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WORLD MARITIME UNIVERSITY
MALMOE, SWEDEN

AN ASSESSMENT OF MARITIME
ADMINISTRATION'S ROLE IN MARINE
CASUALTY INVESTIGATIONS IN
KENYA

by

GERALDINE MWONGELI MAINGI
KENYA

A dissertation submitted to the World Maritime University
in partial fulfilment of the requirements for the award
of the:

Degree of Master of Science
in
General Maritime Administration

Year of Graduation

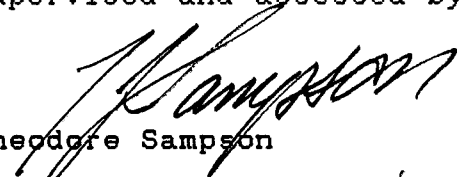
1991

I certify that all material in this dissertation which is not my own work has been identified and that no material is included for which a degree has been previously conferred upon me.

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

Comingsi
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23rd Oct. 1991
.....

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THIS PAPER IS DEDICATED TO
MAUREEN MUTANU AND MICHELLE P. NDUNGE, MY DAUGHTERS,
WILSON MAINGI, MY FATHER,
GRACE MWIKALI MY MOTHER, AND MBINDYO PHILIPS.

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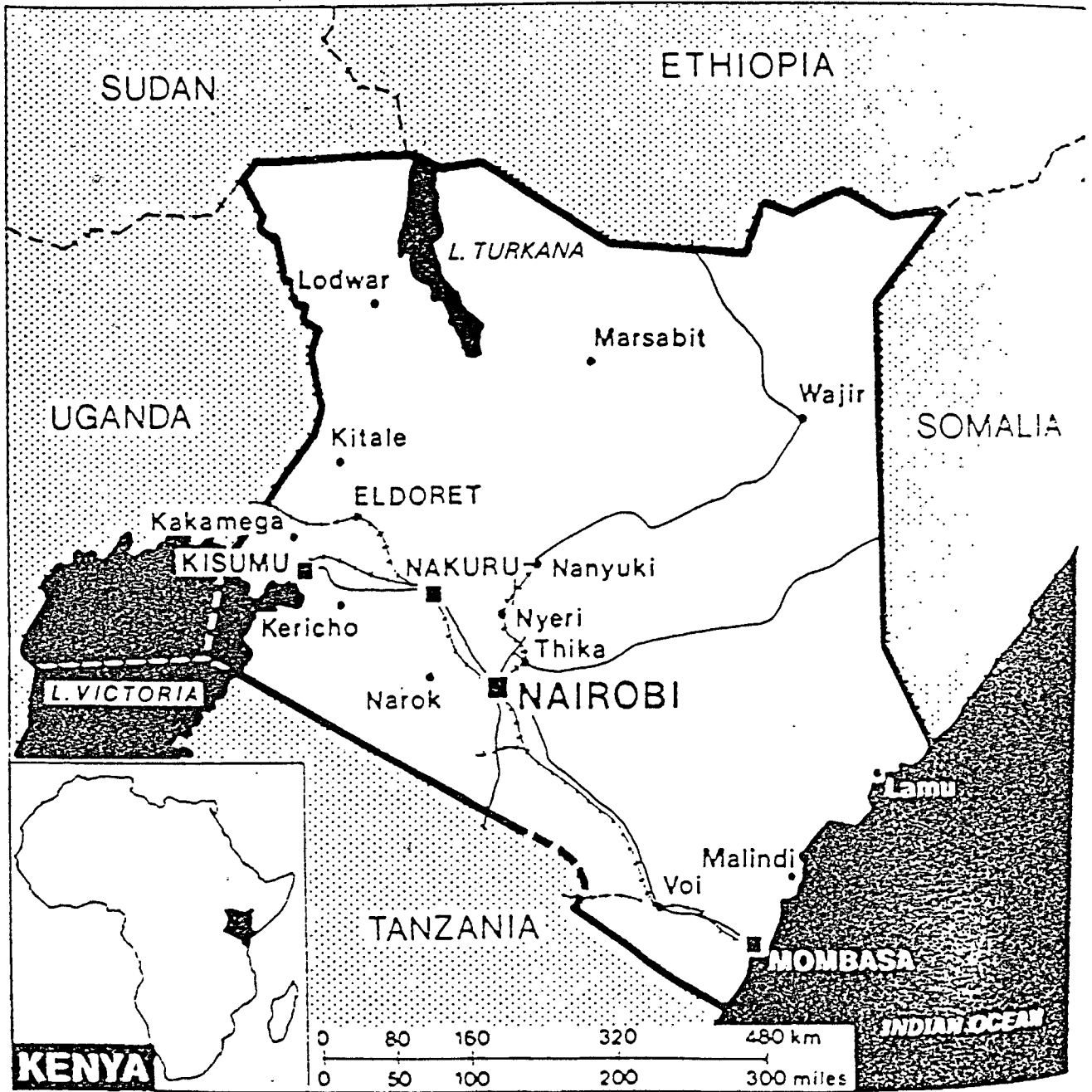


TABLE OF CONTENTS

TITLE:	PAGE

DEDICATION	
ACKNOWLEDGEMENTS	
PREFACE	i
CHAPTER 1.	1
1.1 INTRODUCTION.	1
1.1.1 HISTORICAL SHIPPING ACTIVITY - AN OVERVIEW.	1
1.1.2 MARITIME SAFETY - AN OVERVIEW.	6
1.2 THE PRESENT MARITIME LEGISLATION.	8
1.3 THE PRESENT FUNCTIONS AND ACTIVITIES OF MARAD.	10
1.4 RESPONSIBILITIES OF THE MINISTRY OF TRANSPORT AND COMMUNICATIONS.	10
1.5 RESPONSIBILITIES OF KENYA PORTS AUTHORITY.	14
1.6 RESPONSIBILITIES OF THE MERCHANT SHIPPING OFFICE.	15
1.7 RESPONSIBILITIES OF THE KENYA RAILWAYS CORPORATION .	19
1.8 OTHER DEPARTMENTS.	22
Remarks.	23

CHAPTER 2.	PROCEDURE / SYSTEM FOR THE INVESTIGATIONS INTO MARINE CASUALTIES - THE PRESENT SITUATION.	25
	General over_view	
2.1	THE MERCHANT SHIPPING OFFICE INVESTIGATIONS.	25
2.2	CASUALTY AND ACCIDENT REPORTS.	29
2.2.1	FORMAL INQUIRIES.	31
2.2.2	DISCIPLINARY HEARINGS.	35
	Remarks.	35
CHAPTER 3.	MARINE CASUALTY INVESTIGATIONS - SAFETY PROMOTING AIM.	37
3.1	DEFINITION OF CASUALTY.	37
3.2	TYPES OF MARINE CASUALTIES.	37
3.3	TYPES OF CASUALTY INVESTIGATIONS.	38
3.4	PURPOSE OF SAFETY INVESTIGATIONS.	41
3.4.1	PRELIMINARY INQUIRY.	43
3.4.2	FORMAL INVESTIGATIONS.	46
3.5	INTERNATIONAL OBLIGATIONS.	48
3.6	LESSONS LEARNED.	52
CHAPTER 4.	OTHER COUNTRIES' LEGISLATION AND PRACTICES.	56
	General overview	56
4.1	UNITED STATES OF AMERICA.	57
4.1.1	THE NATIONAL TRANSPORTATION SAFETY BOARD.	57
4.1.2	INVESTIGATION PROCEDURE.	59

4.1.3	PUBLIC HEARINGS.	61
4.1.4	REPORTS AND RECOMMENDATIONS.	61
4.1.5	REPORTS AND PUBLICATION.	62
4.2	THE UNITED STATES COAST GUARD.	62
4.2.1	MARINE CASUALTIES.	54
4.2.2	MEMORANDUM OF UNDERSTANDING.	67
4.2.3	PERSONNEL INVESTIGATIONS.	68
4.3	UNITED KINGDOM.	70
4.3.1	DUTY TO REPORT ACCIDENTS.	71
4.3.2	THE MARINE ACCIDENTS INVESTIGATIONS BRANCH.	72
4.3.3	INVESTIGATIONS PROCEDURE.	73
4.3.4	FORMAL INVESTIGATIONS.	74
CHAPTER 5. CONCLUSIONS AND RECOMMENDATIONS.		77
5.1	NATIONAL OBLIGATION.	75
5.1.1.	LEGISLATION.	78
5.1.2	CASUALTY (definition).	79
5.1.3	JURISDICTION OF THE INVESTIGATING AUTHORITY.	80
5.1.4	REPORTING.	81
5.2	THE PURPOSE.	83
5.2.1	DISCIPLINARY / CIVIL LIABILITY.	83
5.3	CASUALTIES TO BE INVESTIGATED AND EXTENT OF INVESTIGATION.	85
5.3.1	PUBLIC INQUIRIES AS PART OF THE INVESTIGATION.	87
5.3.2	ANALYSIS AND DETERMINATION OF CAUSES.	87
5.4	POWERS OF THE INVESTIGATOR.	89
5.5	WITNESS INTERVIEWS.	90
5.6	THE INVESTIGATING AUTHORITY.	92
5.7	REPORTS OF THE INV. AUTHORITY.	95
5.8	SAFETY DEFICIENCIES AND RECOMMENDATIONS.	96

CONCLUSION.	98
ANNEXES.	100
REFERENCES.	115
BIBLIOGRAPHY.	117
ABBREVIATIONS.	120

PREFACE

The objective of this paper is to assess and analyse the characteristics of the present marine casualty investigations procedure / system (under the Kenya Merchant Shipping Act) which is employed in Kenya for the purpose of ascertaining the causes and / or probable causes of marine casualties.

This assessment is an attempt aimed at defining and recommending the best possible methods of improving impartiality (particularly within the formal inquiries procedure) and the effectiveness of the general casualty investigations system in the country.

It is further the intention of this paper to objectively demonstrate how complete casualty reports, comprehensive investigations and the subsequent operational follow up of recommendations, monitoring and dissemination of information, could effectively contribute to marine safety promotion in Kenya. In addition this could prevent future occurrence of casualties and the prevalent costly and time consuming inquiries. This is because the right targets and interests will be provided with the opportunity to learn the extent and nature of the conditions that downgrades safety, thereby making suggestions for the correction of any wrong procedures uncovered. Mariners would as well learn from the experience of others and become alerted to the problems.

These are goals perceived as geared towards assisting the Maritime Safety Administration in Kenya in enhancing its efforts to ensure continuous safety of life and property at sea.

Particular attention will be given in chapter five to the desirability for Kenya to develop a system that:

- Will meet the needs and nature of the maritime community by retaining the best features of the present system, while making modifications where necessary at reasonable costs,
- Will be consistent with IMO conventions and resolutions, giving particular emphasis to the necessary ratification of the important instruments relating to safety.

In order to facilitate necessary analysis, conclusions and achievement of the above objectives, the following topics will be taken into account and examined in chapters 1, 2, 3, and 4, in that order of priority:

- The present functions and responsibilities of the Maritime Administration in Kenya with a view to analysing the need for some structural changes, particularly within the Maritime Safety Administration, which is the regulatory body entrusted with the powers to conduct casualty investigations. (ch.1)
- The existing marine casualty investigations legislation, practices and procedures in Kenya. (ch.2)
- The most commonly acceptable safety promoting casualty investigation studies. (ch. 3)
- A comparative examination of other countries' legislation and practices (ch.4)

C H A P T E R 1

1.1 INTRODUCTION.

Kenya, a product of the European scramble for African colonies in the 19th century, attained her independence from British rule in 1963.

Geographically Kenya is situated on the Eastern Coast of Africa and has a total area of 582,646 square kilometers. About 13,393 square kilometers of this area is water covered, mainly by Lake Turkana and part of Lake Victoria. The country borders Ethiopia on the North East, Sudan on the North West, Somalia on the East, Tanzania on the South, the Indian Ocean on the South East, Uganda and Lake Victoria on the West. Kenya has a coastline which covers 200 miles, stretching from the border with Somalia in the North to the border with Tanzania on the South.

The official estimate of the population of Kenya as of 1990 was approximately 24 million people with a growth rate of about 3.6 % per annum.

Nairobi is the capital city as well as the Administrative Headquarters of Kenya and has a growing population estimated at 1.5 million people.(1)

1.1.1 HISTORICAL SHIPPING ACTIVITY - AN OVERVIEW.

Participation of Kenya in marine activities dates back to the pre - Islamic period in East Africa when Arab traders linked the Eastern Coast of Africa to the countries of the Far-East, India and the Arabian Gulf. From here trading commodities were brought for exchange at the various ports along the coast. By the 12th and 13th

centuries the old Mombasa town acted as a Dhow traffic port town, as well as Manda situated on the North coast of Kenya. Later in the 15th century Mombasa was the chief sea port of the coast.(2) Thus, intensified commercial activities were a common phenomenon along the East Coast of Africa though sometimes interrupted by changing trade patterns, trading commodities and the political situation of the time. During the 16th century, the Portuguese had established control of maritime trade on the Indian Ocean and viewing Mombasa as having a distinct advantage because of its deep sheltered harbour, made the port their Headquarters.

This continued until the late 1880's when the British dislodged the Portuguese and thus consequently, laid the foundation upon which the port of Mombasa is based today. The construction of the first jetty by the British took place in 1886, in Kilindini for the purpose of discharging arriving materials for the construction of the rail line through Kenya to Uganda.

Today, Mombasa port is the chief seaport of Kenya, handling the country's export and import trade as well as trade for Uganda, Rwanda, Burundi, Northern Tanzania and Southern Sudan. Other ports serving coastal trade and undergoing development are Finji, Kilifi, Kiunga, Lamu, Malindi, Mtwapa, Shimoni and Vanga. Kisumu is a lake port serving transport needs on Lake Victoria and the surrounding regions.

The increasing growth of population in Kenya and that of neighboring landlocked countries, coupled with the recent economic development realized since independence, has resulted in an increase in shipping activities in Kenya. The various functions of the port have, therefore, developed in response to these demands and the reliance of Kenya and these other countries on overseas trade.

Mombasa port began its development into a modern port from the 1920's when the first deep water berth was completed in Kilindini. This was followed by nine more in the 1950's. The 1960's saw the construction of an oil jetty among other facilities at Kipevu for accommodation of oil tankers.

Demand for more berthing accommodation necessitated the construction of berths 11- 14 during this same period. The amount of traffic passing through Mombasa port reached 5 million tons in 1969 from 3 million tons since independence. This traffic averaged about 6.5 million tons in the 1980's with a peak throughput of 8.4 million tons in 1981 following the completion of berth numbers 16 and 17 in 1975 for container handling.

As a consequence of this construction, container traffic handled through the port continued to grow, reaching over 129,666 TEU'S in 1989 from 92,461 TEU'S in 1984. This was the time when an inland container depot at Embakasi, Nairobi had become operational and a container berth no. 18 had been completed three years earlier at the port.(3)

The above figures are of special relevance to this paper as they are an indication of the large number of ships of various types, and sizes engaged in sea transport and visiting the port of Mombasa. Although Kenya has no ships engaged in overseas trade, the responsibility of safety and seaworthiness of all the foreign flag ships calling at Mombasa is that of the Ministry of Transport and Communications, presently delegated to the Merchant Shipping Office in Mombasa.

Besides cargo vessels, the port also handles passenger ferry services operating through Likoni, providing a transport link between the island and the mainland across the Kilindini channel. Millions of passengers, among them

thousands of tourists, and vehicles cross the channel every year. Cruise vessels also operate between Mombasa, Mogadishu, Lamu, Zanzibar, Dar -es -Salaam, Seychelles, Comoro Islands and other tourist sites in the region. Their number is expected to increase to cater to the growing number of tourists.

The early 1990's, saw the launching of the Kenya National shipping line which has been viewed as a turning point for the country's shipping industry. Kenya's shipping has been dominated by foreign interests since the collapse of the East African shipping line thirteen years ago. This line had represented the three Eastern African countries in international shipping and influenced their early involvement in IMO activities.

Following the collapse of the East African Shipping Line, Kenya's participation in international shipping activities was greatly reduced. The development of the Kenya National Shipping Line is therefore expected to enhance the present position in shipping through transportation of national cargo, provision of services to shippers in Kenya and the neighbouring landlocked countries. It will also provide employment for Kenyan mariners.

This may also influence the long overdue national obligation for the ratification and subsequent implementation of those IMO conventions that have not been recognised by Kenya. It could be of great significance in the promotion and development of marine safety in Kenya. For example, ratification of SOLAS 1974 / 78 and the 1988 protocol could enable creation of upto date statutory rules and regulations to ensure safety onboard Kenyan and foreign ships. Presently, Kenyan registered vessels practically continue to operate outside the purview of

this convention because the Merchant Shipping Act has not provided for application of the provisions of SOLAS 1960 to which Kenya is a signatory. Unless Kenya becomes party to the convention, it may not exercise the type of control provided in the convention. In fact, the surveys and certificates which could be issued to foreign ships would even earn the country some foreign currency. On the other hand, acceptance of the STCW 1978 Convention would show that Kenya recognises the need to maintain high training and certification standards for seafarers necessary for safe operation of ships. Ratification of the same would also form the basis for Kenyan domestic training and issuance of certificates of competency acceptable internationally. It will further make it easier for Kenyan mariners to secure employment on foreign ships.

Generally, because of its obligation as a flag state, recognition of international conventions will benefit the country in gaining international recognition in the maritime field. It will also enable the country to have easier access to technical assistance and cooperation from IMO and other states.

Last but not least, marine operations in Lake Victoria have also been active. Vessels of varying sizes, technology and types have plied the lake serving trade demands along the coast and within the vicinity of the lake for years. There has been an increase in the number of passenger and cargo services to Southern Nyanza ports such as Homa Bay, Kendu Bay and Kisumu, meeting both population and economic growth demands. Transportation in the lake operates at minimal costs and this has made it a preferable choice for overcoming the long distances that by any other mode of transport would be very expensive.

Train wagon ferries between Kenya, Uganda and Tanzania

have been serving trade demands in the region and are expected to increase due particularly to the current peaceful political situation in Uganda.

Many more fishing boats and canoes, fisheries, research boats, police patrol boats, and privately owned passenger and pleasure boats also operate in various waters along the coast and on Lake Victoria. Their sheer numbers, the pronounced unseaworthiness, age and the poor manning quality of these vessels have all raised concern for the Maritime Administration and the government.

1.1.2 MARITIME SAFETY - AN OVERVIEW.

The marine activities described above have not gone on without incidents or accidents. There have been casualties within the territorial waters of the country which have involved Kenyan registered, also unregistered commercial vessels, and foreign flag vessels. To note a few of the most current cases: " the tug Harrier disappeared while on her voyage to Zanzibar in 1988 with loss of all on board (a commission of inquiry was set up to conduct the casualty),(4) an oil storage and supply barge the Alpha K sunk in February, 1990,(5) the F.V Ujuzi grounded in May, 1990,(6) and the motor tanker Bernora grounded in July, 1990 while bound for Formosa fishing grounds with loss of 10 lives " (7). Although these are only four casualties, I find the frequency of occurrence particularly of the last three, to be very short and indeed very revealing in respect to marine safety in the country. This is most apparent when one takes into account the small size of the Kenyan registered fleet.(Annex 2).

In Kenya, as elsewhere in the world, sea transport is known to involve high risks. The tremendous technological

changes that have taken place in ship designs, manning levels and limits on nationality of crew, have been changing along with management systems for vessels and cargoes, making some of the risks even more complex. Also the uncertain and inhospitable sea conditions in which vessels must operate, the increasing overreliance on technical developments and continually aging fleet are just three of the many factors which cause concern for old and new types of hazards and which can lead to an increase in casualties.

To elaborate on the ship age factor and its relation to casualties, studies by Prof. J. W Doerffer in 1990 indicated that the age of a vessel has been a disadvantageous factor. According to his report to IMO, the lowest casualty rate in the world fleet is in the group of new ships up to the age of 10 years. This rate rises sharply for the vessels in the age group of 10 to 14 years, and attains its highest level for the group 15 to 19 years old. The casualty rates for ships above 20 years old is nearly 60 % higher than for ships below 14 years. He goes on to say that " the older the ship, the more they are apt to sustain damage, especially if they are not adequately manned ".(8)

Annex 2 has a lot of relevance here as it reflects a clear picture of the age of these vessels. The minimum age being 10 years and the maximum age 39 years, indicating thus the requirement for high standards of maintenance. And expected increase in casualties in the future.

The extent and importance of marine activity in Kenya, coupled with the appreciation of the seriousness of the safety problem is highlighted here in an attempt to focus attention in this document on the need for a viable casualty investigations system. Difficulties however, encountered in obtaining access to any compiled marine

casualty data has precluded a statistical evaluation of the scope of the problem which Kenya faces.

1.2 THE PRESENT MARITIME LEGISLATION.

The Kenya Merchant Shipping Act of 1967 was modelled on the British Merchant Shipping Act of 1894. This was adopted during the inception of the now defunct Eastern African National Shipping Line, which was a joint venture between Kenya, Uganda, Tanzania and Zambia. Although time has passed and marine activities have increased in Kenya, no changes have been made to this act. Comparatively many changes have already been effected by the British to update this maritime legislation. Kenya has since this time ratified a few IMO conventions, but none of them have been incorporated into the Kenya Merchant Shipping Act. Another deficiency of this legislation is that it does not apply to the regulation of inland water transport.

Since the Kenya Merchant Shipping Act originally came into force on December 1, 1967, it has only been amended by a few legal notices. It is comprised of 10 parts which cover 317 sections. Very briefly, the individual parts deal with:

Part 1 (Preliminary) - interpretation.

Part 11 - Registration and licensing of ships
and covers transfers, mortgages, name of ship,
nationality and flag etc as well as
measurement of ships and tonnages.

Part 111 -Masters, officers, seamen and

apprentices, ranging from their certification to their contracts of employment, wages, provisions, health and accommodation, protection and discipline. It also covers relief and repatriation of distressed seamen.

Part 1V - Passenger ships.

Part V - Safety in all its ramifications i.e surveys, load lines, certificates, distress, prevention of collisions, loading of cargo, and seaworthiness.

Part VI - Wrecks - the receivers of wreck, removal of wreck, salvage and investigations into casualties.

Part VII - Limitation of liability and division of liability in the event of a collision.

Part VIII - Legal proceedings such as offenses, jurisdiction, foreign ships, inquiry into cause of death on board a ship, detention of ships and limitation of actions in civil proceedings.

Part IX - Pollution.

Part X - (is supplemental) and deals with such matters as exemptions of government ships, general powers of the minister, delegation of powers and the powers to make regulations.(9)

For the purpose of this paper, the primary focus is on

part VI (b), which deals with investigations into shipping casualties under the Sub - Title " Shipping casualties and accidents on ships " . (Annex 3 is a typed copy of part VI (b)

Despite the lack of amendments to the Act, it is still applicable to the country's requirements dealing with maritime matters. However, Kenya should undertake to update it by incorporating those conventions that have been ratified as well as the provisions of a number of other conventions which have not yet been ratified. These conventions have a great significance on the country's participation and contribution to international shipping trade, its promotion of marine safety and its protection of the marine environment. International conventions provide for a significant source of international law and as such, the required basis for the establishment of national legislation governing maritime activities.

Certain international obligations e.g SOLAS chapter 1 (reg. 21) place on member parties the requirement to investigate casualties occurring to any of its ships subject to the provisions of the convention

Under the ILO - Minimum Standards Convention 1976, each member state should undertake to hold an official inquiry into any serious casualty involving ships registered in its territory, particularly those involving injury and or loss of life. The final report of such an inquiry is also required to be made public etc.

In order for any flag state to effectively fulfill these obligations, first it must be a party to the conventions, otherwise it may have difficulties in establishing the necessary regulations and rules to assist MARAD in performing its safety promoting functions.

In addition to the conventions recommended under 1.1.1, i.e SOLAS and STCW 1978, Kenya should consider MARPOL 1973

/ 78 as well. Considering that Mombasa port has the capability of berthing ships of all sizes and types, including large tankers, there is need for provisions for prevention and control of marine pollution in the country. If a major spill was to take place today in the coastal waters, the only option for MARAD would be to seek assistance from foreign countries and the time lag may prove disastrous to the marine environment and to the nation at large.

Provisions in MARPOL would further make it easy for violations to be dealt with. Reporting of spills and other marine environment violations would also be effected. They would provide for the right to arrest and detain ships which violate the requirements laid down in the convention. The surveys and issuance of certificates provided in the convention could even earn the country foreign exchange. Because Kenya has no fleet of tankers and considering the financial burden of this convention, MARPOL 78 could be considered first to meet the above urgent needs.

Since the country lacks adequate requirements to regulate fishing vessels safety and considering the safety deficiency posed by these vessels in Kenya, the international convention for the safety of fishing vessels 1977, needs to be accepted. The Kenya Fisheries Act only regulates net size and other fishing related activities.

The International Regulations for Preventing Collisions at sea, COLREG 1972, has relevance here for provision of collision regulations and guidelines in the country.

Kenya has been very keen in promoting tourism in an attempt to diversify the economy and attract foreign exchange. Mombasa harbour today is providing berthing facilities to cruise ships. The government, in view of recognising cruise ships and passenger interests should

recognise the Athens convention on carriage of passengers and their luggage.

Other instruments of major importance are the stipulated resolutions (annex 4). They provide recommendations necessary for casualty investigations jurisdiction guidelines, casualty information, casualty cooperation requirements etc.

The above are a few of the many conventions that cannot be ignored because of their relevance to marine safety promotion, and are useful inter alia for the development of maritime national legislation.

1.3 THE PRESENT FUNCTIONS AND ACTIVITIES OF MARAD.

Unlike many traditional maritime nations and some developing countries, Kenya does not have a clearly defined and well structured maritime administration. However, the Maritime Administration (MARAD) in Kenya is placed under the responsibility of the Ministry of Transport and Communications which has delegated authority to its Department of Civil Aviation. MARAD forms a division within this départment.

1.4 RESPONSIBILITIES OF THE MINISTRY OF TRANSPORT AND COMMUNICATIONS.

The Ministry is in charge of maritime policy, e.g, shipping policy involving shipping regulations, economic regulations, environmental regulations, operational regulations, and jurisdictional regulations amongst

others. In those areas which fall under its jurisdiction, it coordinates and handles all matters pertaining to IMO and other international agencies, e.g, UNCTAD and ILO, in so far as they concern maritime activities in Kenya.

The remaining maritime administrative functions have been delegated by the Ministry of Transport and Communications to the Kenya Ports Authority (KPA). The KPA therefore administers the Merchant Shipping Act with respect to those functions falling under its jurisdiction and pursuant to the Kenya Ports Authority Act of 1977. However, the safety maritime administration functions and duties are delegated to the Merchant shipping Superintendent. The Merchant Shipping Superintendent is appointed by the Minister for Transport and Communications but he remains an employee of KPA, thus designated to carry out Safety Administration functions stipulated in the Merchant Shipping Act.

Under section 313 of the above Act, it is provided that:

"For the better execution of certain provisions of this Act the Minister may delegate his powers except the powers to make rules and regulations and powers conferred by sectionsof this Act, to an officer in this Act referred to as the Merchant Shipping Superintendent and any thing done by such officer in respect of this Act in consequence of such a delegation shall be deemed to have been done by the Minister".

The above matters are however, delegated to these authorities after they have been ratified and adopted by the Government.

1.5 RESPONSIBILITIES OF THE KENYA PORTS AUTHORITY.

The KPA, was established by the Kenya Ports Authority Act of 1977, becoming law in 1978. This replaced the corporation status adopted by the Eastern African community which ceased on 31st Dec. 1977. The objective of the Act was to facilitate and achieve development and management of the ports along the coast of Kenya amongst others. This Authority is managed by an executive managing Director and a Board of Directors.

Its responsibilities include:

- Carrying out of all shipping activities of the industry with the major aim of developing the ports consistent with modern port economies.
- Providing facilities for cargo handling and warehousing in the ports.
- Installing and maintaining navigational aids, etc along the coastal waters of the country.
- Ensuring that all ports are operated efficiently, economically and safely and maintain the best possible standards.
- It undertakes the training of junior mariners in Bandari College in Mombasa which falls under its management.

KPA is therefore the government's agency for the execution of maritime administrative responsibilities pertaining to commercial shipping and port operations in

the country. (KPA Act. 1977)

1.6 RESPONSIBILITIES OF THE MERCHANT SHIPPING OFFICE.

The Merchant Shipping Office is the office having the role of the maritime safety administration in Kenya. It is within KPA's organization and has its total operating costs under the financing of KPA. As mentioned before, it administers the Merchant Shipping Act and those other duties delegated by the Minister for Transport and Communications. It is the office managed by the Merchant Shipping superintendent, an employee of KPA appointed by the minister. This presents a dual role which is difficult to play since the Merchant Shipping office has to seek for approval of its decisions from the KPA management. Official expenditure on ship inspections for example, travel by casualty investigators when casualties occur, or to Nairobi (Ministry of Transport and Communications Head office) for consultations, involvement in international affairs (attending IMO meetings), inter-alia, must receive KPA approval. These problems experienced by this office cause unnecessary delays in execution of the various functions entrusted to the office.

The MSS's present functions are :

- The Merchant Shipping Acts enforcement / safety regulations.
- Registration of ships.

- Survey, inspections and certification of ships.
- Tonnage measurement of unregistered vessels.

- Matters pertaining to crew, e.g, examination and certification of Masters, Mates and Engineers and placement of Kenyan crew onboard foreign ships.

- Registration of seamen.

- Detention of untrustworthy ships.

- Survey and licensing of unregistered vessels.

- Accidents and shipping casualty investigations.

- Marine pollution control work.

- Advisory role to the Government on IMO safety conventions and maritime affairs.

- Implementation of the UNCTAD liner code of conduct for liner conferences.(10)

The Merchant Shipping Superintendent's office should be granted independent powers, autonomy and an independent budget among other authorities. These are significant contributory factors to the enhancement of office efficiency and improvement of marine safety. They can facilitate vessel inspections, surveys and certification, reduce casualty investigation processes, enable easy movement of surveyors to casualty sites for example, facilitate gathering of information, and provide for procurement of office equipment such as computers.

The MSS's office has been charged with functions aimed

at furtherance of marine safety, among them the investigations into marine casualties (the major focus of this paper). Therefore, casualty investigations conducted by the Merchant Shipping office should be aimed at achieving this objective in all respects. The above recommendations are meant to contribute substantially towards this direction, but how can effective casualty investigations contribute to marine safety ?

- Casualties should show whether there are lessons to be learned. In order to get to this, the investigator may need to find the causes of the casualty.

- Casualty investigations assist in keeping up professional standards, because omissions or safety faults identified are rectified. Those found responsible are punished when it is necessary in order to prevent them from repeating similar mistakes in future.

- To answer questions such as what happened ? how did it happen ? why did it happen ? and what can be done to prevent it happening again ?, a surveyor requires a lot of information on a casualty. In addition, he may undertake investigation reviews and the subsequent follow up actions on safety deficiencies and the recommendations made.

Since some casualty reports do not explain everything that an investigator needs to know, more information must then be sought. In such cases, and depending on the particular site of the casualty, travelling to the casualty site is found necessary for gathering the required information. This information could be from the shipowner, from the master or perhaps for a fuller report on the accident as a whole or on specific points to be made by an investigator.

Although the office of the MSS is based in Mombasa, no professional staff have been deployed to other areas along the coast to coordinate or undertake an investigation of casualties that may occur here. The only course of action taken under such circumstances is sending an investigator to the area, thereby involving urgent decisions to be made because time becomes crucial.

Sometimes investigations require formal examination of witnesses who may be considered helpful in assisting in the determination of the cause of the casualty. Such interviews may require more than one investigator because of the urgency of the statements and also in order to avoid alteration of information, interference with witnesses and / or reduction of information quality due to delays.

Casualty investigation reviews and follow up are important, since weaknesses in operational practices are pointed out where they have been seen. How these could be improved is another question which is also answered. This enables identified inadequate procedures to be followed and corrected by the authorities.

Casualty records are important for statistical summary and for annual publishing. They could be used to show casualty short term trends in the country and also in long term studies of either particular factors of casualties or for research for studies like this one.

At the moment, casualty recording is not of any required standards and a lot of effort is required in this area. Computer systems would offer great assistance to this office if made available.

1.7 RESPONSIBILITIES OF THE KENYA RAILWAYS CORPORATION.

The Kenya Railways Corporation is a government parastatal body which has the jurisdiction and responsibility to operate marine services plying in the portion of Lake Victoria which borders the Kenyan mainland. The lake has a surface area of 62,940 square kilometers and is situated within the borders of South West Kenya, Northern Tanzania and Eastern Uganda.

Among the services provided are the obligatory welfare passenger ferry operations entrusted by the government to the Corporation. Wagon ferry is one of these services. It is an expansion of the rail operation aimed at providing cheap and reasonable transport to cargo shippers. Other crafts performing supporting functions such as towing, repair, maintenance of piers and harbour waters, and dredgers are also operated. Maintenance of these vessels, their manning, the training of officers and crew, investigations into casualties occurring in the lake are responsibilities of the KR.

Also fishing vessels, mostly uninspected fishing boats and canoes, operate in the lake, the majority of them without official authority, licenses and or life saving equipment. Thus, they engage in risky transportation of passengers, with occasional and sensational marine incidents involving heavy loss of life.

This situation has been difficult to control and concern has been raised on several occasions to the authorities to enforce strict regulations to improve operational safety.

Although these vessels are not strictly sea - going vessels, the question of ensuring safety of life and property on the lake should remain very relevant.

Since the collapse of the East African Community and

the subsequent invalidation of the East Africa Inland Water Transport Act, lake operations have remained under the Kenya Railways Act. Because marine safety depends very much on competence of officers and crew, the standard of periodical surveys and inspection of vessels as well as availability of repair facilities. The authorities should embark on :

- Improved training of mariners, for safe manning, efficient examination / inspections and survey of vessels and for comprehensive investigations into casualties.
- Strict enforcement of regulations.
- Strict regular vessel inspections / surveys etc.
- Improved procedures and guidelines for casualty reporting and investigations into casualties with the assistance of the Merchant Shipping office.
- Total banning of the operation of unseaworthy vessels (when deemed necessary) through withdrawal of operating licences, detention of vessels etc.
- Improved and modernized maintenance and repair facilities in Kisumu.

The KR management in charge of the present arrangement in respect of training, examination, inspections, surveys and casualty investigations should involve the technically qualified marine personnel in the Ministry of Transport and Communications, the Merchant Shipping Office and Bandari college. The proper cooperation and coordination

of the above activities will play a major role in achieving safety promotion in Lake Victoria, and in raising public confidence in these services.

Last but not least, serious casualties involving lake crafts should be placed under the responsibility of a Marine Tribunal according to the recommendations made in ch.5 (under 5.6). The Tribunal should also look into all aspects of marine casualty investigations including those in the lake.

1.8 OTHER DEPARTMENTS.

The other departments in Kenya co-ordinating some functional roles related to Maritime Administration and which may be consulted for relevant and / or expert advice during marine casualty investigations are :

- The Kenya Navy under the Office of the President, conducting Search and Rescue operations, marine casualties and marine surveillance.
- The police in protection of the territorial waters and the economic exclusive zone among others
- Ministry of Tourism and Wildlife involved in fisheries
- Ministry of Environment for marine protection
- Ministry of Commerce
- Ministry of Industry
- Ministry of Foreign Affairs
- Ministry of Labour and
- The Attorney General's Office.

Classification functions pertaining to port state control, surveys and certification, among others, have been delegated to various classification societies listed below. The qualified staff engaged by these societies are also, when required, involved in casualty investigations

as expert witnesses and as sources of technical information not available elsewhere in the country.

The Lloyd's Register of Shipping

Det Norsk Veritas

Bureau Veritas

American Bureau of Shipping

Germansches Lloyd

A Greek Classification society and,

A Japanese classification society.

Remarks.

Since Kenya's maritime activity and participation in domestic and international shipping have increased, there is a need for review and updating of the existing maritime administration. The objective is establishment of a new structure which would best meet the needs of the marine community to date. A proposal for a new Department under the Ministry of Transport and Communications, equal in status and autonomy to the departments responsible for Meteorological and Civil Aviation services (under the same Ministry), is a major recommendation of this paper. Although this is a proposal which is already being discussed at high government levels and has reached an advanced stage, there is a need for this paper to recognize and emphasise its importance to Kenya's maritime

needs and thus its indispensability. More details relating to the Department are to be found in ch. 2 under 2.2. (Annex 1) provides the organizational chart of the proposed structure of this Department, inclusive of the various offices).

CHAPTER 2

PROCEDURE / SYSTEM FOR THE INVESTIGATIONS INTO MARINE CASUALTIES - THE PRESENT SITUATION

2.1 THE MERCHANT SHIPPING OFFICE INVESTIGATIONS.

General overview.

The Merchant Shipping office is currently headed by the Merchant Shipping Superintendent, an officer holding a master mariner (foreign going) certificate obtained in the United Kingdom. Initially he was working as a pilot with KPA. He is assisted by an assistant shipping Superintendent who also holds a master mariner certificate. They both have a Master of Science degree in Maritime Safety Administration MSA (N) from the World Maritime University. These officers are assisted by a Statistician, a general Maritime Administrator, clerical and secretarial staff.

The two surveyors are the only casualty investigators in this office, namely:-

- (a) The merchant shipping superintendent and
- (b) The assistant merchant shipping superintendent

Further the office accommodates two sections, commercial and shipping, which undertake different functions, making the workload of the two surveyors much heavier.

Casualty investigations fall under the shipping section whose responsibility is promotion of safety of life and property at sea and the protection of the marine

environment. The Merchant Shipping Superintendent's office therefore handles both the commercial and the shipping aspects of this office. However, all matters pertaining to safety of shipping are delegated to the assistant Shipping Superintendent. This is the officer who conducts marine casualty investigations more or less single handedly.

This is a very limited number of investigators who are more or less overburdened with their responsibilities of promotion of safety i.e surveys / inspections, issuance of safety certificates, inquiries into shipping casualties and all other aspects affecting safety. For instance, there have been frustrations over the officers inability to effectively control the safety standards of the large number of small commercial boats. Practically, once the owners pay their little licensing fees, they are left on their own, due to inadequacy of officers to follow up and control these boats.

Inadequacy in coping with these responsibilities can not be ignored and especially when the long coast and shoreline of the country is taken into account. Coupled with this is the limited awareness of the population about shipping safety.

In order for the above situation and the suggestions made in ch.1 under (1.6) to be improved and realized respectively, a Department of Shipping and Maritime Safety, directly responsible to the Ministry of Transport and Communications should be established in Mombasa. This will overhaul the inadequate existing arrangement, whereby the Merchant Shipping Superintendent is answerable both to the Ministry and KPA, thereby eliminating the undesirable bureaucracy in the current organizational structure. The officer heading the proposed Department could be

designated as the Director - Chief Surveyor and the powers to implement and enforce technical requirements such as surveys / inspections of ships for issuance of safety certificates, and inquiries into shipping casualties etc should be entrusted to the new department.

The department should also be suitably staffed with officers having a good marine background and possessing a master mariners / Chief marine engineer's certificate of competency. Qualified staff for handling the administrative, shipping, legal, financial and other functions of the department should also be made available. Considering the shortage of officers possessing these qualifications in the country, it could be started with a few officers and gradually be strengthened in the future through transfers of the MSS to the department and other trained staff from KPA. Further more, candidates for training would be identified and trained as staff of the Maritime Safety Administration and Shipping Department. (Annex 1 refers)

The new department's establishment will play an important role in controlling shipping operations and promoting safety in the territorial waters of Kenya. Because of the large number of people involved particularly in commercial shipping, the increasing number of those who board a ferry every morning and evening to and from work, school, business, pleasure, etc, very many lives would be at risk if appropriate measures were not taken to safeguard marine safety in Kenya. The department will therefore be better placed to undertake effective safety promoting functions and carry safety evaluations and analysis of the present safety deficient situation.

It will look into the enforcement of casualty reporting requirements which have not shown signs of improvement.

Operators of mostly unregistered vessels still lack the awareness to report incidents as they fear being apprehended or denied their licence to operate. The department should embark on educating mariners and the public on the benefits of reporting casualties for their own safety and that of their property. Perhaps it should try to impose penalties / fines on owners and operators who fail to report casualties involving their vessels.

It will give more attention to casualties whenever they occur. There has been a general lack of sensitivity by the authorities and the media in reporting to the public the occurrence of casualties particularly those involving single or few losses of life. For example, when fishermen go out in bad weather or on unseaworthy boats to earn a living, and lose their lives in the process, it is barely reported and many cases have gone unnoticed. It is a serious situation which has come to be viewed as a normal fact of life, even by the families and communities of the fishermen. It is an area that the Department should focus its attention on.

The new department will enhance and strengthen the technical capabilities of MARAD. It will provide staff with Marine engineering and Nautical qualifications, as well as Maritime lawyers and others lacking in the MSS office. The required personnel who would assist inter alia, in gathering, maintaining and coordinating marine casualty data, evaluation and analysis could be made available.

It will undertake the legal and other related activities involved in the ratification of the conventions which the Ministry of Transport and Communications may advise the Government to recognise.

Review and revision of the Merchant Shipping Act, pursuant to the recommendations in chapters 1 and 5, is a

realization that could effectively be achieved through the initiative and work of this department.

There will be coordination by the Department with KRC in initiating safety improvement projects and undertakings e.g updating training programmes, recommendations for advanced training of mariners engaged on Lake Victoria, inspections / surveys review and development of appropriate safety promoting procedures and guidelines.

2.2 CASUALTY AND ACCIDENT REPORTS.

The majority of marine casualties / accidents are reported by a vessel owner / master or any other person involved to the MSS office through the Mombasa Radio Coast station or directly through a written letter stating all the details of the vessel. The Minister of Transport and Communications is then informed through the MSS office, while the Managing Director of KPA is also notified.

The MSS is the empowered authority over investigations into any marine casualty within the jurisdiction of the government or wherever a Kenyan registered vessel is involved (as provided under the Merchant Shipping Act - Annex 3). Following a casualty report, he would immediately initiate action and institute a preliminary investigation. His fundamental purpose is finding the cause(s) of the casualty in order to avoid a future recurrence. He also plays an important role in identifying a mariner who may have erred either through negligence or incompetence in contributing to the casualty, since the MSS is also the one responsible for maritime safety and therefore enforcing the relevant regulations.

Preliminary investigations are fact finding oriented

and witnesses who can assist in the investigations are interviewed and their statements are obtained by the investigator (Nautical Surveyor). The first goal is to get as many facts as possible e.g details of the ship, details of crew, details of cargo, documents, and statements. The idea of the investigator here is trying to build up a picture in his mind and get as much information as possible. Documents and statements are the two sources mostly available.

Interviews are mostly informal unless otherwise requested by the witnesses who are nevertheless denied legal representation by their lawyers. During interviews, only the interviewee and when necessary his lawyer are allowed to the designated interview place. When the police is involved, however, witnesses are interviewed separately. When statements are produced they are usually read back before they are signed by witness. The language mostly used is English but whenever Swahili speaking witnesses are called, interpreters are present to assist in recording statements. Each witness who has given recorded evidence is allowed to maintain a copy. Witness statements could be used during a formal investigation if it is deemed necessary by the investigating office, thus providing no special privilege to witness statements.

Photographs are taken whenever deemed necessary. Charts and other relevant facts are collected and analysed in an attempt to explore and arrive at the cause.

The investigator holding a preliminary investigation is provided under the Act, section 265, with the powers of a surveyor and can go onboard ship at all reasonable times and inspect it or any part of its machinery or equipment or any certificate of a master mate or engineer. He however, has no powers to compel witness testimony under

oath nor the production of required documents during investigations.

A preliminary inquiry culminates in a report prepared on completion of the investigations exclusively by the investigator. All the observations of the facts surrounding the casualty, his conclusions and recommendations are incorporated into the report. This report is strictly confidential and is only available to the MSS office and the Ministry of Transport and Communications. If and when the police make a request to this office for assistance, they too require a copy. The M D - KPA, is also provided with a copy for records. In the distribution of this report, a cover letter addressed by the investigator would always stress that the contents of the report are confidential. This is a restriction which could be for reasons of allaying any possibility of prejudice prior to a formal inquiry, if decided upon by the preliminary investigator and or the Minister.

Other parties involved in a casualty do not get copies of the investigations report and they may only see it when a formal inquiry is held.

2.2.1 FORMAL INQUIRIES.

Formal inquiries are ordered by the Minister who may appoint a Judge, a Magistrate or a senior public officer to be a commissioner, and may not necessarily be preceded by a preliminary inquiry.

The basic criteria used for holding a formal inquiry are:

1. A serious casualty usually causing considerable public outcry, and great concern, resulting to considerable loss of life and property. In a case like

this the Minister can order that a formal inquiry be carried out straight away thus dispensing with the preliminary inquiry. On the other hand, a decision for a formal inquiry into less serious casualties will be determined by the advice given by the investigator conducting the preliminary investigation.

2. Where a master, mate, pilot or engineer is charged with incompetence, misconduct or default while serving on board a Kenyan ship, or on board any other ship on or near the coast of Kenya or in the course of voyage to a port in Kenya.

A formal inquiry follows more or less a judicial process with a Commissioner usually a Judge of the High Court of Kenya presiding. He would be assisted by one or more assessors of Nautical engineering / Marine expatriate appointed with the Minister's approval.

The Commissioner has got the powers of a Commissioner in Kenya. He also has got power to suspend or revoke certificates or to criticize the conduct of any party involved in a casualty. This usually involves officers or pilots whose certificates may be in jeopardy, shipowners for engaging on incompetent crew and the Maritime Administration itself for safety deficiencies. A counsel is also appointed, he is usually a senior state counsel appearing for the state. The major concern of a formal inquiry is usually the determination of cause or causes and whether it was caused or contributed to by the wrongful act or default of any party. The parties involved are allowed to be represented by their own lawyers according to their own arrangements. As in preliminary investigations, interpreters are also appointed for the witnesses who may have difficulties in understanding the

language used, usually English and Kiswahili.

After hearing complete evidence from witnesses and making conclusions, the Commissioner prepares a full confidential report and submits it to the Minister. Such a report would include, the findings on the causes and contributory factors of the casualty, his decision as to disciplinary measures, i.e suspension or revocation of an officer's or engineer's certificate or a pilots licence. The Commissioner further includes recommendations or actions to be taken in order to prevent a similar occurrence from happening again and to promote safety at sea.

After the report is received by the Minister, a statement is made to the media with effect to the conclusions made. However, the report is not released to the public. Parties involved are nevertheless free to take whatever legal action they may deem necessary to settle liability or other related cases in court afterwards.

An appeal by an officer, an engineer, or pilot from a decision involving a certificate's suspension or revocation can be made to a court to decide on the appeal. Such an appeal is permitted "where on an investigation a decision has been given, to the cancelling or suspension of a certificate / licence or an application for the investigation to be re held under this section has not been or has been refused -----"

The Minister can order the investigation to be re held by the same Commissioner or by a newly appointed one, who may be assisted by the same assessors or by different ones, whenever there is new evidence or there is suspicion of miscarriage of justice.

Perhaps it is important to note here the fact that formal investigations generally require long hearings

sometimes running into months. For example, the "Harrier" formal investigation ran from July 1989 to April 1990, and had taken the authorities from 5th August, 1988 to 18th July, 1989 to decide on a formal investigation Commission. Such lengthy inquiries involve costly processes for all the parties involved. Nevertheless, they are easily conducted than recommendations are implemented due to the equally substantial financial expenses subsequently involved. Interviews conducted with safety officers indicated that the industry would need time to make funds available for such implementation of casualty recommendations, i.e training of small vessels crew, procurement, installation and maintenance of safety equipment.

For those small vessels, such as fishing boats and canoes, operating within various waters in Kenya, related safety recommendations made in casualty reports may prove impossible to implement due to the high expenditure involved. Further more, there are restrictions and frustrations usually experienced by safety promoting officers in their enforcement of safety regulations. Sometimes safety enforcement efforts have been misunderstood to be interference with the shipping business by the operators and members of the public. This behaviour is attributable to the general unawareness of safety, because some involved parties also have some influence in the industry and they may use their influence to block safety enforcement efforts. Other vessel operators are involved in cheating malpractices such as borrowing safety equipment which their vessels lack. The aim is to merely present them during safety inspections in a desperate attempt to prove their adherence to regulations.

The above problems provide the reasons why vessels less

than 25 tons comprise those with the highest casualties in the country.

2.2.2 DISCIPLINARY HEARINGS.

The Minister may also order a formal inquiry for disciplinary purposes, to examine whether a master, mate, or engineer is incompetent, has been guilty of an act or misconduct, drunkenness or tyranny, has caused through his wrongful act or default, the loss of or a serious damage to a ship or the loss of life, has been guilty of a criminal offense, or has failed to render assistance in a case of collision. Such hearings are held before a person appointed by the Minister who is given the powers of a surveyor under the Act. These hearing's reports are made to the Minister and recommendations are also made to him as to whether or not certificates of the parties concerned should be suspended or cancelled. The Minister then takes the final decision depending on the recommendations given.

Remarks.

The major purpose of casualty investigations should be the determination of casualty cause(s) or probable causes. Knowledge on how a casualty occurred and why it occurred is perhaps the most essential prerequisite for the development of appropriate corrective measures, regulations, standards of safety, and perhaps review of existing regulations / legislation in order to achieve the internationally required safety standards. According to accident reports examined during research, most marine casualties in Kenya have been concluded to have been

caused by human error. This implies a justification for recognition and ratification of the STCW convention 1978, as earlier recommended.

It is the Merchant Shipping Superintendent's office which is responsible for safety promotion through enforcement of regulations, as well as investigations into marine casualties. Therefore, determination of violation of law / regulations by this office during investigations and the subsequent institution of civil penalty action to responsible persons should not be underestimated, since this is an essential characteristic of enforcement of law.

Several shortcomings have been noted in the preceding casualty investigations legislation and procedures. Solutions to these problems listed below are provided in the recommendations in ch.5.

- Too much secrecy
- Inquiries into serious casualties (formal) take far too long and involve high costs in producing results.
- Formal Investigations are conducted by legally qualified persons instead of technically qualified persons.

CHAPTER 3

MARINE CASUALTY INVESTIGATIONS - SAFETY PROMOTING AIM.

3.1 DEFINITION OF CASUALTY.

As provided for in the United Kingdom Merchant Shipping (accident investigation) regulations of 1989, and widely applicable in many other countries, an accident / casualty in general terms covers any contingency whereby :

1. There is loss of life or major injury to any person on board, or any person is lost from, a ship or a ship's boat; or
2. A ship is lost or presumed to be lost, or is abandoned or materially damaged; or
3. A ship strands or is in collision; or
4. A ship is disabled; or
5. Any material damage is caused by a ship.(11)

3.2 TYPES OF MARINE CASUALTIES.

Every marine casualty is more or less a unique occurrence in itself. The circumstances surrounding one casualty cannot be exactly the same as those around another casualty, therefore making them different, however small the difference could be. Marine casualties can generally be grouped into the following categories : -

- Collision,

- Grounding,
- Foundering,
- Fire or explosion,
- Cargo / property damage,
- Chemical or oil spills.

3.3 TYPES OF CASUALTY INVESTIGATIONS.

The following general groups of casualty investigations have been widely identified and accepted as the most common types of marine casualty investigations:

1. Safety investigation, usually conducted by the Maritime Safety Administration. This form of investigation further employs two more types of investigations i.e Preliminary and Formal inquiries.
2. Disciplinary investigation, also conducted by the Safety Administration but quite often by another person designated for this purpose other than the safety investigator.
3. Criminal investigation, carried out by the Department of Justice to punish criminal acts.
4. Civil liability investigation, by interested parties usually represented by lawyers and aimed at settling liability claims.

These marine investigations are, however, generally

aimed at maritime safety and disciplinary issues.

Carefully conducted investigations on the circumstances and conditions of a collision between two vessels or between a vessel and an installation, for instance, may reveal the cause(s) and it is usually unlikely that only one party contributed to the occurrence. The contributory factors and wrong procedures identified by the investigations will, subsequently, lead to necessary action being taken to reduce the chances of similar accidents happening again.

A casualty caused by defects in the design, structure of a ship or failure of machinery will require careful examination for causes to be established by expert investigators who need to have no direct connection nor personal interests in it. They need to know whether the casualty was caused by defects in the design and construction of a ship for instance, or by repair and maintenance or defects in the buoyancy, stability, freeboard, strength of the hull or failure of the equipment on board ship. All or any of these could be the contributing factors. The answer to such vital questions could contribute to remedial measures being taken. For example, the "Amoco Cadiz" casualty investigation identified at least six design faults with a defective steering gear acting as the major cause.

Investigations of circumstances leading to a foundering sometimes even in the case of a vessel sinking without trace of survivors, can yield useful information like confirmation of the fact, approximate position, and apparent causes. The sinking of the "Muncher", a six year old West German Lash barge carrier in the North Atlantic

in a severe storm with the loss of all on board on or about 12th Dec. 1978, while on a voyage from Rotterdam with a cargo of steel products, is a good example.

Fire and explosion are highly dangerous on an oil tanker because of the flammable nature of oil. These two being the most dreaded dangers at sea have in the past received thorough investigation, not only for the settlement of the subsequent claims but more importantly for the lessons available from the casualty investigation. Investigations are important because they arrive at remedial actions such as new requirements / regulations. For example, the SOLAS requirement to provide inert gas systems on tankers followed a series of disastrous explosions within one month on the VLCCs " Mactra", " Marpessa" and the "Hony Haakon VII", and thus is a benefit of casualty investigations.

As a consequence of the "Herald of Free Enterprise" disaster, investigations of marine casualties, which had traditionally been the responsibility of the marine surveyors of the Department of Transport - Marine Directorate, was handed over to the new body named the Marine Accident Investigations Branch established in 1989 as an independent arm of the Department of Transport. Its role is to investigate accidents at sea, on board ships and dangerous occurrences at sea to determine what caused an accident in order to prevent it happening again.

The "Derbyshire" casualty of the four year old OBO (Ore Bulk Oil) vessel of the United Kingdom registry, with the loss of all 44 on board, serves as a good example. The need for a formal investigation was not recognized and appreciated by the authorities concerned until her sister

ship, the "Kowloon Bridge" was lost under different conditions off S.W Ireland.

Since the basic cause(s) of an accident and the action necessary to ensure that it will not happen again does not always become clear from the physical facts of the case, all factors which may have influenced the actions should be examined. For example, some failure in the engine room or steering equipment may be due to an inspection failure or to faulty inspection techniques by a classification society, or when human error appears as a possible cause of the accident.

3.4 PURPOSE OF SAFETY INVESTIGATIONS.

The main purpose of an inquiry / investigation into a shipping casualty is to :

1. Ascertain the facts,
2. Obtain all relevant information, and
3. Determine as precisely as possible the cause / causes of the casualty so as to enable the Maritime Safety Administration to take necessary steps to prevent, as far as practicable, the occurrence of similar casualties in the future.

Investigations enable suggestions to be made for the correction of any wrong procedures that may be uncovered. Occurrences of casualties clearly indicate shortcomings in the design and construction of ships and in their servicing. It is easiest "to learn through bitter experience but it is very expensive and sometimes most

painful" (Professor J.W Doerffer).(12) Opportunities would be missed if we did not analyse accidents in order to learn the lessons worth obtaining. A.F Harrold in a paper presented "on the investigation of marine casualties" to the Institute of Marine Engineers agrees that "without question, bad experience is salutary and provides the richest source of learning and thus obviates repeating the mistakes of others".(13) It could, therefore, be concluded that, conducting comprehensive fair investigations without infringing on the legal rights of the witnesses, and bringing out a useful report in good time, enables a profitable use of the lessons offered by the accident.

Casualty investigations are further undertaken for the purpose of compliance with the legal requirements of the relevant maritime authorities.

Marine casualty safety investigations are also aimed at restoring public confidence and reliability of sea transport, particularly considering the risk of damage by dangerous cargo and or oil to human life and to the marine environment as well.

Casualty investigations also aim at establishing blame and liability and if necessary punish or provide damage compensation.

Marine casualty safety investigations have adopted two widely applied stages :

1. Preliminary inquiry, and
2. Formal investigations.

3.4.1 PRELIMINARY INQUIRY.

This inquiry should be conducted by a responsible official(s) with the necessary expertise and duly notified as the proper officer for the purpose by the Maritime Administration (usually under the Merchant Shipping Act). This stage can be said to be quasi-judicial in nature, where the preliminary investigating officer has the duty to :

1. Inform the government / Ministry concerned of the shipping casualty having occurred within its jurisdiction.
2. Hold a preliminary investigation, when considered necessary, into the shipping casualty.
3. Submit the proceedings and report of the preliminary inquiry to the Ministry.
4. Make an application to a court (or commissioner empowered under the Merchant Shipping Act) for a formal investigation into the casualty if he considers it necessary and if the government directs him to do so.

A preliminary investigating officer needs to be a highly experienced professional, properly trained for the task, and appreciative of the solemn duty being undertaken. By virtue of his designation, he would further be obliged to :

1. Show great patience and understanding in examining witnesses, since they are likely to have been through a traumatic experience.
2. Remember to place himself "in the shoes " of the

witness when recording his statement in order to understand the relevant circumstances properly.

3. Appreciate the fact that his conclusions / recommendations may have far reaching consequences affecting the career(s) of the seafarer(s) concerned and perhaps, the ship owners themselves.
4. Distinguish clearly between "error of judgement" and "negligence" as regards his conclusion regarding an act of omission or commission on the part of any seafarer concerned.
5. Remember the purpose and objectives of the inquiry.
6. Ensure that the proceedings and the report of the inquiry are such as to be capable of forming a proper basis for the decision of his government as regards further follow up action(s).

When it has been considered necessary by the investigating officer for a preliminary inquiry to be conducted, it becomes his responsibility to perform the following duties :

1. To board the vessel involved and inspect any of the machinery, boats, equipment or articles on board without detaining or delaying the vessel from proceeding on any voyage unless deemed necessary. This should be however, within the jurisdiction of the state.
2. To enter and inspect any premises considered necessary and relevant for the purpose of the report the investigator is directed to make.
3. To summon witnesses and request answers as deemed

necessary for the purpose.

4. To require and enforce the production of all books, papers, documents and any other evidence considered necessary and important for the purpose.
5. To administer oaths or require any person to be examined by him to make and subscribe a declaration of the truth of the statement made by him in his examination. ②

Perhaps it should be deemed desirable for the Maritime Safety Administration to control the power to administer oaths by issuance of clear orders / instructions to preliminary inquiry officers who may be lacking legal training or judicial experience. Also for those witnesses who may not understand the implications of making statements under "oath" to be informed in case some of the facts and evidence may be used in a formal investigation, or litigation before court.

Also the power to "summon" these witnesses whose attendance cannot be ensured through normal communication forms needs also to be made clear through similar instructions as above.

Considering preliminary inquiries have been mostly for departmental purposes, their reports have usually not been made public in most countries. This method of disseminating inquiry findings has been found to be inadequate in providing the lessons that are available, through the reports of the circumstances surrounding a casualty. Although interested parties do however, often apply for copies, this defeats the major purpose of the investigation.

3.4.2 FORMAL INVESTIGATIONS.

A formal investigation should be a public or judicial inquiry held in addition to or instead of a preliminary inquiry as may be decided by a government. It could be held by a court (or commissioner), or a Board empowered under the Merchant Shipping Act (of the country involved). The commissioner should be assisted by assessors with the appropriate expertise who are designated by the court (or commissioner) from a panel maintained by MARAD or by an appropriate court for the purpose.

Usually, a formal investigation is ordered by a government (or the official in charge of the Maritime Safety Administration duly appointed) to be held in any of the following circumstances :

1. If the preliminary inquiry has not been considered sufficient.
2. If it appears that the shipping casualty has occurred through an avoidable cause.
3. If it appears likely to lead to the prevention of similar casualties in the future.
4. If the casualty resulted in a serious damage to property or loss of life or property.
5. If the casualty has given rise to a substantial amount of public attention or to a disturbance of public confidence.
6. If there has been any alleged default or negligence

on the part of the master or any officer.

7. If a certificate of competency of an officer (including a master) is likely to be dealt with.

When, during a formal investigation evidence of criminal conduct or behaviour in violation of the laws of the country has been identified, this evidence should be forwarded to the department of justice for further consideration and prosecution of the offenders./

Formal investigations result only rarely, but when they do take place they are lengthy, taking several months in some cases, hence being costly. However, they are valuable in so far as the fundamental purpose of a casualty investigation is to learn lessons. The opportunity of learning lessons is lost unless they are disseminated to the marine community. There is no more effective way of achieving this than through a public inquiry.

A good example is the formal inquiry held by the British government into the "Kurdistan" disaster after considerable pressure from the Canadian authorities who were concerned with the oil pollution threat in their waters. This inquiry lasted 10 weeks and is said to have cost 1 million and only established a badly repaired bilge keel as having caused the vessel to break into two. A conclusion which could have been reached through a sensible and cheap preliminary procedure.

The several factors indicated here under are known to reduce the value of a public inquiry and therefore should be treated carefully by investigators if positive and desired results are to be achieved.

1. Withholding of relevant information to protect commercial or other interests by witnesses or owners who may reveal less information than the amount available.
2. The instinctive in - built protective mechanisms sometimes exercised involuntarily by humans.
3. The idea of tampering with, concealment or even destruction of evidence whether intentionally or otherwise.
4. Lack of or unavailability of relevant expertise and professional assistance since it is unlikely that one person would have all the answers.

This is when the investigator's expertise, professional experience, patience and understanding are put to the test and it should be his duty to use his knowledge on interview techniques, legal rights of witnesses, administration of oaths to get the information he deems helpful for the investigations.

3.5 INTERNATIONAL OBLIGATIONS.

The main purpose of IMO activities is to increase safety at sea. This is a complex task involving life, cargo and the marine environment in general. Large improvements in safety are brought about by learning lessons from casualties inter alia. This has been the major reason why IMO member parties to its conventions

have been required to investigate casualties and report to the organization in this regard.

The investigation and reporting obligations required from the member states are to be found in the following extracts from the respective international conventions.

These instruments are, however, binding only when adopted by IMO members states.

1. The International Convention for Safety of Life at Sea, (SOLAS 1974/78), for example, require in Chapter 1 (Reg.21), that each administration :

- Undertakes to conduct an investigation of any casualty occurring to any of its ships subject to the provisions of the present convention, when it judges that such an investigation may assist in determining what changes in the present regulations might be desirable.
- Each contracting government, undertake to supply the organization with pertinent information concerning the findings of such investigation. No reports or recommendations of the organization based upon such information shall disclose the identity or nationality of the ships or in any manner fix or imply responsibility upon any ship or person.

The obligations expressed under the above convention from a party state to investigate a casualty and report to IMO sounds conditional. It is dependent upon a party state's sole decision as to whether or not an investigation may assist in bringing about changes to the convention. Further more the obligation applies to SOLAS ships only. However, it recognises the sovereignty of a

party state and its responsibility for investigating casualties within its jurisdiction.

2. Under the ILO - Minimum Standards Convention 1976, No. 147 Art. 2 (g), each member undertakes to hold an official inquiry into any serious marine casualty involving ships registered in its territory, particularly those involving injury and or loss of life. The final report of such an inquiry normally to be made public.

This applies only to member flag states jurisdiction to hold investigations into serious casualties involving ships under their registries. The obligation further recognises the need for the publicity of a casualty investigation report.

3. Under the United Nations Law of the Sea Convention, 1982, Art.94(7), each state shall cause an inquiry to be held by or before a suitably qualified person or persons into every marine casualty or incident of navigation on the high seas, involving a ship flying its flag and causing loss of life or serious injury to nationals of another state, or serious damage to ships or installations of another state, or to the marine environment. The flag state and the other state shall cooperate in the conduct of any inquiry held by that other state into any such marine casualty or incident of navigation.

This applies to casualties occurring on the high seas and particularly involving a flag state's ships causing serious damage to another state's nationals, ships and installations and the marine environment. It does not

include jurisdiction on investigations into casualties occurring within territorial waters. Cooperation between the two states is emphasised.

4. The Administration of a member state party to the international Convention for the Prevention of Pollution from ships, (MARPOL 73/78), undertakes, under Art.12, to conduct an investigation of any casualty occurring to any of its ships subject to the provisions of the regulations if such casualty has produced a major deleterious effect upon the marine environment.

Each party to the convention also undertakes to supply the organization with information concerning the findings of such investigations when it judges that such information may assist in determining what changes in the present convention might be desirable.

This provides jurisdiction to a flag state over investigations into casualties involving her ships causing serious pollution to the environment. However, this only applies to MARPOL ships.

5. Under the international Convention on Load Lines, 1966, (LL 66) Art. 23, each administration undertakes to conduct an investigation of any casualty occurring to ships for which it is responsible, and which are subject to the provisions of the present convention, when it judges that such an investigation may assist in determining what changes in the convention might be desirable. Each contracting government also undertakes to supply the organization with the pertinent information concerning the findings of such investigations. No

reports or recommendations of the organization based upon such information shall disclose the identity or nationality of the ships concerned or in any manner fix or imply responsibility upon any ship or person.

As in SOLAS, the requirement under this convention is conditional since it depends on the decision of a party state on whether or not a casualty investigation involving its ships is seen to assist in bringing about changes to the convention. It also apply to LL (66) ships only.

A number of IMO resolutions have also been adopted (Annex 4). These resolutions provide recommendations which are however, not binding in any way, although party states would feel morally obligated to comply with them.

3.6 LESSONS LEARNED.

International maritime conventions, the purpose of which is to prevent accidents at sea, can as a rule be said to have arisen or been strengthened as a result of such catastrophes as the loss of the "Titanic, Torrey Canyon, Amoco Cadiz and the Exxon Valdez " inter alia.

Thus some beneficial outcome of the lessons learned after some catastrophic disasters has indeed been achieved as follows.

1. In 1914, following the sinking of the "SS Titanic" in 1912 with a heavy loss of life, 13 Nations attended a conference for the formulation and adoption of an international convention for the Safety of Life at Sea (SOLAS) covering such areas as safe construction, and use of radios in times of distress which never came into force

because of the outbreak of the war however.

2. In 1929, 18 Nations participated at a follow up conference which adopted a convention providing a minimum standard of subdivision, boatage, life saving appliances for passenger ships, and included a minimum recognition of structural fire protection, and also required the use of radio and adopted some regulations for the prevention of collisions at sea.

3. These were further improved and strengthened at a 1948 conference of 30 Nations with the adoption of grain and dangerous cargo regulations.

4. In 1960, another conference was convened following the tragic collision between the "Andrea Doria" and the "Stockholm" in 1956. This aimed at dealing with the problems raised by development of inflatable life rafts. Existing requirements were also strengthened and several new ones covering stability, fire fighting, carriage of grain, life saving appliances and nuclear ships were also adopted. Further more, ,

- new requirements were introduced for survey of hull, machinery and equipment of cargo ships and radio equipment.
- in cargo ships of 5000 gross tons and over, requirements calling for structural fire protection were introduced.(14)

5. The "Torrey Canyon" disaster off the English coast in March 1967, resulted in a spill of oil causing pollution damage of an extent previously unknown. This incident made the world aware of the need for international regimes of liability and compensation for pollution damage caused by

oil spills from tankers. Following this disaster, the IMO convened a diplomatic conference in Brussels in 1969, which adopted the International Convention of Civil Liability for Oil Pollution damage which entered into force in 1975.

The Fund Convention adopted in 1971, and which entered into force in 1978, was also a result of this incident.

6. During March 1977, the United States requested IMO to take international action to improve safety and pollution prevention measures after a series of tanker accidents in or near the United States coastal waters in the winter of 1976 - 77.

As a result, the IMO, after intense preparation convened the International Conference on Tanker Safety and Pollution Prevention. Its purpose was to consider improving the provisions of two conventions developed four years previously, but which had not been implemented internationally, and was also meant to strengthen these earlier conventions, namely MARPOL 73 and SOLAS 74.

The product of this conference was the adoption of two instruments, commonly referred to as the SOLAS protocol and the MARPOL protocol, hence the MARPOL 73/ 78, and SOLAS 74/ 78 as amended. Areas of concern such as radar, steering gear, inert gas system, surveys and VHF radio telephone were given attention.

7. The adoption of the International Convention on Oil Pollution Preparedness, Response and Cooperation 1990, was developed following a meeting of leaders of the major industrial nations in Paris which requested IMO to put forward proposals for further measures to prevent pollution. This is an important step aimed at improving the ability of coastal states to combat marine pollution

and is a response to the lessons learned on how accidents like the " Exxon Valdez" grounding in 1989, can cause disastrous oil spills with immense damage to the marine environment.

The main features of this convention are going to be

- oil pollution emergency plans.

- response systems and

- international cooperation.(15)

C H A P T E R 4

OTHER COUNTRIES' LEGISLATION AND PRACTICES

General overview.

In this chapter, comparative examination of the United States' and United Kingdom's legislation and practices applicable to marine casualty investigations is taken into account. This examination is appreciated as very educative and revealing in many aspects, and could be useful in reaching the conclusions and recommendations in ch. 5.

Although objectives of casualty investigation systems differ from one country to another, they also differ from strictly penal systems (e.g USCG - Administrative Law Judges personnel hearings) to systems only oriented towards safety (e.g NTSB's) within a country's system, and between different countries as well.

The objectives pursued under the different systems, also directly affect the processes of investigations, their reports and their use to a less or greater degree, depending on whether they are geared towards safety promotion or disciplinary objectives or both.

Several similar and common subjects to the three systems (Kenya discussed in ch.1 and 2), U.S.A and U.K will be taken into account).

These include :

- The different bodies with jurisdiction to investigate marine casualties, and relations,

- Casualties reported and investigated,

- Purpose of marine casualty investigations,
- Investigations procedures,
- Reports and their publications,
- Role of safety recommendations.

4.1 THE UNITED STATES OF AMERICA:

The major agencies with jurisdiction to conduct (or cause to be conducted) marine casualty investigations under a dual type of a system are the National Transportation Safety Board and the United States Coast Guard. The Coast Guard carries out all marine casualty investigations while the NTSB investigates and determines the facts, conditions, circumstances and the cause or probable cause(s) of major marine casualties, casualties involving US public vessels and the Coast Guard's safety functions.

4.1.1 THE NATIONAL TRANSPORTATION SAFETY BOARD (NTSB).

The NTSB was created by the Transportation Act of 1966 as an agency of the US department of Transportation. Following the independent Safety Board Act of 1974, the Safety Board was established in 1975 as a totally independent agency with broadened responsibilities. It consists of five members who are appointed by the president of the United States with the advice and consent of the US Senate to serve a five years terms. The

appointments are made in such a way that one term expires each year.

The Board seeks to ensure that all modes of transportation (Air, Highways, Marine, Pipeline and Railway) in the USA are operated safely, by investigating accidents, initiating and conducting safety studies, and issuing safety improvement recommendations. All Safety Board investigations are fact finding investigations. Nevertheless, compliance with Safety Board recommendations is voluntary.

The Board has no authority to conduct administrative, civil or criminal proceedings against parties involved in marine accidents, but it does, however, possess a review role with respect to actions taken by the US Coast Guard to suspend or revoke the licences or certificates of seamen.

The Board has jurisdiction to investigate maritime accidents which occur in US waters, regardless of the nationality of the ships involved, or which involve a US registered ship. According to the joint regulations (i.e US Code of federal regulations 46) applicable to the Board and the Coast Guard, the Safety Board is required to investigate accidents which result in :

1. The loss of six or more lives;
2. The loss of a mechanically - propelled vessel of more than 100 gross tons;
3. Property damage initially estimated at \$ 500,000 or more;
4. Serious threat to life, property, or the environment

by hazardous materials;

5. Investigations of accidents involving US public vessels and non - public vessels, which result in at least one fatality, more than \$ 75,000 in property damage, or significant safety issues relating to Coast Guard safety functions and or its vessels.

The Board's other powers are to hold public hearings, sit and act at such times and places, administer oaths, require by subpoena the attendance and testimony of witnesses and production of evidence, enter any property, or wreckage where a casualty has occurred for the purpose of investigations, examine or test and obtain autopsy reports of individuals involved in casualties. (16)

4.1.2 INVESTIGATION PROCEDURE.

In its efforts to achieve these objectives, the Board employs to great advantage, a technical party system in conducting marine investigations, to ensure the presence of the proper breadth and depth of knowledge on various aspects. This of course depends upon having available a cadre of trained personnel by the Board.

The investigation parties are however, selected depending on their ability to provide technical expertise to assist in the investigation on various aspects and are designated by the Board as deemed necessary for each individual accident. Each party representative is assigned responsibilities and directed by the Board's investigator in charge. These representatives are usually suitable and qualified technical employees who are however, not allowed to represent claimants or insurers at the same time as

investigations are being conducted.

In the event of an accident, there is usually a "go team" which proceeds to the scene of the accident immediately before evidence perishes or witnesses disperse. This "go team" consists of employees of the Board who have a wide range of professional expertise, commonly licensed deck or engineering officers, ship inspectors, metallurgists, meteorologists, hazardous materials experts, human performance specialists, survival factors specialists

When necessary, party representatives are also designated to participate in the initial on - scene investigation where wreckage parts or failed machinery components are selected for further testing. Log books, course recorder tapes, charts, and other documentary evidence is collected, examined and analysed.

Also, when possible, witnesses are interviewed by investigators at a convenient place near the accident scene shortly after an accident, before evidence is destroyed or interfered with and witnesses disappear. If necessary subpoenas are issued and sworn testimony may be taken as well in order to ensure statements are based on true knowledge of what happened and misinformation is avoided.

Meetings with party representatives and investigators in - charge are held throughout the fact finding stage to ensure that all parties have an opportunity to review all evidence and testimony, and to ensure also that no important aspects of the investigation are overlooked.

A final technical review meeting is then held to ensure that all parties are in agreement as to the pertinent facts uncovered. Parties are also invited to provide proposed analyses, conclusions, and recommendations for

the Board to consider in the formation of its final report.

4.1.3 PUBLIC HEARINGS.

The Board sometimes holds fact finding public hearings in order for persons involved in an accident to testify and be questioned. In this case, a board of inquiry is established by the Safety Board and this board of inquiry is usually presided over by a Safety Board member. During public hearings, witnesses are called to testify and be questioned under oath, while other parties involved in the accident are also invited to participate in the public hearing proceedings. These hearings are always public and are designed to help the Safety Board determine the cause of an accident and provide information on which the Safety Board may be able to develop recommendations to prevent other similar accidents.

4.1.4 REPORT AND RECOMMENDATIONS.

After the conclusion of every major investigation, the Safety Board determines the probable cause of the accident, issues a public report describing the facts, conditions, and circumstances of the accident, and makes safety improvement recommendations to prevent similar accidents in the future (recommendations submitted by the Board to the Secretary of the Department of Transportation and or other Agencies require a written response not later than 90 days after receipt).

Investigation reports usually include the Safety Board's analysis of the facts of the accident and specific conclusions that may be drawn from the analysis. Therefore, the Board's determination of an accident's probable cause is dependent on its analysis of the facts, conditions and circumstances surrounding the accident. Finally, identification of those factors which contributed to the accident are effected.

It should be noted here that the Board's investigation regulations prevent the use or admission into evidence of the Board's accident reports in any suit or action for damages arising from accidents.

4.1.5 REPORTS AND PUBLICATION.

Marine accident investigation reports and safety studies are published by the Safety Board after completion of each investigation. It also makes annual reports to the U S congress regarding its accident investigations and recommendations.

4.2 THE UNITED STATES COAST GUARD.

The Coast Guard, an agency of the department of transportation, has a broad range of maritime functional responsibilities including, inter alia the following :

- . Vessel inspection and certification,
- . Licensing and certification of personnel,

- . Federal pilotage,
- . Vessel traffic management,
- . Regulations and their enforcement,
- . Search and rescue and,
- . Full jurisdiction to investigate all marine casualties.(17)

The Commandant is in full charge of the agency and below him are various offices, amongst these is the office of the Marine Safety, Security and Environmental Protection. This is headed by a Chief and consists of six more divisions i.e the Marine Technical and Hazardous Materials, Merchant Vessels Inspection and Documentation, Merchant Vessel Personnel, Marine Investigations, Port Safety, Security and Marine Environment Response.

The District Commander in the field, supervises the Administration of the Marine Safety Division offices which fall under this office, as well as the Officer in Charge of Marine Inspection - the OCMI.

According to the Code of Federal Regulations 46 and the Marine Safety Manual, the Coast Guard's casualty investigations are carried out in order to determine the following :

1. What caused the casualty;
2. Whether any misconduct / negligence etc by licensed / documented mariners contributed to it;

3. Whether there is need for further investigations;
4. Whether any misconduct of any other person including Coast Guard employees contributed to it;
5. Whether there was violation of laws / regulations which could initiate civil penalty action or reference to an Administrative law judge(s) for criminal enforcement;
6. Whether there is need for changing existing law / regulations or initiating new ones to prevent similar incidents.

Coast Guard's investigations are, however, a means to promote safety of life and property at sea and to protect the marine environment. These marine investigations have been generally grouped into the following categories : -

1. Commercial vessel accidents (marine casualties);
2. Personnel conduct on the part of professional mariners holding licences, certificates, documents;
and
3. General enforcement of laws / regulations.

4.2.1 MARINE CASUALTIES .

In the event of a marine accident, which further would result in :

- . Loss of life and or serious injury, or
- . Material property loss, or material damage affecting a vessels seaworthiness,

The vessel's owner, agent, operator, and or person in charge there on, is required to report immediately to the nearest Coast Guard Marine Safety or to a Marine Inspection office, failure to do so resulting in liability for a civil penalty of \$ 1000.(18)

The Coast Guard's jurisdiction to investigate marine accidents extends to commercial vessels anywhere in the world and to foreign flag vessels in U S waters. In conducting marine casualty investigations, several procedures are employed by the Coast Guard, such as :

1. The vast majority of its investigations are treated as routine, C G - 2692 form reporting investigations. Here vessel, crew, injuries, deaths, accident and location and a description of what occurred as well as the best guess as to why / how it occurred are entered by the person reporting the casualty as earlier mentioned. The investigating officer then would review the form in an attempt to determine whether the information is complete and accurate. He would, subsequently, conduct preliminary interviews as required and then evaluate whether a more detailed investigation is necessary or not. When he decides that, the form and any other attachment is all that is required. He endorses the form indicating the apparent cause of the casualty.

2. In some cases, the C G - 2692 form is found to be

inadequate in fully describing all the aspects of the casualty. As a result, therefore, a shorter cover letter called a Letter of Transmittal is used by the investigator who attaches it to the form. Most of these are one man investigator cases.

3. A few complex marine casualties are found to require a full Narrative Report where the investigator includes fact finding, conclusions and recommendations. This procedure is usually lengthy. Informal investigations are conducted with sworn testimonies from witnesses, while involved parties are also allowed to participate and to be represented by their attorneys (it should be noted that, all casualty investigations are reported to the Commandant either through a Narrative report, Letter of Transmittal or form 2692 as deemed applicable by the investigating officers involved).

4. The biggest and or major casualties require direct notification to the Commandant and the District Commander who in turn reports to the NTSB. When NTSB requests C G to investigate a major casualty, on - scene investigations are carried out for fact finding purposes and determination of causes as mentioned earlier, and when necessary by holding public hearings. Public hearings are suggested by the District Commander and decided upon by the Commandant. Marine Boards of investigations are composed of two or three C G officers with inter alia, professional qualifications, marine safety background and experience. When C G conducts investigations under the request of NTSB, the NTSB would nominate its investigator who may call and examine witnesses and submit or request additional evidence. When the investigations report is completed, the Commandant will provide a record of the

proceedings to the Safety Board which then issues its own report to the public.

4.2.2 MEMORANDUM OF UNDERSTANDING.

To avoid duplicative efforts in investigations involving the two Authorities, a memorandum of understanding was signed in 1981. This requires that, whenever a major casualty has occurred, one Authority may assume leading responsibility, while the other provides supportive participation. For instance, where there is extensive loss of life and or significant property damage involved, the NTSB would decide whether to participate in a joint C G -NTSB inquiry, do it alone or lead and conduct a formal inquiry under its own rules. The second option is quite prevalent in casualties where C G vessels are involved, thus removing the image of C G investigating itself. This resolves the conflict of interest problem which initially led to the establishment of the Safety Board.

Foreign flag vessel casualty investigations usually follow the same procedures but obviously with the knowledge and, when necessary, the participation of the nearest Consul office or P & I club representing the involved vessel. The investigator has powers to subpoena foreign witnesses if required to appear for examination and questioning, although he cannot refer charges against them.

There is coordination with other Federal agencies in investigations. For example, on matters of fires,

explosions, and pollution, the Minerals Management Service would be involved, while others fall under the Department of Defense.

4.2.3 PERSONNEL INVESTIGATIONS (DISCIPLINARY).

The C G has also the jurisdiction to suspend or revoke a licence / document when the holder is found to be negligent, or to have committed an act of misconduct etc as mentioned above. Mariners are charged with formal proceedings by investigators before Administrative Law judges. During such proceedings, mariners can be represented by a counsel who can call witnesses and produce evidence on their behalf.

Licences can be suspended for varying periods of time or revoked. However, in the event of either decision, mariners can appeal against the decision to the Commandant and even when unsatisfied with the outcome, to the NTSB. Mariners who fail to show up for personnel cases are listed down in a Seaman Locator and or Seaman Wanted List for future tracing whenever they show up in any port. (out of about 500 -1000 personnel incidents per year, 300 - 400 of them result in formal suspension and revocation hearings). The majority of disciplinary hearings held by ALJ's deal with misconduct on board, alcohol, drugs, and fights.

General enforcement laws and regulations investigations, lead to civil and criminal penalty proceedings where C G Hearing officers take necessary action against violation of laws / regulations on the basis of available evidence before them. They then would

decide on whether to dismiss a case, especially the ones lacking adequate evidence / proof or imposing penalty payments or reducing the penalty particularly when the respondent's response has been positive and satisfactory. Similarly, an appeal can be lodged to the Commandant whenever there is dissatisfaction on the part of a respondent for necessary re -consideration.

Conclusion.

Coast Guard Investigation recommendations initiate remedial action to correct specific safety problems found during investigations. A number of the recommendations are decided upon by the Commandant. For the broader safety implications, either suspected or not apparent, safety studies and analysis of the entire system are carried out, and necessary evaluation and identification of solutions by the relevant division are undertaken.

4.3 UNITED KINGDOM:

Perhaps the United Kingdom has the longest history of casualty investigations which dates as far back as two centuries or more. Presently the United Kingdom casualty legislation has originated from the Merchant Shipping Act of 1894 which has been amended by various Acts, particularly the Merchant Shipping Act (1974), the Merchant Shipping Act (1979), the Merchant Shipping (Formal Investigations) Rules of 1985 and recently by the Merchant Shipping (Accident Investigation) Regulations 1989.

This is the system upon which the Kenyan Marine Casualty Investigations system is based, despite its lack of amendment during the past several years. It is a system which consists mainly of preliminary inquiries and formal investigations into marine accidents.

Under the present regulations, the Secretary of State is empowered to designate as Chief Inspector of Marine Accidents, any of the several appointed inspectors. His functional responsibilities include, making regulations regarding inter alia, the following:

- . Marine accidents definition,
- . Purpose of investigations,
- . Duty to report accidents,
- . Ordering of investigations,
- . Preservation of evidence,

- . Conduct of investigations,
- . Submission of Inspector's enquiry report,
- . Summaries of investigations ,
- . Reopening of investigations,
- . Penalties, and others.

4.3.1 DUTY TO REPORT ACCIDENTS:

Under the current rules, the Master of any U.K registered ship and any other ship within U.K territorial waters, is required to send a report to the Chief Inspector of Marine Accidents currently heading the MAIB (the Marine Accidents Investigations Branch). This report is expected as soon as is practicable and in any case not later than 24 hours after the ship's next arrival at port from when an accident occurs. Where a ship is lost or presumed lost or is abandoned, the owner or the Master or senior officer is obliged to report the accident as required above. Any casualty report made to a marine office or the department of transport or to H M Coastguard is also subject to the above requirements.

The fundamental purpose of investigating an accident under these regulations is to determine its circumstances and causes with the aim of improving the safety of life at sea and the avoidance of accidents in the future. It is not their purpose to apportion liability nor blame unless this contributes to the achievement of the above purpose.

4.3.2 THE MARINE ACCIDENTS INVESTIGATIONS BRANCH.

(MAIB)

The establishment of this new body in 1989, which is specifically charged with the duty to investigate marine accidents, created an independent arm of the Department of Transport, reporting directly to the Secretary of State for Transport.

The MAIB is empowered to investigate :

- . Accidents at sea and on board ships and
- . Dangerous occurrences at sea.

This Board took over investigations of marine accidents previously conducted by the staff of the Department's Marine Directorate who were specifically appointed as inspectors for the purpose under the Merchant Shipping Act.

The Board aims to determine what caused an accident in order to prevent it from happening again. Its staff composed of professional inspectors and experienced surveyors, has been drawn from the following three major marine disciplines:

- . Nautical,
- . Engineering and
- . Naval Architecture.

This new set up requires that MAIB is advised at the earliest opportunity after an occurrence. Where serious

accidents are concerned, reports are required to be made initially by the quickest means e.g by Telephone or Telefax, to the Branch and any other office of the Department of Transport or H M Coastguard.

After accident reports are received here, they are immediately referred to an inspector for a decision on what action is to be taken. Normally, the type and severity of the accident will determine whether:

1. Further action will be necessary or not;
2. More information will be sought from the owner, employer or other person / body;
3. A limited investigation by an inspector will be carried out;
4. An inspector's inquiry will be called under the Merchant shipping (Accident Investigation) regulations 1989.

4.3.3 INVESTIGATION PROCEDURE.

Following receipt of accident information, the duty inspector who is required to be sent to the scene of the accident is conducted immediately. The Chief Inspector would then make a decision depending on the evidence obtained by the inspector (s) on whether the accident is going to be subjected to a limited investigation or whether a full inspector's inquiry is to be carried out (informal / preliminary inquiry).

When an accident leads to an inspector's inquiry,

subsequent fact finding investigations would be conducted usually following the procedure required for preliminary inquiry as generally stipulated earlier in Chap. 3 and a publication of the inspectors fact findings will be the ultimate goal. Accidents resulting only in limited investigations may require only a questionnaire being sent for further details to the owner and or other relevant persons for more information and then it is closed. Such limited casualty investigations are published only at regular intervals in a form of accident summaries. It should be noted here that the above publications are being carried by the MAIB subject to the new Regulations requirements and it is a new undertaking.

4.3.4 FORMAL INVESTIGATIONS.

MAIB's formation did not affect the old arrangements for holding formal investigations into the most serious accidents, usually ordered by the Secretary of State after considering the views of the inspector who carried out the informal / preliminary inquiry and other advice of casualty officers.

Several questions are also likely to be considered when deciding to hold a formal investigation, that is :

1. Is it likely to throw additional light on to the cause of the accident ?
2. Will it assist in publicizing and pursuing the lessons of the accident so as to prevent a recurrence ?
3. Did it involve heavy loss of life or attract expensive

public attention ?

An informal investigation is held before a Court consisting of a Wreck Commissioner, who is usually a senior practicing Lawyer. He is assisted by assessors of Nautical Engineering or Naval architects. The Court is nominated by the Lord Chancellor and is made independent of the Department of Transport. The Secretary of State would appear before the court as one of the parties to the investigation and is usually represented by a lawyer (a barrister specialising in Maritime cases). The Secretary could also be assisted by government solicitors, while other parties involved, such as ship owners and masters etc may brief Counsels, are represented also by solicitors or appear on their own. Before these proceedings, witnesses are given formal notice of the time and place of the hearings.

Formal investigations are held in public unless otherwise decided by the Commissioner, although they are rarely resulted to (on average, about one a year).

A formal investigation starts with a statement by the Secretary of State and other brief speeches on behalf of the other parties. Witnesses are then called and examined as necessary.

Amongst its powers is the power to cancel or suspend an officer's certificate giving its decision and a brief summary of its findings, in public. However, few cases result in this extreme step being taken by the Commissioner. The Department of Transport, on the other hand, has no powers over such certificates nor an officer's career, and therefore it relies on the ship owners for necessary disciplinary action in such cases.

The Commissioner would also make a report (including

his and the assessors findings on the cause (s) of the accident and safety improvement recommendations to avoid future accidents) to the Secretary of State from where it is finally published. This report is signed by the Commissioner and the assessors and in the case of objections by any or all of the assessors, reasons for doing so would be made in writing.

A formal investigation's re - hearing is usually subjected to the same rules applied during formal investigations, but appeals can be heard by the High Court or Court of Session.

Following the establishment of the new independent body (MAIB) responsible for investigations into accidents at sea, on board ships and dangerous occurrences at sea. The procedure of investigations is expected to change more with time from the old system (particularly that applicable to formal investigations), by making it more independent and less reliant on legally qualified personnel to technically qualified personnel.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS.

5.1 NATIONAL OBLIGATION.

Since one of the government's major responsibilities is the public's protection and safety, maintenance of safe operations and manning of vessels registered in Kenya should indeed be of utmost interest. Similarly, the government should also maintain an equally important interest in the safe operation of vessels of other registries operating within its internal and territorial waters.

It is, therefore, a national obligation to examine marine casualties, to analyse them and thereafter to give publicity to such casualties in an attempt to prevent a recurrence of similar events. Because the primary task of an investigating authority (a responsibility which has been delegated to the MSS in Kenya) is to promote safety, the most effective way of achieving this aim is by means of the safety recommendations made. The wide spread dissemination of lessons learned is the most valuable result of an investigation, while suppression of the information negates the primary intent of the process and should be discouraged and done away with.

The public further needs to be convinced about having confidence in national legislation governing maritime safety, through the practical application of laws governing the conduct of those responsible for vessel operations and those on the management and organization of ship safety procedures.

This legislation further needs to be well known and clear to the public. Efforts should also be made to ensure that costs and or lack of ability to make regulations applicable do not lead to negligence of safety of life and property at sea.

It must be remembered that the inquiry of a marine casualty is in the public's interest and may have implications for :

- Confidence in and reliability of sea transport;
- The reliability of shipowner's management and on those on board the ship,
thereby implying that any doubts set against the quality of management, will also extend to the Maritime Safety Administration as well.

Next of kin in particular have a right to know the real cause of a casualty and the cause of events leading to it. The public at large also has a right to know that an accident has been comprehensively and independently investigated for the purpose of attaching responsibility and compensation, in addition to possible improvements in maritime safety.

These obligations have been recognized and strengthened by IMO through previously mentioned conventions and resolutions (Annex 4).

5.1.1 LEGISLATION (National).

The source of legal authority for inquiries /

investigations and the legal means for meeting the relevant international obligations has to be the National Legislation.

It is therefore the responsibility of a government to enact legislation to :

1. Define what is a casualty;
2. Provide for the circumstances in which the administration may conduct inquiries / investigations; and
3. Prescribe the nature and extent of authority vested in all those charged with responsibility in such matters.

5.1.2 CASUALTY (Definition).

It is very essential for the relevant terminology to be clarified and defined in the Merchant Shipping Act, taking into account words used such as "accident" and "casualty", for instance, under section 213 and 266 respectively. The reason being to avoid the difficulties sometimes encountered when studying the Kenya Merchant Shipping Act 1967, in reconciling terms used to describe an accident to a ship, an accident aboard ship, an incident concerning ships, hazardous materials incidents, or dangerous occurrences.

Also when dealing with the words "inquiries" and "investigations", particularly for the public's understanding, the Act should similarly be reviewed and made clear.

As a result, therefore, a clear definition of those casualties, incidents and safety hazards which must be reported should be provided through regulations by the investigating authority.

5.1.3 JURISDICTION OF THE INVESTIGATING AUTHORITY.

The investigating authority should have exclusive jurisdiction to investigate all marine occurrences involving Kenyan registered or licensed ships whenever they occur, for the purpose of making findings as to their contributing factors, causes and recommendations based thereon.

The Merchant Shipping Act 1967, under section 264 and 266 provides for a limited jurisdiction in that :-

- "where on, or near the coast of Kenya, a ship is stranded, lost -----,
- where in any place a Kenyan ship is stranded, lost,-----or damaged and a witness is found in Kenya,
- Where ----- and any evidence is obtainable in Kenya as to the circumstances in which she proceeded to sea or was last heard of".

It seems unacceptable that Kenya should conduct investigations into a marine casualty anywhere merely because a witness happens to be in Kenya or evidence is obtainable in the country.

Sometimes casualties are tragedies resulting in loss of life or a ship with all hands on board, leaving no first hand evidence to assist the investigator. However, a properly trained and experienced surveyor must try to fall

back on his experience and try to put himself in the mind of the ship's master and others on board, so as to make the best possible assessment of what happened. Then most likely the pieces will fall into place. Witnesses should include people ashore as well as shipowners, and stevedores if a cargo shift is considered a possible factor in the accident. Witnesses should also include officers involved in search and rescue, the pilot who was last on board, local residents who may have seen what happened if a casualty occurred near shore. All possible alternatives should be exploited for information to be made available.

Further more, the investigating authority should have jurisdiction consistent with international law, including the Law of the Sea Convention 1982, to investigate all marine occurrences involving foreign ships when they occur within 200 miles of Kenya's shores or up to the outer edge of the continental margin which ever is furthest, or when such occurrences involve a foreign ship when on a voyage to or from a Kenyan port.

5.1.4 REPORTING.

Reporting of marine casualties needs to be done directly to the investigating authority through a comprehensive casualty reporting system which should also provide for voluntary reporting of marine accidents. This is in addition to the current procedure requiring mandatory reporting by owner or master to the Minister of Transport and communications, by letter signed by those reporting. The investigating authority should also define, through regulations, those casualties, incidents and

safety hazards which must be reported and this comprehensive reporting system should further include provisions protecting the identity of the voluntary reporter.

Reporting of marine casualties needs to be done through a casualty reporting form in place of the current practice of reporting by letter. An appropriate form should therefore be developed and provided and hence distributed to all registered ships, shipowners, ship dockyards, surveyors, maritime institutions. This is to enable the recipients to familiarize themselves with the reporting requirements. Such a form will also be intended to provide the investigating officer with the basic information about the ship, her owner, master, officers and crew, cargo, the type of casualty and the surrounding circumstances, thereby reducing the burden of writing a letter to report a casualty by owner or master.

(Annex 6 provides a typical format of a marine casualty reporting form).

Last but not least this paper is further recommending that :

- I. Kenya should ratify those IMO, conventions which directly affect maritime safety .
2. The Kenya Merchant Shipping Act, 1967 should be revised to incorporate the requirements / obligations of a signatory government, to the international conventions to enable the country to meet the international treaty obligations and contribute effectively to the safety of life and property at sea, and to protection of the marine environment.

3. A new set of rules and regulations to implement and enforce the requirements of IMO conventions should be drafted.

5.2 THE PURPOSE.

The primary purpose of marine casualty investigations should continue to be the improvement of safety of lives and property in the marine mode of transport. Casualty investigations need to be seen as a form of preventive medicine i.e the process of finding out the causes of the casualties, learning lessons and recommending on or sometimes improving regulations and safety measures to prevent recurrences should be of the utmost interest.

Investigations are acknowledged as having resulted in major improvements in areas such as ship construction, life saving and fire fighting equipment, navigational aids, levels of competency of sea men, search and rescue, and prevention of marine pollution. They should continue to improve further, marine safety.

5.2.1 DISCIPLINARY / CIVIL LIABILITY.

The disciplinary and civil liability aspects of casualty investigations have been considered in many countries as additional purposes, or at least consequences of the process. Even if (for instance on disciplinary aspect) it only requires including recommendations in the investigation reports to the effect that disciplinary action should be taken by others e.g the U.S.C.G who engages a separate proceeding before an Administrative Law

Judge for this purpose.

Kenya applies a similar system, since disciplinary recommendations in a report may be used to remove incompetent seamen to avoid further safety risks. As provided in the Act, the Minister has jurisdiction to appoint a judge/ commissioner to hold a formal investigation and may cancel or suspend a certificate or licence of a master, mate or engineer granted under the Act when there is proof of wrongful act or default, incompetence or gross act of misconduct.

This process is obviously likely to have negative consequences for the willingness of the personnel involved to cooperate in the investigation in explaining what really happened. Naturally, the reaction would be to remain silent, or mostly give false or misleading information and to be cautious in giving statements, or to require a lawyer before giving an answer. This would limit the investigator from getting a complete picture of the circumstances underlying causes of an accident.

Since the duty of a safety administrative officer involves taking legal steps on offenses against safety regulations, he should be ruled out as an investigator. The investigator should only have a safety promoting aim.

Solution.

A marine casualty investigation system :

1. Should be totally independent of any disciplinary process, which should be completely separate,
2. Should not determine or apportion blame or recommend any type of disciplinary action,
3. Should, however, not be prohibited from engaging in fact finding, where it may be concluded that a person

committed a fault which could be subject to disciplinary action.

Similarly,

4. It should not determine or apportion liability.
5. Its reports should not be prohibited from making objective fact finding from which fault giving rise to possible civil liability may be determined or concluded.

5.3 MARINE CASUALTIES TO BE INVESTIGATED AND EXTENT OF INVESTIGATION.

Since it could be costly to investigate fully all reported marine occurrences, some of which may have no lessons to be derived and learned, it would be appropriate if more elaborate criteria were set out for casualties that require to be investigated, either through a preliminary investigation, and or formal investigation.

All marine incident reports should, however, be examined and causal determinations made. Where conclusions can easily be reached, no further investigations need to be carried out. However, appropriate recordings should be effected in order to help determine safety deficiencies.

When a casualty report is incomplete or not sufficiently informative to make causal determination, further verification should be carried out.

When causal determination cannot be reached through examination and verification of a casualty, the investigating authority should carry out further

investigations until such a determination can be made -
(Annex 5 provides a developed and recommended
investigation system)

When it appears that something complex or unusual occurred or when it is apparent that important safety lessons can be learned, the investigating authority should investigate to the fullest extent possible, until the facts are clearly established to its satisfaction.

It is for this reason that criteria or guidelines set would be useful in determining when one of the above courses of action should be followed. For instance, a casualty resulting in considerable loss of life or extensive property damage could have simple facts readily known and easily determined causes, requiring no detailed investigation whatsoever, unless on the other hand, it arouses considerable public concern and sensitivity.

These guidelines should be reviewed periodically by the investigating authority which should also have full discretion regarding their application.

However, different levels of investigations should not be taken to mean different methods of investigations, since they will only range from a simple verification of a casualty report, to a full field investigation, and or by a public hearing depending on the degree of severity and or damage / complexity or recommendations made by investigating officers. All should have the same objective of determining the cause (s).

The bottom line is the determination of the contributing factors and causes of a marine occurrence,

identification of safety deficiencies and recommendation of corrective courses of action to be taken by the safety promoting authority, to improve safety of life and property at sea.

5.3.1 PUBLIC INQUIRIES AS PART OF THE INVESTIGATION.

Investigation guidelines / regulations should further state the powers to hold public inquiries as part of the investigations, while the investigating authority must use its discretion to decide when to hold a public inquiry. In addition, the authority needs to establish, review periodically and publish the general criteria it would consider when choosing to conduct a public inquiry. The chairman of such an authority should have the authority to order that a public inquiry be held.

Finally, the investigating authority should have the power, with the approval of the Chairman, to make regulations establishing rules of procedure and rules of evidence for public inquiries. These also need to provide for the purpose of the inquiry i.e to remain a fact finding proceeding as to the contributing factors and causes of the casualty being investigated.
(The provisions of the Merchant Shipping Act relating to formal public investigations should be repealed)

5.3.2 ANALYSIS AND DETERMINATION OF CAUSES.

Analysis involves selection of relevant facts, thorough examination of these facts and comparison of the results with existing regulations, standards and established

practices covering marine casualty investigations, nationally and internationally.

Analysis should take into consideration the following aspects if it is expected to produce positive results.

1. Human aspects, such as willingness and ability to communicate, skills, fatigue, knowledge, experience
2. The quality and or quantity of evidence taken.
3. Technical aspects involved in the casualty e.g failure of equipment, poor workmanship, cargo stowage.
4. Determination of the most probable cause / causes of the casualty involved.

A fundamental condition of the effectiveness of maritime safety work is that it is performed by competent persons.

Investigating officers, therefore need, as a result, to acquire or be knowledgeable on interview techniques, legal rights of witnesses, administration of oaths, photography, all relevant safety standards as advocated by national and international requirements, and classification societies.

They should have knowledge and or ability to interpret information gathered during investigations.

They further require continuous on the job training through seminars, symposia inter alia to update their expertise in investigation techniques. This is because the qualifications of an investigator assigned to a casualty investigation determine the thoroughness and quality of

results obtained.

5.4 POWERS OF THE INVESTIGATOR.

The investigating officer should have powers provided for by the provisions of the Act relating to this aspect and must include :

- Power to enter any premises or board any vessel and examine her and the equipment / machinery, to secure attendance of and interview witnesses, take statements, collect, examine, and or make copies of papers, books, records, and documents, take photographs, remove or mark any original documents or objects for future identification. All these would be of great assistance in development of facts and determination and establishment of the cause (s) of a casualty.
- Power to protect the site of a casualty.
- Power to require medical information or examination as well as autopsies.

The investigating officer must be required to be at the scene of casualty early enough to collect evidence and interview witnesses while investigation material is fresh, and before time has changed or wiped out important evidence.

When a casualty occurs and there are indications of investigators being blocked from entering the vessel, the investigator should have powers provided to :

- Impound the vessel.

- Cease the licences of officers and crew, and provide minimal penalty fines for failure to cooperate.

When a casualty involves a foreign vessel or is in foreign waters, the Minister must ensure there is assistance of the foreign government through diplomatic circles, and other officials and departments such as customs inter alia. The classification society covering the vessel must be asked to cooperate and provide expert witnesses.

5.5 WITNESS INTERVIEWS.

The investigating officer must ensure that interviews of witnesses are productive in all aspects. It is his duty to make sure that witnesses are officially invited by either letter, telephone, or verbally to attend interviews and be examined. Investigating officers should have the right to use their discretion on whether to interview them on oath or to conduct informal interviews.

When a witness requests the right to be assisted by his own lawyer, he should be allowed and his lawyer also to ask questions pertinent to the safety purpose of the investigation, provided he does not make statements.

Witnesses interviews should be conducted in privacy "in camera". However, when the investigator deems it necessary to interview more than one witness at a time, for instance the master and the watch officer, he may do so provided there is consent of the witnesses .

Witnesses statements must be read to them before they are signed, unless they prepared their own statements (in

which case they will have full knowledge of the contents). Further more, witnesses should be informed when their testimony is to be recorded, although this should not require his consent and copies of statements should be made available upon request by witnesses. When recorded tapes are to be used, they should not be erased until they cannot serve any further purpose.

In short, it is recommended that :

1. Witnesses' statements obtained by investigating officers whether in oral form or written, should together with the identity of the witness himself be privileged and should not be used against a witness in any legal or other proceedings anywhere (without this a witness may be reluctant to give correct evidence). This privilege should be exempted only when :
 - (a) The investigating authority is using it and even so, it should only be used in civil proceedings or a prosecution for perjury, or for giving contradictory evidence, or for knowingly giving false or misleading evidence;
 - (b) When an officer authorised by law to gain access to it requires so;
 - (c) It is released to a court after the court's examination concludes that it is necessary for the administration of justice.

5.6 THE INVESTIGATING AUTHORITY.

The investigating body ought to be quite independent of both Maritime Administration and business interests. As such it will neither have powers to put its own recommended measures into effect, nor need to have this power at all.

It is very important for any authority engaged in the investigation of marine casualties to be independent and totally separate from the maritime safety administration. This is because it is the maritime safety administration that issues maritime regulations or takes an active role in their issue; examines and has the responsibility of checking vessel's seaworthiness; issues certificates; confirms the seaworthiness of ships in various respects; is responsible for the manning of ships and the competence and the licensing of the personnel. It also provides marine services e.g aids to navigation and where any of these is found to be faulty, the investigator may hesitate to criticize his colleagues.

Under such circumstances, an accident can be a proven sign that the safety authority has failed in its efforts to prevent casualties. It is inappropriate that the Maritime Safety Administration should investigate accidents which they have had the opportunity to prevent earlier. Involved parties could therefore conclude that the safety administration contributed to the accident through careless inspections or deficiency in regulations and safety devices. Difficulties also arise when it is further seen to be investigating itself.

As a result, therefore, marine casualties ought to be investigated by an impartial board which is totally separate from the Safety Administration.

This paper, therefore, strongly recommends that :

A Marine Tribunal be established in Kenya for the purpose of conducting independent investigations into marine casualties, in place of the existing arrangement, where the merchant shipping superintendent's office has been entrusted with the powers to carry out this responsibility, through delegation of duties by the Minister of Transport and Communications.

The Marine Tribunal should be composed of the following members :-

1. A Judicial and an experienced Judge,
2. A Nautical Master Mariner, and
3. A Marine Engineer.

The most suitable of these three members should be designated Chairman of the Tribunal for the executive administration of the Tribunal.

The three members should be assisted by assessors to be drawn from the Maritime Safety Office, but who will no longer belong to this office, since they will be maintained in the safety administration within a panel mainly for this purpose, and from which the Tribunal will be selecting especially the most suitable for assistance in formal investigations.

The responsibilities of this board should include inter alia :

- Looking into all aspects of marine casualty

investigations in Kenya.

- Production of a Safety Manual for use by the Maritime Safety Office, the Ministry and investigators, shipowners, crew, educational institutions, mariners as may be deemed necessary by this office.
- Should try to simplify the Act and its provisions and incorporate such factors as casualty reporting guidelines and criteria, casualty report form provisions, types of casualty investigations in gathering facts and evidence, as well as casualty reports.
- Keep records of casualty statistics, conduct analysis of accumulated casualty data in Kenya using computer technology programs and maintain cooperation internationally with other investigations Board and other organizations.
- Look into crew matters and particularly those not involved with disciplinary action.
- Look into L. Victoria serious casualties which have remained under the Kenya Railways Corporation.

The Tribunal should have the objective of facilitating casualty investigation proceedings and elimination of the conflict of interests as earlier mentioned. It should also shorten investigation time and reduce costs, since there will be no time wasted in deciding on formal investigations for instance. In addition it should facilitate early release of casualty reports.

- The Tribunal should, within its powers, point out any shortcomings found in the maritime regulations.
- It should conduct fair and impartial investigations into marine casualties, and produce and prepare annual reports to parliament and conduct safety studies for the improvement of marine safety.
- Last but not least, the Tribunal should be directly responsible to the central government.

5.7 REPORTS OF THE INVESTIGATING AUTHORITY.

All marine casualty investigation reports should be made available to the public immediately, subject only to any restrictions that may be required in the interests of national security.

Casualty reports should be published in all cases where the investigating Marine Tribunal conducts a casualty investigation.

Marine reports should include :

A brief introduction, a summary, findings of facts, conclusions and comments, and finally recommendations, as previously discussed.

Prior to issuance of an investigation report, it is recommended that, a confidential copy of its draft should be submitted to the Minister of Transport and Communications, and to any one else who, in the opinion of the investigating tribunal, has a direct interest in its

findings and recommendations. Any person to whom such a draft is given should be given reasonable time to make presentations in such a manner as the tribunal deems appropriate and which, in turn, the tribunal should consider.

Even after publication of a casualty investigation report by the Tribunal, it should have a right to reconsider its findings and recommendations whenever, it is deemed necessary.

The Tribunal should further have powers to conduct safety analysis arising out of a casualty report and subsequently report on the results.

Finally, when disseminating casualty report findings and recommendations, the Tribunal should aim at getting the pertinent information into the hands of mariners, including fishing vessel mariners, shipowners, ship repairers and marine institutes.

5.8 SAFETY DEFICIENCIES, AND RECOMMENDATIONS.

A casualty investigation's main purpose is the identification of safety deficiencies and submission of recommendations which may be directed to marine regulatory authorities, to government, to the marine community, to ship repairers, to shipowners, and to mariners, in order to avoid reoccurrences.

The Marine tribunal should therefore have the responsibility to develop and issue safety recommendations whenever appropriate, whether as a result of an

investigation or as a result of statistical or other analysis.

In pursuit of the above, it should use its discretion on whether to consult experts both within and outside the government provided that no conflict of interest is created and that, such consultations are contributory factors to the final report.

These recommendations either, general or specific, should be included in the casualty investigations reports.

The investigation Tribunal should stipulate in its report the time limit within which any government department, or agency, to which a recommendation is made, is required to take action intended in the report, or its rejection to such a recommendation. In case of a rejection, good reasons for doing so should be made clear in writing and all these need to also be made available to the public.

Last but not least, it is very important for the Tribunal to follow up the implementation of its recommendations.

CONCLUSION

Although Kenya is not a prominent maritime nation (annex 2) as shown by the total number of vessels plying within its waters annually, numerous marine accidents involving particularly small commercial boats and canoes in addition to those of registered vessels, occur each year along the coastal waters and in Lake Victoria. Nevertheless, very little public attention has been drawn to these incidents. As a matter of fact, it is only when there has been considerable heavy loss of life that the casualty becomes sensational and attracts considerable public attention. This, however, contradicts the real situation in the marine industry where a substantial number of Kenyans make a living out of or through the use of seas and lake. This is particularly the case in the fishing industry, sea transport, canoe and ferry services, small scale pleasure boating by tourists and merchant shipping. This reflects substantial economic activity, which represents also a considerable proportion of the country's gross national product.

As a result, therefore, safety deficiencies in the marine industry have an adverse effect on the national economy because shipping is known to be a capital intensive business and human life is obviously as highly sacred and valuable.

Those major national decisions taken to increase the safety of life and property at sea should thus give top priority to making the marine casualty investigation process public. This is due to the fact that many lives and ships have been lost simply because the lessons learnt from accident investigations do not reach those who are most concerned i.e. the mariners. As a result they miss the opportunity to learn from the experience of others.

This will be achieved by the implementation of recommendations made earlier regarding the establishment of an independent marine investigation tribunal, with jurisdiction over all serious marine casualties both at sea and on Lake Victoria. It is the only objective that will aim at solving the conflict of interests problem prevailing in the present system.

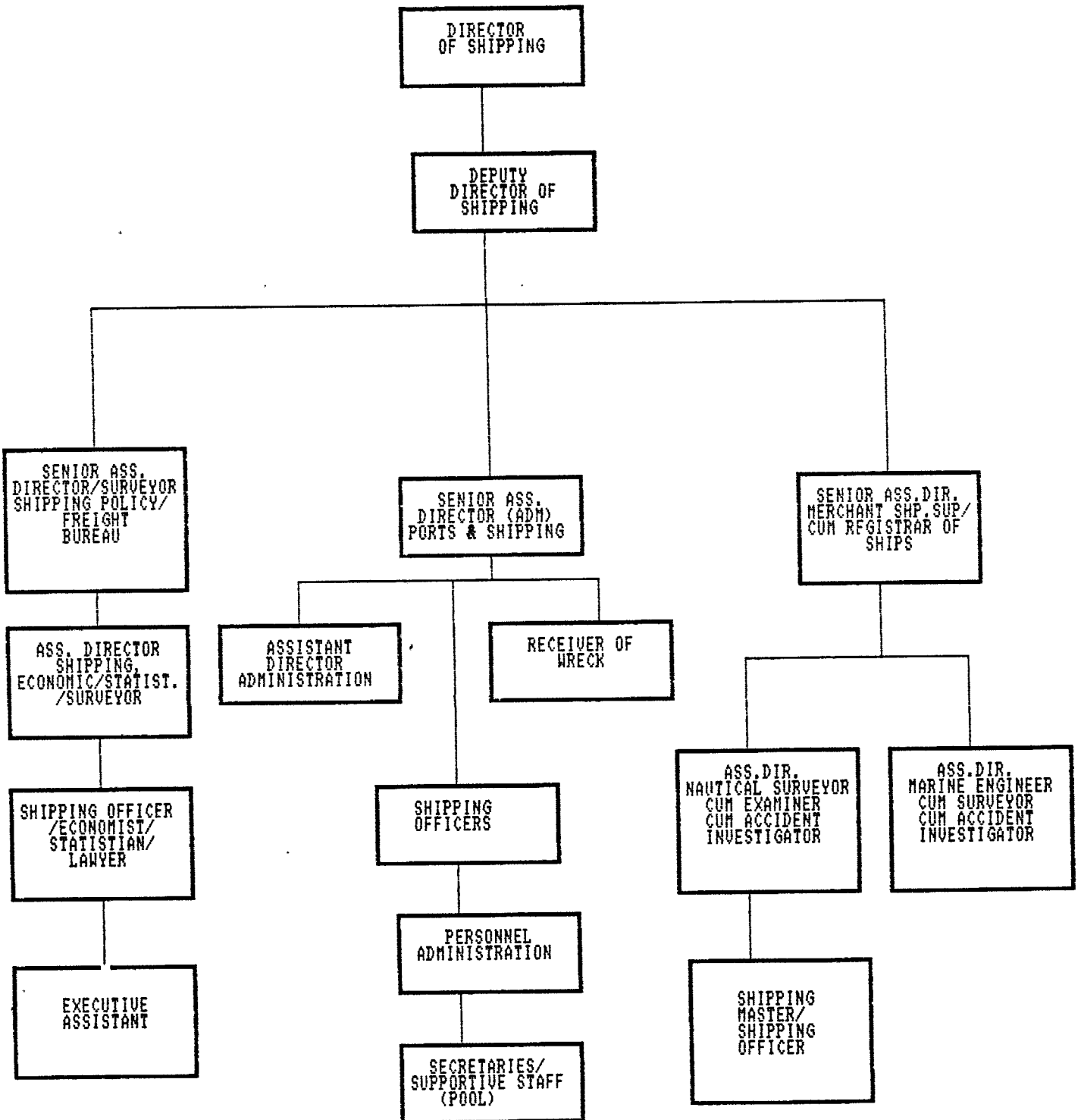
Similarly, implementation of the recommended department of shipping in the Ministry of Transport and Communications, for the improvement of maritime safety issues in the country, is going to be a great achievement.

Further more, this paper acknowledges that it would be very difficult to achieve the above without legislation. This paper therefore, urges immediate review and updating of the Merchant Shipping Act 1967. Further international conventions related to safety promotion in the marine mode of transport need to be considered, ratified and incorporated into the Act.

In conclusion, this paper wishes to remind those involved in marine safety promotion that, since casualties will continue to happen, as there is no such thing known as perfect safety, we should learn from them in order to avoid other unnecessary losses. "Unless conclusions are promulgated without fear or favour and corrective measures are taken, then an opportunity has been lost and valuable lives and ships have been sacrificed in vain", as stated in a London seminar at the Institute of Marine Engineers.

Lessons learned from casualty investigations, irrespective of whether they are considered to be insignificant, rare, or acts of God, provide a rationale for continuous improvement in the development of effective investigations for furtherance of marine safety.

MINISTRY OF TRANSPORT & COMMUNICATIONS
PROPOSED SHIPPING DEPARTMENT



ANNEX 2

KENYA REGISTERED VESSELS

NAME	GRT	PORT OF REGISTRY AND YEAR		WHEN BUILT
-----	---	-----		-----
Imbran	77.95	MSA	1968	1952
Samaki	46.22	MSA	1968	1957
Maymun	69.01	MSA	1968	1956
Mvita	47.79	MSA	1968	1957
Nabila	1168.01	MSA	1969	1962
Baruti	32.42	MSA	1969	-
Khole Khole	49.92	MSA	1969	1969
Shakwe	122.15	MSA	1970	1969
Suli Suli	15.38	MSA	1971	-
Impala	110.62	MSA	1971	-
Tewa	217.48	MSA	1977	1928
Safina	381.68	MSA	1976	1975
Karibuni	17.26	MSA	1977	1975
Kuvuna	225.22	MSA	1977	1966
Kuvuna	62.43	MSA	1977	1970
Kusi	352.72	MSA	1978	1977
St. Christ				
Likoni	104.69	MSA	1978	1957
St. Michael	104.50	MSA	1978	1959
Mvita	193.30	MSA	1978	1969
Tobia	27.79	MSA	1979	1977
Ujuzi	118.72	MSA	1979	1968
Kuvuna	62.43	MSA	1979	1972
Funguo	275.89	MSA	1980	1980
Uchumi	275.89	MSA	1980	1980

Mkizi	45.12	MSA	1980	1980
Lariana	55.53	MSA	1991	1978
Tawakal	271.12	MSA	1982	1982
Kiboko	391.67	MSA	1982	1976
El Lamy	354.58	MSA	1982	1982
Mchunguzi	38.06	MSA	1982	1982
Mlizi	38.06	MSA	1982	1982
Kiongozi	-	MSA	1982	1982
Taisir	260.97	MSA	1983	1983
Simba II	361.63	MSA	1984	1983
Nguvu II	361.63	MSA	1984	1984
Morea	194.95	MSA	1984	1965
Chui	361.63	MSA	1984	1984
Mwokozi	672.85	MSA	1984	1984
Nyuni	658.82	MSA	1984	1966
Duma	361.63	MSA	1984	1984
Tawakal	886.29	MSA	1984	1984
Faru	361.63	MSA	1985	1984
Shaza	15.04	MSA	1985	1984
Nasseeb	50.80	MSA	1985	1984
Mauritatian	104.27	MSA	1985	1953
Betty				
Mauritian	104.27	MSA	1985	1953
Winnie				
Overdraft II	13.83	MSA	1985	1978
Harrier	28.56	MSA	1985	1977
Al Nasser	144.21	MSA	1985	1984
Fadhili Al	76.29	MSA	1985	1983
Karim				
Sofia	988.23	MSA	1985	1970

Source - Merchant Shipping Office (1990).

ANNEX3

THE KENYA MERCHANT SHIPPING ACT -CAP. 389.

"213 Accidents to Kenya ships to be reported.

Where a Kenya ship has sustained or caused an accident occasioning loss of life or serious injury to any person or has received any material damage affecting her seaworthiness or her efficiency either in her hull or in any part of her machinery, the owner or master shall, as soon as possible after the happening of the accident or damage transmit to the Minister, by letter signed by the owner or master, a report of the accident or damage and its probable occasion, stating the name of the ship, her official number if any, the port to which she belongs and the place where she is.

SHIPPING CASUALTIES.

"264 A Shipping casualty shall be taken to occur:

- (a) Where, on or near the coast of Kenya, a ship is stranded, lost, abandoned or damaged, or any loss of life occurs by reason of a casualty happening to or on board a ship.
- (b) Where in any place a Kenya ship is stranded, lost, abandoned or damaged and a witness is found in Kenya .
- (c) Where a Kenya ship is lost or supposed to have been lost and any evidence is obtainable in Kenya as to the circumstances in which she proceeded to sea or was last heard of.

"265 Preliminary inquiry.

1. Where a shipping casualty has occurred, a preliminary inquiry may be held respecting the casualty by a receiver, a surveyor or any other person appointed for the purpose by the Minister.
2. For the purpose of an inquiry, the person holding the inquiry shall have the powers of a surveyor under this Act, and in addition may require the attendance of all such persons as he thinks fit to call before him, and may require answers or returns to any inquiries he thinks fit to make, and may administer oaths.
3. Upon the conclusion of an inquiry, the person who made it shall send to the Minister a report containing a full statement of the case and his opinion there on , accompanied by such report of or extracts from the evidence and such observations as he thinks fit.

" 266 Formal investigations by commissioner.

1. The Minister may appoint a Judge, a Magistrate or a senior public officer, to be a commissioner to hold formal investigations or a formal investigation under this part.
2. A formal investigation need not be preceded by a preliminary inquiry.
3. A formal investigation may be held in the following cases:
 - (a) Shipping casualty;
 - (b) Where a master, mate, pilot or engineer is charged with incompetence, misconduct or default while serving
 - (i) On board a Kenya ship, or
 - (ii) On board any other ship on or near the coast of Kenya or in the course of a voyage to a port in

Kenya

4. The commissioner so appointed shall hold a formal investigation with the assistance of one or more assessors of nautical, engineering or other special skills or knowledge appointed by the Minister from a list approved by the Minister for the purpose.

" 267 Powers of commissioner.

The commissioner shall have all the powers and privileges of a commissioner appointed under the commissions of inquiry Act.

" 268 Power of commissioner as to certificates.

1. The certificate or licence of a master, mate or engineer granted under this Act may be cancelled or suspended by a commissioner holding a formal investigation into a shipping casualty under this part, if the commissioner finds that the loss or abandonment of or serious damage to a ship or loss of life has been caused by:

(a) His wrongful act or default.

(b) His incompetence or gross act of misconduct.

(c) In a case of collision, his failure to render such assistance or give such information as is required under part v.

2. A cancellation or suspension under this section requires the concurrence of the majority of the assessors assisting the commissioner.

3. Each assessor who does not concur in and sign the report of the commissioner shall state in writing his dissent and the reasons for it.

4. The commissioner shall in all cases send a full report on the case with the evidence to the Minister and shall

also, if he desires to cancel or suspend any certificate or licence, send the certificate or licence so cancelled or suspended to the Minister with his report, and a copy of the report shall also be furnished to the master, mate or engineer whose certificate or licence has been cancelled.

" 269 Delivery up of certificates.

1. The commissioner may at one time during or after a formal investigation call upon any master, mate or engineer to deliver his certificate or licence to him, and the commissioner on receiving the certificate or licence shall send it to the Minister.

2. On receiving the certificate, the Minister shall, if the certificate or licence:

- (a) Has been granted in Kenya, retain it, or
- (b) Has been granted else where than in Kenya, send it together with the full report upon the case and a copy of the evidence, to the Government of the country concerned.

" 270 " Rehearing of formal investigations.

1. Where a formal investigation has been held, the Minister may order the investigation to be re held either generally or as to any part thereof, and shall so order if;

- (a) A new and importance evidence that could not be produced at the investigation has been discovered, or
- (b) For any other reason there has been in his opinion ground for suspecting that a miscarriage of justice has occurred.

2. The Minister may order the investigation to be held by the commissioner who held the investigation in the first instance, or may appoint another commissioner and select the same or other assessors to hear the case.

3. Whereon an investigation decision has been given with respect to the cancelling or suspension of the certificate or licence of a master, mate or engineer and an application for the investigation to be held under this section has not been made or has been refused, an appeal shall lie from the decision of the court.

" 271 " Inquiries as to the fitness of officers.

1. Where the Minister has reason to believe that a master, mate or engineer is from incompetence or misconduct unfit to discharge his duties, or that in a case of collision he has failed to render such assistance or give such information as is required by this Act, he may cause an inquiry to be held.

2. The Minister may either himself appoint a person to hold the inquiry or may direct the inquiry to be held before a judge.

3. Where the inquiry is held by a person appointed by the Minister, that person :-

- (a) Shall hold the inquiry with the assistance of a competent lawyer appointed by the minister;
- (b) Shall have all the powers of a surveyor under this Act.
- (c) Shall give a master, mate or engineer against whom a charge is made an opportunity of making his

defense, either in person or otherwise, and may summon him to appear;

- (d) May make such order with regard to the costs of the inquiry as he thinks fit; and
- (e) Shall send a report upon the case to the Minister.

4. Where the inquiry is held by a judge, the inquiry shall be conducted and the results reported in the same manner, and the court shall have the same power, as in the case of a formal investigation into a shipping casualty under this part.

5. Where upon an inquiry the Minister is satisfied -

- (a) That the master, mate or engineer has been shown to be incompetent or has been guilty of an act of misconduct, drunkenness or tyranny;
- (b) That the loss or abandonment of or serious damage to a ship or any loss of life was caused by the wrongful act or default of the master, mate or engineer;
- (c) That the master, mate or engineer has been guilty of a criminal offence or has been blamed by a Coroner's inquest in respect to the death of any person; or
- (d) That the master or mate, in a case of collision between his vessel and another vessel, has failed without reasonable cause to comply with the requirements of this Act with regard to rendering assistance or to giving information .

He may suspend or cancel the certificate of competency or licence of the master or mate or the certificate or licence of the engineer, as the case may be.

Annex 4

INTERNATIONAL (IMO) GUIDELINES ON CASUALTY
INVESTIGATIONS.

IMO has also adopted a number of guidelines on casualty investigations inter alia the following:-

1. IMO Resolution A.442 urges governments to ensure they have available efficient means and suitably qualified personnel and material resources to enable them adequately to enforce international regulations particularly in cases of casualties and contraventions of maritime safety or marine environmental protection.
2. IMO Resolution A.173 is intended to ensure that states seriously affected by or having a substantial interest in a maritime casualty have the opportunity of being represented at inquiries into or proceedings related to such casualty.
 - It seeks unification of practice in relation to such inquiries and proceedings.
 - Recommends that a flag state holding an inquiry into a casualty which affects or may affect another state to consult with that state or if the inquiry is held as a matter of course then to inform that state of its date and place.
 - Recommends that unless otherwise required by national rules, such inquiry be open to the public and permit a representative of the other state concerned to attend and participate.
 - Recommends similar facilities be extended to the flag state at an inquiry held by a state seriously affected or having substantial interest in a casualty.

- Does not affect or apply to the holding of a preliminary of informal inquiry or any other proceedings.
- Recommends that a state should not be treated for the purposes of the resolution as being affected by or having a substantial interest in a casualty only by virtue of its being the flag state of a vessel involved or by one of its nationals having a commercial interest in the ship or its cargo.

3. Resolution A.322 draws the attention of contracting governments to the SOLAS and LL conventions to their obligations to investigate casualties in accordance with those conventions.

Urges these governments to provide IMO with information on the findings of such investigation.

Requests the IMO Maritime Safety Committee to examine regularly such reports and recommend action as necessary and to list serious casualties and request administration to provide information regarding inquiries held by them.

4. Resolution A.440 urges governments to cooperate on a mutual basis in investigations into marine casualties and to exchange information freely for the purpose of a full appraisal of such casualties.

5. Resolution 433 provides a standard marine casualty report form which includes a means of classifying the causes of casualties and
Urges Administrations to complete and forward this form to IMO in respect of the total or constructive total loss of ships of 1600 gross tonnage or more and of

ships of 500 gross tonnage involved in loss of life.

Recommends that the information so supplied be based on the report of :-

1. A court or board of formal investigation
2. A preliminary inquiry or investigation carried out by the administration or
3. An informal fact - finding investigation carried out by the administration.

Recommends a copy of the above report or extracts therefrom be forwarded to IMO with the marine casualty report .

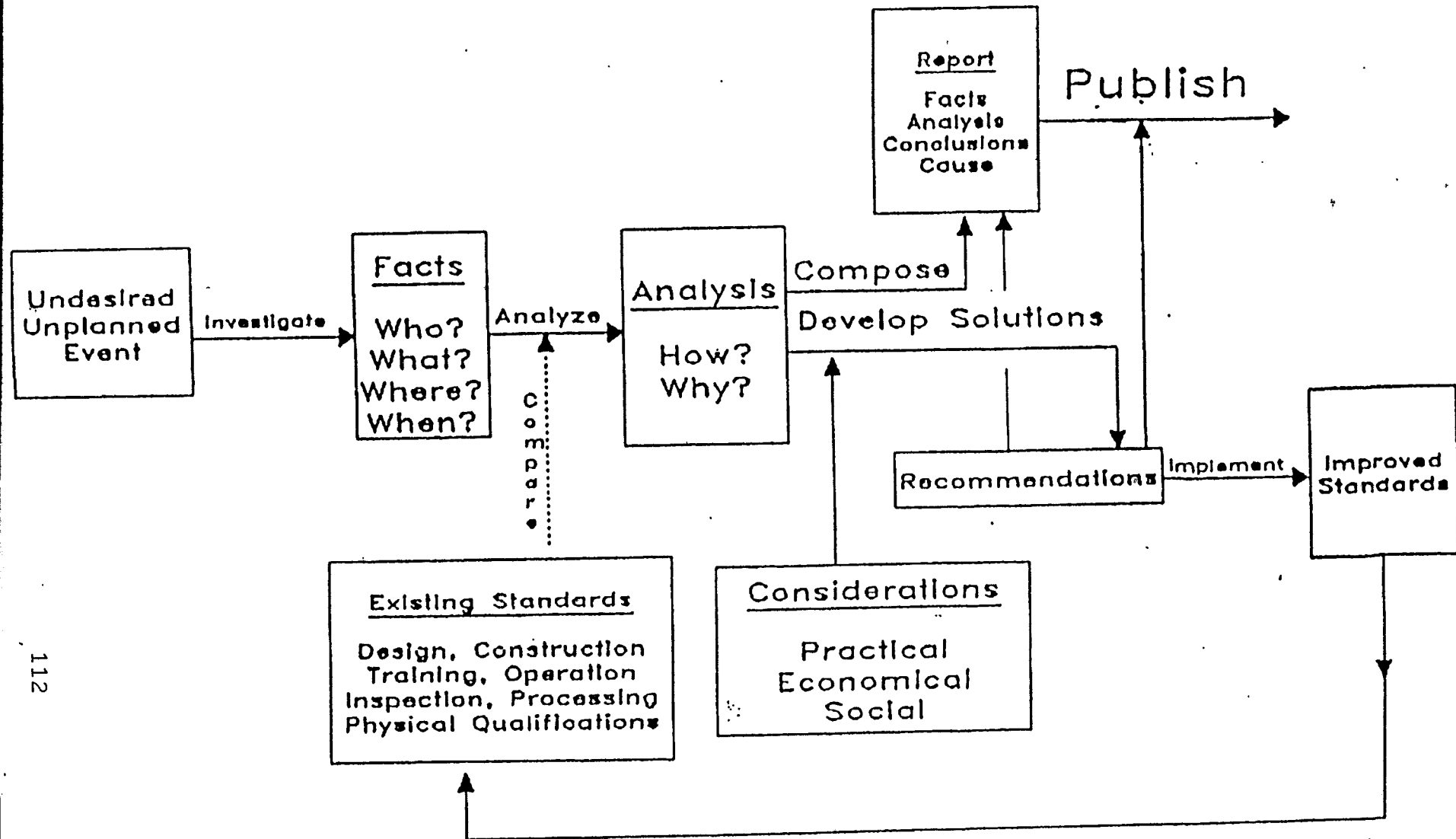
Urges completion and forwarding to IMO of the fire casualty record (MSC/ cir.388), intact stability casualty record (MSC / cir. 224) and the questionnaire on the Marine Distress system (COM/ circ.70) (Annex 2)

6. Resolution A 147 applies to all governments including those not parties to the MARPOL convention and recommends action for the reporting and processing of reports of oil pollution incidents and the provision of such information to IMO.

THE ACCIDENT INVESTIGATION PROCESS

Source- F.L Miswall (lectures)

ANNEX 5



FORMAT OF MARINE CASUALTY REPORTS ^{*/}

1. The completed form should be returned as soon as possible to the IMO Secretariat.
2. Where it is proposed to carry out further investigations, this form should nevertheless be completed as far as possible and returned to the Secretariat.
3. The summary and recommendations of any subsequent report should be forwarded to the Secretariat in due course.

Name of ship	Distinctive No. or letters	Type of ship	Year of build	Flag	Gross Tonnage

Date of Casualty Day Month Year	Time of Casualty (local time)	Type of Casualty (i.e. fire, foundered, etc.)	Name(s) and Flag(s) of other ships involved

Name of place or sea where casualty occurred	Latitude and longitude of casualty	State of sea, weather and visibility at time of casualty

Port last sailed from and date of sailing	Port of destination	C a r g o	
		Status (i.e. loaded, part loaded, ballast)	General description of cargo(s)

Brief account of the sequence of events of the casualty:

^{*/} Note by the Secretariat:

This form is not to be used as a substitute for reports of enquiries into serious casualties.

Probable cause of casualty, if known:

Brief account of any assistance given to the ship and/or rescue services provided:

Brief account of the extent of the damage to the ship:	Will the ship be Repaired* Salvaged* Broken up* Not removed*
--	--

Number of lives lost	Did pollution occur? (From subject ship only)		
Crew: Passengers:	<table border="1"> <tr> <td data-bbox="665 929 907 1081">Yes/No*</td> <td data-bbox="907 929 1422 1081">Pollutant Amount, if known</td> </tr> </table>	Yes/No*	Pollutant Amount, if known
Yes/No*	Pollutant Amount, if known		

Comments on applicability of Convention requirements, recommendations and measures taken to prevent recurrence:

Is a further investigation to be carried out? Yes/No*	If yes further information should be forwarded in due course
---	--

Signature and title of person providing information

.....

.....

Date

On behalf of

* Delete as appropriate.

INTER-GOVERNMENTAL MARITIME CONSULTATIVE ORGANIZATION

FIRE CASUALTY RECORD

No.

1. Date and place of casualty⁽¹⁾
2. Type of ship (passenger, cargo, bulk carrier, oil tanker, fishing vessel, etc.)
3. Were any voyage limits imposed on the ship? *
-
4. Year of build Year of major reconstruction
5. Particulars of ship :
 Length between perpendiculars (in metres) Gross register tonnage
- Propelling machinery (type, fuel, etc.)
6. Nature of cargo
7. Location of ship : Was the ship under way or in port?
- If in port, specify the condition (loading, unloading, under repair, or others)
-
8. Local conditions : Time (daylight or darkness) Wind force (Beaufort scale)
- State of sea (and code used)
9. Part of ship where fire broke out*
-
10. Probable cause of fire*
-
-
11. Description of damage*
-
12. No. of persons on board : Passengers Crew
13. No. of victims : Dead Injured
14. Structural fire protection (briefly describe fire resisting and fire retarding bulkheads, doors, decks, etc. through the whole area affected by fire) :
-
-
15. Fire detection method at site of fire :
 (a) Automatic
- (b) Others*

Fixed fire extinguishing installations :

- (a) At site of fire
- (b) Adjacent areas

Ship's fire extinguishing equipment used (foam, dry chemical, CO₂, water, steam, etc.):

- (a) Fixed*
- (b) Portable*

Effectiveness of action taken by crew to extinguish fire :

Outside assistance given and equipment used (e.g. fire department, other ship, etc.):

Time taken to fight fire : To control To extinguish

Synopsis*

Observations

Records to be completed for passenger, cargo and fishing vessels of 25 m. in length and over, and should cover casualties which occurred in 1962 and later.

The provision of data marked (*) is optional.

Data marked with an asterisk (*) should be given as precisely as possible.

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ABBREVIATIONS.

ALD ADMINISTRATIVE LAW JUDGE.

C.G. COAST GUARD.

ILO INTERNATIONAL LABOUR ORGANIZATION.

IMO INTERNATIONAL MARITIME ORGANIZATION.

KPA KENYA PORTS AUTHORITY.

KR KENYA RAILWAYS.

LL 66 LOAD LINE CONVENTION, 1966.

MARAD MARITIME ADMINISTRATION.

MARPOL INTERNATIONAL CONVENTION FOR THE PREVENTION OF
 POLLUTION FROM SHIPS, 1974/78.

M D MANAGING DIRECTOR.

MAIB MARINE ACCIDENTS INVESTIGATIONS BOARD.

MOTC MINISTRY OF TRANSPORT AND COMMUNICATIONS.

MSC MARITIME SAFETY COMMITTEE.

MSS MERCHANT SHIPPING SUPERINTENDENT.

NTSB NATIONAL TRANSPORTATION SAFETY BOARD.

OBO ORE BULK OIL.

OCMI OFFICER IN CHARGE OF MARINE INSPECTIONS.

SOLAS INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE
AT SEA, 1974/78.

STCW STANDARD OF TRAINING, CERTIFICATION AND
WATCHKEEPING CONVENTION, 1978.

TEU TWENTY FOOT EQUIVALENT UNIT.

UK UNITED KINGDOM.

UNCTAD UNITED NATIONS CONFERENCE ON TRADE AND
DEVELOPMENT.

VLCC VERY LARGE CRUDE CARRIER.

VHF VERY HIGH FREQUENCY .

US UNITED STATES .