cargo, etc. following a casualty, he should make this clear and describe what he has found. Cross reference should be made in the margin to the appropriate appendix document from which any other facts are drawn. In other words, it should always be made clear whether facts reflect the declarations of the witnesses, what the inspector saw for himself or whether they have been drawn from some other source.

The factual report should contain information on the following:-

1. background (e.g. description and factual information about the ship, the crew, the ship's equipment, cargo and voyage, weather, relevant operational arrangements and procedures, etc.);

2. events leading to the casualty;

3. the sequence of events following the casualty, including search and rescue;

4. other relevant circumstances and events after the casualty;

c) The Inspector's comments, conclusions and recommendations

This section should contain the inspector's comments on the reliability of witnesses or other evidence, comments on the attitude and behaviour of the individuals, conclusions as to the reasons for the casualty, recommendations on action necessary to prevent a recurrence, and a recommendation on whether or not to seek formal investigation.

The following headings may form useful guidelines but are not exhaustive:

a) reliability of witnesses and other evidence;
b) breaches of the Merchant Shipping Acts;
c) discussion on the sequence of events and other related matters;
d) execution of emergency procedures;
e) SAR operations;
f) cause of casualty;
g) measures which might have prevented the casualty

d) Appendices

Supporting documents should accompany the report, and should include, as appropriate:

- declarations;
- plans of ship, diagrams or records of equipment;
- relevant statutory certificates, etc;
- charts;
- crew and passenger list;
- log extracts;
- cargo details;
- SAR reports;
- weather reports;
- transcripts of distress traffic;

- press cuttings and photographs;
- other appendices at the inspector's discretion.

Proposals

While up-dating the National Maritime Code the definition of casualty and the authority responsible for the conduct of casualty should be considered and included. Referring to the proposal in Chapter II, one of the main functions of the MSA is the conduct of Casualty Investigation. For the Maritime Safety Department, to conduct such casualty enquiry/investigation trained/qualified personnel will be needed to carry out such tasks (see Chapter VIII).

Casualty enquiry/investigation methods are continously improving with experience gained from casualties occurring world-wide. Through international fora, for example the IMO, such experiences/ideas in the conduct of casualty investigation are exchanged. For this reason, it is imperative for representatives from the MSA in Somalia to attend such international conferences/meetings in order to benefit from the experience of others.

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3. M.M. Boss' project

CHAPTER IX

A. Special attention to the safety of fishing vessels

Although the Somali fishing fleet is owned by the Ministry of Fisheries, the ships are registered in the Ministry of Maritime Transport and Ports. Therefore their safety comes under the responsibility of the latter.

The principal difference between a general cargo and a fishing vessel is that cargo vessels load their cargo in harbours. After loading, their hatches must be closed watertight and are not normally opened until arrival at the next harbour, where the cargo is to be unloaded.

Fishing vessels, on the other hand, catch fish at the fishing grounds and thus take onbord their "cargo" at sea. Therefore fishing vessels have to operate frequently with hatches open at sea.

Another factor, also characteristic of fishing vessels, is the catching operation itself. Often there are heavy pulling forces from the fishing gear, even on small vessels. Furthermore, fishing operations often take place at open and unsheltered fishing grounds. In addition, the crew on many smaller fishing vessels still has to work without shelter on open deck.

Fishing vessels with open hatches, pulling forces from fishing gear, operating in heavy seas, are therefore more vulnerable than cargo ships and clearly require a different approach at the design, building and operational stages.

The features of fishing vessels are so different from other seagoing ships that they could not be covered by the international conventions for safety of life at sea. It was not until the International Conference on Safety of Fishing Vessels

was held in Torremolinos, Spain, in 1977 that an International Convention for the Safety of Fishing Vessels was drawn up. It is obvious that advanced design of fishing vessels will continue to develop as safe a ship as possible, both regarding strength, watertight integrity, stability and seaworthiness in general; also the continuous maintenance of all safety devices of the vessel and its equipment is essential.

It is, however, also essential for the safety of fishing vessels and their crews, that the training of the fishermen and their certification is clearly considered for the various types and sizes of fishing vessels. The training of the crew for the bigger fishing vessels will have to include, besides knowledge of navigation and vessel manoeuvring and handling, sufficient knowledge of ship stability and seaworthiness in general.

A well-designed, well-built and well-equipped fishing vessel, in the hands of a well-educated, experienced and responsbile crew, is the safest ship we can achieve.

The Somali fishery regulation is the Maritime Code 1959 (Degree law No 1 of 21/02/1959). This has been discussed in the analysis of the Maritime Code. The Code gives powers to the Ministry of Fisheries to issue fishery regulations, but these have not, up to now, been promulgated.

It is apparent that the law is quite old and needs reviewing in this connection. Therefore, I recommend the following measures:

1. National safety rules in respect of the operation of fishing vessels should be promulgated as a matter of urgency to protect life and property

2. The safety rules, instructions and guidelines should be complied with

3. The training of the personnel should be improved adequately

4. The hull, machinery, equipment and radio installations should be surveyed at a regular time in order to ensure that their condition is in all respects satisfactory.

B. Shipboard safety

1. General

A seagoing vessel is the workplace, home and recreational area for its crew. The machinery spaces and navigating bridges, living, recreation and galley spaces are compacted into the smallest, most effective area possible. This is a potentially dangerous situation, since the crew is always close to a hazardous environment.

Every member of a ship's crew must think safety, work safely and remain constantly conscious of the hazards of the environment.

Shipboard safety is more than simply being careful. It includes knowing what is unsafe and how to avoid the careless actions and inactions that can make an area unsafe. Poor safety practices result from a lack of safety knowledge; carelessness results from a disregard from that knowledge. Both can lead to disaster.

A crewman who operates a piece of welding equipment without training may not know the safety rules. A person who smokes in a "no smoking" area may be acting in direct violation of safety rules he knows and understands. An officer who sees that a valve is leaking but does nothing to ensure that it is repaired may only be accused of inaction. However, the damages that can result from these practices will not be affected by any subtle

differences in intent. Safety requires full and continuous participation of every crew member.

2. Appointment of safety officers

Everybody at sea is familiar with the different kinds of accidents which routinely happen to seafarers, however, as far as I know there are no crew members assigned to deal with the problems of safety onboard Somali ships as is the case in many bigger maritime nations. It will be a good example and beneficial to everybody if we follow the same procedures to avoid accidents, whether minor or major, which happen to our seamen.

The Master or Owner is required to appoint a safety officer. If the owner opts for the choice to rest with the Master, he should ensure that the Master be advised that in making this decision due note should be taken of the fact that certain personnel may have attended an appropriate shore-based training course and should therefore be considered for the post. The appointed person shall continue to hold the post until:

a) that person ceases to be employed on the ship; or
b) his appointment is terminated by the employer. In the latter the Master will immediately have to appoint a successor.

The duties of the safety officer are wide and are best summed up in the following points:

1. The safety officer should use his best endeavours to ensure that the provisions of the safe working practices for seamen and the employer's occupational health and safety policies are complied with and to improve the standards of safety consciousness among the crew.

2. The safety officer should investigate all personal accidents which result in, or are likely to result in, the persons suffereing being incapacitated from work for more than three consecutive days. He should also investigate every dangerous occurrence and all potential hazards to occupational health or safety hazards, and make recommendations to the Master to prevent the recurrence of an accident or to remove the hazard.

   A good safety officer must remember that he is in no way a representative of any sectional interest and that he must be able to take an unbiased, objective view of any accident or complaint and present the facts to the interested parties.

3. The safety officer should investigate all complaints by crew members about occupational health and safety unless he has reason to believe that a complaint is of a frivolous or vexatious nature.

4. The safety officer should make representations, and where necessary, appropriate recommendations to the Master, and through him to the employer, about any deficiencies in respect of legislation.

5. The safety officer must ensure that the safety instructions, rules and guidelines are complied with.

6. He should maintain a record book describing all the circumstances and details of all accidents and dangerous occurrences and containing all statements made by witnesses thereto; recommendations to prevent future similar accidents or dangerous occurrences; details of the investigations, complaints and inspections.

7. He should make the records, kept under the above paragraph,

available on request to any safety representative, to the safety committee, to the Master, and to the Maritime Safety Department of the Ministry.

8. He should stop any work which he reasonably believes amy cause a serious accident and immediately inform the Master or his deputy who shall be responsible for deciding when work can be safely resumed.

9. He should carry out any occupational health or safety investigation or inspection required by the safety committee.

The importance of keeping records cannot be over-emphasised, particularly in view of the fact the safety officer may be reasonably liable for a fine if he fails to keep any of the records that are required by the regulations.

3. Appointment of safety representatives

The safety representative is entitled to a place on the ship's safety committee and as a member of that committee shall use his best endeavours to improve the safety awareness of the ship's crew and in particular those persons who have appointed him as their representative.

A safety representative may:

1. Participate, subject to the concurrence of the safety officer, in any of the investigations or inspections carried out by the safety officer or, after notification to the Master or his deputy, undertake similar investigations or inspections himself, whether or not such investigations or inspections have already been carried out by the safety officer.

2. On behalf of the crew on matters affecting the occupational health or safety of the crew, he will:

   a) consult with the Master, his deputy and the safety officer and make recommendations to them that any work which the safety representative believes may cause an accident, should be suspended;

   b) make representation through the Master to the employer;

   c) request through the safety committee, an investigation by the safety officer of any such matters.

3. Inspect any of the records kept by the safety officer.

There must be a clear requirement by regulations that where safety representatives are selected, the Master shall form a safety committee consisting of himself as chairman, the safety officer, and the elected safety representatives. It is important, however, to realise that a safety representative is chosen to carry out his work on behalf of his constituents at all times and not only to attend committee meetings. It is essential for the safety personnel to control the crew to follow the safety procedures as required by law.

4. Safety practices

The safety personnel should ensure that the following safety practices are observed:-

1. Wearing of safety equipment such as:-

   a) safety helmets,
   b) hearing protection,
   c) eye protection,

d) face shields,
e) respiratory protection,
f) hand protection,
g) foot protection,
h) protective clothing.

2. Signs, notices and colour codes:

- Colours and symbols appropriately used can provide ever-present information and warnings of hazards which are essential to safety at work, and in some instances may be independent of language. If there is a need to amplify or clarify the meaning of any symbols used in these signs and notices, then an appropriate text, for example, "No Drinking Water", should be given below the sign or "No Smoking" with a cigarette depicted
- Portable fire extinguishers are usually identified according to colour coding
- Gas cylinders: each cylinder should be clearly marked with the name of the gas and its chemical formula or symbol
- pipelines: the basic identification colour should be applied on the pipe either over its whole length or as a colour band at regular intervals along the pipe

3. Permit-to-work systems:

There are many types of operations onboard ship when the routine action of one way inadvertently endangers another or when a series of action steps need to be taken to ensure the safety of those engaged in a specific operation. It is necessary, before the work is begun, to identify the hazards and then to ensure that they are eliminated or effectively controlled.

A permit-to-work does not in itself make the job safe, but

is a guide dependent for its effectiveness upon the conscientious observance of the set procedure by those involved in the job.

4. Entering enclosed or confined spaces:

The atmosphere in any enclosed spaces not continously or adequately ventilated, such as cargo or other tanks, cargo holds, pump rooms, cofferdams, duet keels and stores, may contain toxic or flammable gases or be deficient of oxygen to the extent of being incapable of supporting human life. The safety personnel should assure that no person enters an enclosed or confined space without the prior permission of a responsible officer.

5. Tools and materials:

For every job, the proper tools of the right size should be available and used. Tools used for a purpose for which they were not designed may cause injury to the user and damage to the work item and the tools.

6. Welding and flame cutting operations:

Welding and flame cutting elsewhere than in the workshop should generally be the subject of a "permit-to-work". Operators should be competent in the process, familiar with the equipment to be used and instructed where special precautions need to be taken.

7. Painting:

Paints may contain toxic or irritant substances, and the solvents may give rise to flammable and potentially explosive vapours; men using such paints should be warned of the particular risk arising from their use.

8. Working aloft and outboard:

Proper precautions should always be taken to ensure personal safety when work has to be done aloft or when working outboard.

9. Anchoring and mooring:

- Anchoring: before anchors are let go, a check should be made that there are no small craft or obstacles under the bow. The man operating the brake and others in the vicinity should wear safety goggles and safety helmets.

- Mooring: surfaces of fairleads, bollards, bitts and drum ends should be kept clean and maintained in good condition. Rollers and fairleads should turn smoothly and a visual check made that corrosion has not weakened them.

10. Lifting and mechanical handling appliances:

All appliances and gear used for lifting, lowering and handling loads on a ship should be inspected, examined and, where necessary, tested at regular intervals. Inspections, examinations and tests should be carried out by a competent person.

11. Work in machinery spaces:

- Every dangerous part of any machine should be securely fenced unless it is in such a position or of such construction as to be safe to all the crew.

  All steam pipes, exhaust pipes and fittings, which by their location and temperature present a hazard, should be adequately lagged or otherwise shielded.

- A notice should be displayed at each boiler setting out operating instructions.

- A seafarer should never enter or remain in an unmanned machine space alone, unless he has permission from, or been instructed by the engineer officer in charge at the time.

- Adequate information should be available on each vessel, laying down the operating and maintenance safeguards of the refrigeration plant, the particular properties of the refrigerant and the precautions for its safe handling.

12. Hydraulic and pneumatic equipment:

Personnel using hydraulic and pneumatic equipment should be fully conversant with the proper procedures for its safe operation. Operation instructions should be followed at all times.

13. Servicing radio and associated electronic equipment:

Exposure to dangerous levels of microwave radiation should be avoided by strict adherence to instructions about special precautions contained in manufacturer's handbooks. Radar sets should not be operated with wave guides disconnected unless it is necessary for servicing purposes, when special precautions should be taken.

14. Storage batteries:

When a battery is being charged it "gases", giving out both hydrogen and oxygen. Because hydrogen is easily ignited in concentrations ranging from 4 % to 75 % in air, battery

containers and compartments should be kept adequately ventilated to prevent an accumulation of dangerous gases.

15.Work in ship laundries:

Many of the general hazards found in a ship's laundry are similar to those elsewhere on the ship; strains can be caused by improper handling of awkward or heavy loads and equipment. Washing left in gangways can cause falls and defective or improperly used machinery can cause injuries.

5. Fire prevention

Throughout history mariners have gone to sea in all types of watercraft, and more often than not, with very limited protection against the threat of shipboard fires. In the event of fire, persons ashore often have available the immediate assistance of well-trained firefighting professionals. Mariners are alone aboard ship, and when fires occur at sea they must remain onboard and cope with these incidents to the best of their own abilities. These efforts, often because of lack of knowledge, training and experience, have produced less than satisfactory results and at times have resulted in tragedy. Because of the many technological advances in ship design and operation, today's mariner must possess more knowledge than his predecessors in many special areas. Fire prevention, control and extinguishing are some of these areas.

In Somalia, every vessel should be so contructed and equipped that there is no substantial fire risk to the vessel or to persons onboard. The structural fire protection arrangements provided should be capable of withstanding the passage of flame for at least half an hour. The skipper should ensure that the crew is adequately trained in the use of fire fighting equipment and undertake its regular inspection.

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CHAPTER X

Prevention of marine pollution

1. General

The worldwide demand for oils of all kinds is continuously increasing with crude oil production rising up to several thousand million tons a year. Increased crude oil production will result in a continuous increase in the total amount of crude oil and oil products that are processed and transported each year. Most of this is transported and stored several times between the production well and the point at which it is consumed.

While incidents involving the massive discharge of oil into the sea are fortunately rare, smaller quantities of crude oil and also oil products frequently enter seas, estuaries, harbours and rivers as a result of accidents to vessels, tanks, pipelines, etc, and as a consequence of operational practice at sea.

2. Tanker Traffic in the Region

The Indian Ocean is the heaviest oil tanker traffic route in the world. Approximately 550 million tons of oil per year are transported from the Middle East to Western Europe and America. On any one day there is an average of 224 tankers within the East African Region. At the same time the Horn of Africa lies within the big shipping lanes connecting Europe and America via Suez to the Gulf, South East Asia and the Far East.

Of the various forms of possible pollution from ships, oil pollution is the most prominent. This is particularly so in Somalia which borders the Indian Ocean to the East and the Red Sea to the North. oil carried by ships may be discharged in one

way or another.

At this point it is necessary to define what pollution is:

Pollution is "the introduction by man, directly or indirectly, of substances or energy to the marine environment resulting in such deteterious effects as harm to living resources; hazards to human health; hindrance of marine activities, including fishing; impairment of the quality of seawater and reduction of amenities". Oil carried by ships may be discharged either accidently or deliberately, and, understandably, it is the accidental episodes that are well known, particularly since the Torrey Canyon incident of March 1967. That incident raised public awareness and indeed several more catastrophic incidents followed.

Fortunately, the Somali coast has not experienced many such catastrophies. The closest have been two incidents, the first one was the grounding of the 237.700 ton Japanese supertanker - Showa Marie at the strait of Malacca in January 1975. The second was the collapse of the 250.000 Spanish supertanker - Castillo de Belver, 25 km off the Cape of Good Hope in August 1983.

In both cases the loads of crude oil from the Middle East were lost. The grounding of the container ship M/V Ariadne in Mogadisho harbour in August 1985 posed a great chemical hazard to the entire city of Mogadisho. Fortunately the dangerous cargo was removed in time.

The probability of a major accident occurring in Somali territorial waters should perhaps be in direct proportion to the amount of tanker traffic. The second mode of discharge is the deliberate type, largely through tank washings and deballasting, especially when tankers approach the sheltered areas surrounding the home of crude oil in the Middle East. In

some cases the tank washings are done close to the East coast of Africa. The same is true for cargo ships.

All ships may need to take ballast water when travelling unladen or in bad weather. Ballast tanks occupy cargo spaces and are limited in size, so additional ballast may be carried in empty fuel tanks and when this is discharged it carries oil into the sea. Bilge water is pumped overboard and invariably contains oil from the ship's engines. Individually the quantity of oil released may be small, but since Somalia lies between two busy shipping lanes, the total amount entering the sea is considerable. Such discharging adds up with persistant practice and is revealed in the form of tar balls or oily deposits which are prevalent along the East coast of Africa.

3. Strategies for controlling ship-borne pollution in the East African region

Various strategies exist at the level of legislation, surveillance and enforcement. A regional consideration is useful because of the fluid nature of the shipping operations, elusive task of surveillance and the limited capacity of any individual state to carry out the task of surveillance and enforcement. Therefore, joint or co-ordinated action may have to be considered. This would require to start with, an inventory of the available capacity and legislation as well as an examination of options such as port-state strategies. Such information will, in any case, be necessary for the enforcement of Article 5 of the June 1985 East African Regional Sea Convention (the Nairobi Convention).

4. Regional combating of marine pollution

It is necessary for the countries of East Africa to establish a joint regional pollution combating policy with maximum priority given to navy and air surveillance. This may take different

forms:

- policy duties: monitoring, prevention, reporting of offenders and even rerouting or interception;
- assistance: assistance to shipping navigation aids;
- relief: which covers both assistance and rescue, antipollution measures, pollution control, etc. Some of these actions would seem to require priority. This is the case for:
- The protection of natural resources with special reference to avoiding fish pollution;
- the detection and prosecution of deliberate acts of pollution which contravene existing national and international regulations. This concerns mainly the detection of illegal discharges of oil at sea and the collection of evidence for prosecutions;
- search, rescue and assistance to shipping.

There are other actions which may be carried out in addition to or in conjunction with these priority tasks, such as scientific surveys concerned either with basic research or prospecting for natural resources, the observation of special situations arising from the discharge of domestic or industrial wastes, with or without waste pipes, or the discharge of cooling water from high capacity power stations situated along the coast, etc.

In addition to prosecutions for operational discharge from tankers, all actions designed to counter the effects of widescale pollution resulting from an accident at sea, should, for example, be added.

Consequently, the consideration of the facilities necessary to carry out these tasks require that a certain number of factors should be taken into account:

Environmental factors: geographical chracteristics of the zone

surveyed (area, cleanliness), meteorological and oceanographic conditions, existing infrastructures (airfields, logistic facilities), resources, i.e. the economic interest of the zone, and possibly local political conditions.

In Somalia, in particular, the navy bears the brunt of maritime surveillance assignments, especially where antipollution and depollution measures, control of shipping and surveillance of ocean fishing are concerned. It should be noted at the same time that the facilities available to the navy for civilian surveillance of the economic zone are not always such as to enable it to carry out satisfactorily the assignments to which it is alerted. The sophistication of observation equipment on aircraft are ill-suited to civilian surveillance and greatly increase the cost of intervention.

5. Sea water sampling

When crude oil is discharged into the sea, whether as a result of tanker accident or as a deliberate discharge, the natural spreading ultimately results in the formation of a very thin layer of oil which may not even exceed a fraction of a millimetre in average thickness.

The sample is collected in a very careful manner. A single sample containing a litre of oil should be taken. If different types of oils are observed in the area, samples of these should be collected. Suitable records of the precise location, date and time of sampling, should be sent to the laboratory. Much characterization work can be done with very small samples of up to a few millilitres in size and limited sample availability should never be used as a reason for not submitting a pollutant for laboratory examination. However, a litre of oil is required for a comprehensive laboratory characterization and where possible the sample should contain this quantity of oil (in the case of oil in water emulsions, which contain up to 80 % water,

it would be necessary to collect five litres of emulsion). Clean glass jars should be used (e.g. Kilner or, for larger samples, confectionary jars).

Suitable confining and skimming techniques should be used to collect the sample from a thin layer of oil on water.

Absorbent polyurethane foam sheets or plain polythene sheets can also be used with advantage to gather small amounts of oil which can subsequently be recovered.

Oil deposited on rocks or other impervious materials should be scraped off and placed directly into the sample container. Lumps of tarry or waxy pollutant should also be placed directly into sample containers; no attempt should be made to heat or melt these samples to enable them to flow into a container. Oil adhering to seaweed, small places of wood, sand, plastic materials, cloth, vegetation or other debris should be dealt with by placing the complete specimen comprising oil and support material, into the sample container. Oiled dead birds should be dealt with similarly. The container, particularly glass, should be adequately protected to prevent damage in transit.

6. Recommendations

It is evident that Somalia is suffering to a lesser degree from the effects of chronic oil pollution as a result of the discharge of oily residues from tankers traversing its marine water to and from the Middle East area in the Western Indian Ocean. But Somalia is at risk from pollution caused by maritime accidents, both on the High Seas and inshore, and during related terminal and port operations. There is, in general, an accute lack of national oil spill contingency planning backed up by the existence of oil spill response equipment, material and trained personnel.

Taking into account this necessary preliminary assessment of the problems, the following recommendations could be made:

- National legislation and regulations relating to the control and prevention of marine pollution from ships should be strengthened and, where applicable, steps should be taken to ratify and implement international conventions relating to the protection of the marine environment

- Somalia may require technical assistance from IMO in this task

- Somalia should develop national oil spill contingency plans

- The Somali Government should have regional co-operation arrangements with the other countries in the region for combating oil pollution

- National seminars and workshops on oil pollution prevention, control and combating should be regularly convened and organized to provide the necessary training to enable all levels of personnel within the country to play their respective roles in response to an oil pollution emergency.

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CHAPTER XI

Summary of Conclusions and Recommendations

The Advantages of a Maritime Safety Department

National Aspect

Some safety matters are presently conducted through the marine department, but this appears to be done in an unorganized way since the people handling them are themselves lacking adequate knowledge needed for fulfilling this duty.

The creation of a separate Maritime Safety Department will draw the expertise, equipment and materials of safety into one family. This family will have no other duty but to deal with safety matters. This will reduce the dangers facing ships and their crews. It is a fact that, if the crews are encouraged to maintain ships regularly, the docking expenses will become less. Officers usually try to rectify faults when they are expecting surveyors for inspection, just the way treasurers are scared of auditors.

Lack of experience may bring mismanagement in all types of services, be it operational or financial. Unsystematic ways of conducting measures may result in unnecessary delays or failures. Human lives and property at sea may be jeopardized if the correct remedies are not followed. High cost and unlimited repetition of difficulties may arise if a correct programme is not set. The valualbe advice of maritime safety personnel may help the government draw certain safety policies.

International aspects

Shipping is international in character, and the ocean the common heritage of mankind. Before the advent of aircraft,

ports were the main gates to the outside world. Yet even today the ship is still the most important means of transport. International trade passes through the sea whatever the distance may be: This means an international approach is necessary when dealing with the question of shipping and related matters.

The international bodies of IMO, UNCTAD and ILO endeavour to help governments make shipping economical and safer than they were before.

"Safer shipping and cleaner seas" is one of the motives of IMO. This is the international obligation of every country.

The Maritime Safety Department personnel will help the government of Somalia follow these international obligations, by studying the relevant conventions and other instruments and the possibility of their adoption and implementation. The maritime safety personnel will negotiate with their counterparts in the area to draw any regional cooperation schemes concerning maritime safety and pollution prevention.

The difficulties of the infant Maritime Safety Department

In the previous chapters of this paper, we spoke about different topics with which the newly established "Maritime Safety Department" should deal. It is evident that this will be a big burden upon the newly established department, but without difficulties nobody reaches success. I hope in the near future, Somalia will reach a stage where highly trained graduates from the World Maritime University will be available to deal with the different aspects of safety - a discipline, which I am confident to say, is rarely heard in the maritime circles of Somalia at the present time.

Some topics such as Maritime Legislation and Maritime Education

will not be totally dealt with by the Administration but in collaboration with the other institutions concerned, such as the Ministry of Justice and the Ministry of High Education, respectively.

Legislation forms the base for safety. It is the most important tool a surveyor possesses to carry out his national and international duties successfully. Without it nothing could be performed legally. For example, without the necessary instruments you cannot stop, inspect, control or detain a substandard ship if the ship is sailing with an angle of heel of 45o.

To draft new, up-to-date, Somali Maritime Legislation is not too difficult a task, but enforcing it is not easy.

Therefore, in the first years after the implementation of the new code, the administration should be very strict in the field of enforcement. A large percentage of maritime casualties are related to the "Human Factor". This can be reduced by training. A Somali form of standards of training, certification and watchkeeping should be formulated. I do not think that any Somali vessel will be undermanned quantitatively but the quality of those people should be improved.

Luckily, the safety record of Somali vessels is comparatively good. Only certain minor strandings have taken place in the past, and no major disasters have happened.

Surveys and inspections control how the ship is complying with the relevant rules and regulations. Correctly surveyed ships seldom meet difficulties at sea. Intermediate surveys are very important, especially for the life-saving appliances which deteriorate with time due to lack of maintenance, corrosion, too much paint on the joints, etc. Shipowners bring their vessels for survey at the right time to renew their

certificates because otherwise people will be reluctant to deal with them commercially.

Despite all the precautions taken in port state control survey and inspection, manning, training, development in ship building, and development of new navigational aids casualties still occur. These are unfortunate occurrences, but we still learn something out of it. That is why casualty investigation is so important. Its purpose is to learn lessons, not necessarily to sue the people involved.

Search and Rescue is a tough job which needs both men and materials. The organization mostly suited to assist the maritime administration in that field is the Navy, which by utilizing its fast speedboats, helicopters and aircraft, can render assistance more quickly than any other body ashore.

Combat and prevention of marine pollution is also not an easy job. The situation can be easily handled if some form of contingency plan exists. Any pre-planned combat procedures could be easily put into action within the predetermined time. The best policy of handling an emergency situation is to deal with it while it is not too late, utilizing the men and resources plannd for such a situation. The resources should not necessarily be used for a single purpose, but beforehand be developed in such a way as to utilize them for different purposes, i.e. combat of marine pollution, SAR, repairs and maintenance of navigational aids, surveillance and patrolling and even some normal services but which would not mean that these resources were unavailable when required to fulfill the prime aim.

It is worth mentioning that, although these resources may belong to different organizations, they should be put under one command during an emergency. In normal times this command must make sure that these resources could come under their disposal

within a prescribed period of time and in a safe and sound condition.

Summary of the Recommendations

- Since in the Ministry of Maritime Transport and Ports of Somalia there is no separate department which deals with maritime safety matters, I strongly recommended (in Chapter II) "the establishment of a new Maritime Safety Department", which will serve to safeguard the national fleet and help it withstand the many risks that can be encountered at sea.

- As we mentioned earlier, the present Maritime Code was drafted in 1958, but during this time many international conventions have been adopted and amended; also the volume of Somali tonnage has changed, so that I recommended, in the same Chapter, the need to up-date the Maritime Code of Somalia, and to promulgate the necessary subsidiary legislation (rules /regulations).

- Somalia should ratify and implement SOLAS, 1974, since it has superseded SOLAS, 1960.

- According to the International Maritime Conventions adopted by the Somali Government and in pursuance of Somali Legislation, the surveys (mentioned in Chapter IV) upon all vessels carrying the Somali Flag should be carried out.

- While revising the present Somali Maritime Code, a chapter dealing with safety of navigation should be added. The future code should clarify when inspections will be necessary.

- In Chapter V, I recommended that since maritime training is vital for the safety and efficiency of operations of ships,

the Somali Government must provide proper maritime training facilities for the maritime academies, institutes and all kinds of maritime training schools - to fulfill the STCW standards.

- Since Somalia presently lacks an organized SAR system, I recommended (in Chapter VI) the establishment of a regional cooperation-SAR system, which could be more effective and cost less.

- The National Maritime Code should include the definition of casualty and the authority responsible for the conduct of casualty.

- For the Maritime Safety Department to conduct such casualty inquiry/investigation, trained/qualified personnel will be needed to carry out such tasks.

- In Chapter IX, I recommended the following measures:-

  1. National safety rules in respect of the operation of fishing vessels should be promulgated as a matter of urgency to protect life and property;

  2. the training of the personnel should be improved adequately;

  3. the hull, machinery, equipment and radio installations should be surveyed at regular intervals in order to ensure that their condition is in all respects satisfactory.

- National Legislation and Regulations relating to the control and prevention of marine pollution from ships should be strenghtened and, where applicable, steps should be taken to ratify and implement international conventions

relating to the protection of marine environment.

- Somalia should develop national oil spill contingency plans.

- The Somali Government should have regional co-operation arrangements with the other countries in the region for combating oil pollution (see Chapter X).