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WORLD MARITIME UNIVERSITY

Malmö, Sweden

**MARITIME SAFETY AND POLLUTION PREVENTION
IN GHANA:**

A Review of Implementation and Enforcement
of International Conventions

By

MOSES KWADZO BEICK-BAFFOUR

Ghana

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

**MARITIME SAFETY AND ENVIRONMENTAL PROTECTION
(Nautical)**

2000

Declaration

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

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

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DEDICATION

This dissertation is dedicated to my beloved wife, Patience and our children Andy, Becky, Michael and Lady Vera.

Acknowledgement

“I can do all things through Christ who strengthened me.

Philippians 3:13 (Holy Bible, King James Version)”

I wish to preface this work with many thanks to God Almighty, the author and perfecter of my faith and whose light shines on my path always. For, it is by the grace of God that the entire family was kept safe and sound throughout the 17 months absence. I also wish to thank the members of the International Church, Europa Porten, Malmö for offering Patience and me a spiritual refuge. I want to give a special credit to my wife Patience; without her patience, humour, understanding and strength throughout the course, I have no doubt that this work could not have been accomplished. A similar sentiment goes to my mother Madam Elwine Fio Baffour, our children and my family.

I would like to thank Mr. Cabot James Afari, Shipping Commissioner, Shipping and Navigation Division and his Deputy Mr. Peter Azumah for nominating me for this course. I wish to record my gratitude to Mr. M T Addico, Secretary General of Maritime Organisations of West and Central Africa for his endeavours in seeking my sponsorship. To my sponsors, the International Maritime Organisation I would like to express my thanks to you for giving me this great opportunity. I am especially indebted to Vice Admiral E O Owusu-Ansah, Chief of the Naval Staff, Ghana Navy, for granting me the permission and support to pursue this course. My special thanks also goes to Commander E B Komeng for his intuition, guidance and motivation in attaining this ‘*tour de force*’.

I wish particularly to express my appreciation to my course Professor and supervisor, Professor P K Mukherjee of the University, for his extensive and helpful critiques of earlier outline and drafts of this work, which compelled clarification of some key issues. I wish to record my thanks to the staff of WMU Library as well as all Staff of the University for their assistance throughout the course.

The above selective shortlist is inevitable, however, to all the others who helped me, I can only record my indebtedness and express my good wishes. Finally, I wish to state that my indebtedness expressed here goes beyond the confines of the brief way in which they are all noted, I remain eternally grateful.

Abstract

The cardinal point of this study is the review of implementation and enforcement of maritime safety and anti-pollution conventions in Ghana. The contemporary maritime interests, national and international obligations and the potential risk to safety and marine environment likely to emerge from the Gateway Programme under Ghana Vision 2020 Plan constituted the basis for the study

A general view on International maritime safety, pollution prevention, response, preparedness and co-operation Conventions precedes an analysis of the processes of ratification, implementation and formulation of national legislation. On the average, it is noted that Ghana has ratified relevant Conventions pertaining to safety and anti-pollution but not search and rescue and pollution response and preparedness. The pace of implementation and enforcement however, does not reflect realism in shipping and marine environment due partly to finance and low prioritisation of maritime issues.

The study also examines the role of a number of maritime agencies and sub-regional co-operation. Inter-agency co-ordination, lack of facilities and lack of proper legal framework accounts for the inactivities of the agencies in complementing the efforts of the Shipping and Navigation Division. Sub-regional co-operation is acknowledged as essential to implementation of Conventions. An appraisal highlights gleaming prospects in the role of other national agencies and sub-regional bodies.

Guidelines on effective implementation and enforcement of safety and anti-pollution measures is underscored against national efforts at formulation and refinement of the Bills on a Maritime Authority and a National Shipping Law. It is noted that Ghana does not enjoy the same political and economic leverage as its industrialised counterparts in the maritime industry. Nevertheless, realistic recommendations towards the enhancement of safety and anti-pollution preparedness, response and co-operation against a backdrop of on-going privatisation of the maritime services under Vision 2020 Programme is made.

KEY WORDS: IMPLEMENTATION OF CONVENTIONS, NATIONAL LEGISLATION, ENFORCEMENT, SUB-REGIONAL CO-OPERATION

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List of Abbreviations

ANSL	Association of National African Shipping Lines
BIMCO	Baltic and International Maritime Council
CEN	Compliance and Enforcement Network
CLC	International Convention on Civil Liability for Oil Pollution Damage
DMA	Danish Maritime Authority
DNOP	Director of Naval Operations and Plans
DOSP	Dalhousie Ocean Studies Programme
EEZ	Exclusive Economic Zone
EPA	Environmental Protection Agency
EPC	Environmental Protection Council
EPZ	Export Processing Zone
ERP	Economic Recovery Programme
FCBP	Fisheries Capacity Building Project
FSA	Formal Safety Assessment
GMDSS	Global Maritime Distress and Safety System
GN	Ghana Navy
GNPC	Ghana National Petroleum Corporation
GPHA	Ghana Ports and Harbours Authority
IACS	International Association of Classification Societies
IAMSAR	International Aeronautical and Maritime Search and Rescue
ICAO	International Civil Aviation Organisation
ITCP	Integrated Technical Co-operation Programme
IMCO	International Maritime Consultative Organisation
IMO	International Maritime Organisation
ILO	International Labour Organisation
ISM	International Safety Management
ITCP	Integrated Technical Co-operation Programme
ITU	International Telecommunication Union
LLMC	International Convention on Limitation of Liability and Maritime Claims
MCS	Monitoring Control and Surveillance
MEPC	Marine Environment Protection Committee

MINCONMAR	Ministerial Conference of West and Central Africa on Maritime Transport
MIS	Management Information System
MORT	Ministry of Roads and Transport
MOU	Memorandum of Understanding
MOWCA	Maritime Organisation of West and Central Africa
NADMO	National Disaster Management Organisation
NDPC	National Development Planning Committee
NGO	Non- Governmental Organisation
NMP	National Mobilisation Programme
OAU	Organisation of African Unity
OPRC	International Convention on Oil pollution Preparedness, Response and Co-operation
OILPOL	Oil Pollution
PNDC	Provisional National Defence Council
PSC	Port State Control
PSCO	Port State Control Officers
RCC	Regional Co-ordination Centre
SAF	Self Assessment Form
SAR	Search And Rescue
TBT	Tributyltin
UASC	The Union of African Shippers Council
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNDP	United Nations Development Programme
WACAF	West And Central African Region
WATC	West African Training Cruise
WMU	World Maritime University

CHAPTER ONE

INTRODUCTION

“It is irresponsible to wait for an incident to happen with an ensuing loss of life or degradation of the environment before taking some corrective action”.

(William, A. O’Neil, 1999).

The beginning of the 20th century witnessed a dramatic increase in the international use of the sea. It was characterised by an era when traditional law maintained that freedom of the sea included the freedom to navigate the sea as an inherent right possessed by all who could build and sail ships. However, vessels and their equipment, and the shipping scenario they operate in, have changed disproportionately bringing into sharp focus both the advantages of faster and larger ships and the associated risks to people and their environment.

The spate of maritime accidents by the middle of the last century prompted the United Nations to establish the Intergovernmental Maritime Consultative Organisation (IMCO) in 1948, which was later renamed the International Maritime Organisation (IMO) in 1959. (UN, 1998, pp. 150). The chief mandate of the IMO is to improve the safety of international shipping and to prevent marine pollution from ships by providing the international forum for deliberations. In the half century that followed, IMO developed more than 40 conventions and codes and its membership grew from 32 in 1959 to 157 in 1999. (O’Neil, 1999, p.17).

It is generally acknowledged that the 1967 *Torrey Canyon* incident in the English Channel was the catalyst for significant international change in combating marine pollution (Julian, 2000, p.71). However, the 1972 Stockholm Conference on the Human Environment heightened political and public awareness and added impetus

to global and national efforts to safeguard the environment. In its wake, people and nations all over the world began to break out of their old insularity to the realisation that environment and development issues are inextricably inter linked.

Ghana, a littoral State, with a substantial size of sea room has diverse maritime interests in the ocean. This has influenced post-independent successive Governments to take steps to ensure sustainable use of the sea and its resources. In this regard, a number of maritime institutions like the Ghana Navy, Shipping and Navigation Division, Black Star Line, Ports and Harbours Authority, Tema Shipyard, a Maritime Academy and the Ghana Shippers Council among others were established. Unfortunately, some of the institutions set up to administer maritime related issues are defunct while others have not received the desired attention.

Ghana has ratified a number of international maritime conventions but over the years, their implementation as in most developing States, have not seen any substantial progress with the desired impact. But as the IMO Secretary – General, Dr William A. O’Neil noted in his 1999 World Maritime Day Address, “the shipping industry’s priority must continue to be the implementation of existing safety and environmental regulations. Though implementation remains the responsibility of the industry and of Government, the evidence is that it has not always been given its proper importance” (O’Neil, 1999, p. 29).

The 1983 Economy Recovery Programme (ERP) provided an enabling environment for further development, and so a new development programme entitled Ghana Vision 2020 has been launched. Under the new programme, it is anticipated that Ghana will develop into a middle income country by the year 2020. In both the accelerated Growth Strategy and Vision 2020 documents, the maritime transport sector has been identified as important because of its role in fostering economic development by providing the right environment for the growth of industries and agriculture. In this connection, the Government is to promote Ghana as the Trade Investment Gateway to the West African Region, through Export Processing Zone (EPZ), free ports and liberalised trade policies. If implemented properly, Ghana will

increase its trade substantially within a relatively short period. Subsequently, shipping activities in Ghanaian waters will also increase in equal proportion.

Additionally, Ghana not being an oil-producing nation has had to import crude oil and petroleum products for domestic use. With the attainment of a middle income status, the standard of lives will undoubtedly improve and energy demands will grow. On this matter, Jan Thomasen (Navigare 1999, pp13) had this to say:

oil and gas as energy for consumption are synonymous with good living standards, likely to be secured by exploitation projects that will last well into this century.

This will generate vigorous attempts to either intensify the search for offshore oil and gas or increase importation of crude oil. Furthermore, the adjacent seas of Ghana is a home to some of the world busiest shipping routes, particularly heavy oil tanker traffic from the Arabian Gulf, Nigeria or Gabon to the north and south America and to northern Europe (MINCONMAR, 1999). Any oil spills on the high seas could therefore impact negatively on the maritime interests.

The above benefits and threats underscore the dependency of the Ghanaian economy and the success of future development plans such as Vision 2020 on the sea and its resources. Irresponsible exploitation of the marine resources including fisheries or any major pollution from an accident would not only destabilise the growth of the economy but also cause irreversible or long term damages to the marine environment and the ecosystem. Fortunately, there is a global consensus with regard to these threats and the need to combat them.

It is a generally held view that maritime incidents such as those involving oil tankers the Aegean Sea off the coast of Spain in 1992 and recently the Erika off the coast of France in December 1999 could have been averted or their impact minimised if adequate preventive measures were taken. The spontaneous reaction following public outcry after such accidents has demonstrated that until something goes wrong, the general public and most politicians are not aware that there is a problem.

But as the IMO Secretary – General, Dr William A. O’Neil observed during the 1999 Lloyd’s Register Lectures:

it is irresponsible to wait for an incident to happen with an ensuing loss of life or degradation of the environment before taking some corrective action.

The main objective of this dissertation is to bring into focus the importance of adopting a prudent approach to the implementation and enforcement of maritime safety and pollution prevention conventions in Ghana. Against this background, an analysis of the potential dangers posed by shipping to the ship, people and the environment is undertaken. The implementation of international maritime safety and pollution prevention conventions in Ghana is reviewed. Deficiencies and problems associated with the mechanisms for implementing and enforcing these conventions and the prospects of sub-regional co-operation are identified with the view to constituting recommendations towards ensuring a formidable maritime environment in support of present and future national development plans. To effectively protect lives and the marine environment, it is submitted the following factors must be maintained:

- (a) Participation in developing and ratification of relevant international conventions.
- (b) Prompt introduction of the conventions into domestic legislation or updating existing instruments where necessary.
- (c) Provision of enforcement mechanisms supported by the appropriate human resource base.

The effective implementing of related regulations is crucial to the development of the maritime sector as envisaged by Vision 2020. Implementing conventions and effective use of available resources to enforce the laws will help foster national aspirations.

CHAPTER TWO

GHANA MARINE ENVIRONMENT AND THE “GATEWAY” PROGRAMME

2.1 Legislative Framework

Ghana ratified the 1982 UN Law of the Sea Convention (UNCLOS) on 20 March 1983 and to bring the domestic laws into conformity with the Convention, the Maritime Zone (Delimitation) Law, 1986 was enacted and came into force 22 August 1986 (PNDCL, 159, 1986). The law established a territorial sea of 12 nautical miles (nm), contiguous zone of 24nm and an exclusive economic zone (EEZ) of 200nm from the baselines from which the breadth of the territorial sea is measured.

2.2 Contemporary Maritime Interest

2.2.1 Sea-borne Trade

Shipping plays a vital role in Ghana's economic development with over ninety percent of both export and import goods being shipped. Ghana ranked fourteenth in the world on Maritime Dependence in 1995 and the sea-borne trade in US Dollars as a percentage of the Gross Domestic Product for 1995 stood at 47 percent ¹.

2.2.2 Marine Resources

(a) Living Resources:-

Ghana has a long tradition of fishing in both the marine and lagoon environments. Fishing is the most important activity in the entire coastal zone in terms of the

¹ According to statistics on selected countries compiled from UN Statistics Yearbook and other sources by Professor Ma Shuo (1999) of the World Maritime University (WMU).

number of people involved directly as well as dependent on it (Armah & Amlalo, 1998, p.39). Sixty percent of the national protein requirements are obtained from the sea while thirty percent of the labour force is engaged in maritime related activities. At the end of December 1999 there were 74 registered fishing vessels between 200 and 1000 gross registered tons and over 5000 smaller trawlers and canoes in Ghana (FCBP, 1999).

(b) Oil and Gas Exploration:-

Geological studies have indicated that Ghana has oil and gas deposits in the Tano basins (Akintoba, 1996, p.63). Prospecting companies have been exploiting the possibilities of drilling the oil and gas with Petro – Canada International Assistance Corporation, drilling appraisal wells in the Tano field in 1984. Plans are well underway to develop the fields and use the gas in thermal power generation from plants being built at Aboadzi near Takoradi. It was therefore not surprising, when during the Fourth Oil and Gas Africa 2000 Conference, held in Accra, March 2000, the British Company Dana Petroleum and GNPC announced the discovery of oil with a flow rate of up to 1000 barrels a day (<http://www.ghanaweb.com/GhanaHomepage/News> April 2000).

2.3 Coastal Sensitive Areas

- (a) Mangrove occurrence is sparse with stands limited to three main areas; around Elmina, near Iture, west of Cape Coast and at the Volta Delta, which are associated with tidal flushing. The mangroves constitute fish breeding grounds for the adjacent lagoons.

- (b) Lagoon fisheries form an important part of the economy of the coastal fishing communities along the entire coast. This is to be expected given that most lagoons are in addition, found to be important nursery areas for marine species like snappers and mullets (Armah & Amlalo, 1998, p.45). Fish and fish products from the lagoon contribute to the total protein intake of the nation. Notable Lagoons are Sakumono, Keta, Muni and Kpeshie lagoons.

- (c) Salt production is extensively carried out within or on the edges of several coastal lagoons, notably along the eastern dry savannah belt of the coastline, of Songaw and Panbros wetlands. (Armah & Amlalo, 1998, p.38). The pan method of production uses seawater collected from the lagoon or tidal channels at high tide when more saline water is available.
- (d) Sandy Beaches can be described as one area in the entire country that offers rich and varied opportunities for tourism. Long stretches of sandy beaches occur from the Côte d'Ivoire border to Axim and from Prampram to the border town of Aflao. In all, they constitute about seventy percent of the 550km of the Ghanaian coastline. Tourism has emerged in recent times as an important foreign exchange earner for the country.

2.4 Major Threats of Pollution

Even though Ghana is not yet an oil producing country and the risk from terminal operations could be considered a potential threat, its geographical location, and the heavy dependence on importation of petroleum products puts the above mentioned maritime interests at risk from pollution resulting from accidental, operational and deliberate discharges. For example in 1998 alone, 95 very large oil tankers carrying petroleum products called at both the Tema and Takoradi port oil terminals (GPHA, MIS, 1999) with the potential of further growth judging from the following comments. During a sod cutting ceremony for a new treatment plant for residual oil at the Tema Oil Refinery, President J J Rawlings (<http://www.joy-online.com>, 29 May 2000) said:

it will also make finished products more available on the local markets and even provide significant surplus for export to neighbouring countries. With this project, Ghana will join the rank of countries, numbering less than 50 world-wide, which have the technological capacity to process residual fuel oil.

From this perspective, the major pollution threat with the potential of causing environmental, ecological and economic impact to the country are as follows:

- (a) Deliberate tank washing residues or similar discharges from tankers passing offshore. As a policy of the Shipyard and Drydock Corporation (PSC Tema Shipyard) ships wishing to dock are required to arrive at the yard with tanks free from oil residue and gas. Such requirement makes it necessary for an oil tanker to clean and gas free its cargo tanks and subsequently discharge the residue into the sea before arrival at the yard. These discharges if not carried out according to prescribed standards could constitute pollution of the sea and result in tar balls on beaches.
- (b) Spills resulting from collisions, grounding, explosions or structural failures.
- (c) Potential local impact from loading and unloading accidents in harbours, at buoys and lightening operations. Fishing vessels operating in Ghanaian waters prefer, for economic reasons, to illegally bunker their vessels at sea.
- (d) Potential impact of an oil spill in a neighbouring country from collision, grounding or operational discharges. Ivory Coast is exploiting oil in the Tano Basin on the western border. That means any operational or accidental discharges on-site should be of grave concern to Ghana.
- (e) Incidences of developing countries experiencing dumping of toxic wastes both on land and in the marine environment have been recorded and the West Coast of Africa is no exception.
- (f) Laid-up vessels at the Tema port, the Fishing harbour and dotted along the coast, are a source of pollution as they discharge oil, lubricants and garbage into the sea. Unfortunately some laid-up fishing vessels being used as storage tanks for bunker aggravate the situation. It was one of the reasons that led to a recent report that 30 such vessels are a potential threat to standards set by the European Union for accepting fish imports from Ghana (The Ghanaian Chronicle, March 28, 2000). In some cases, laid-up vessels serve as stand-off platforms for pirate attacks on ships waiting at the anchorage.

(g) Unsafe practices associated with the transport or trafficking of migrants by sea.

(h) SAR requirements *etc*

2.5 Shipping/Shipping Registry

At present, Ghana operates a closed registry of ships. A national Shipping Company (Black Star Line) was established in 1957 to foster national aspirations in the maritime industry. By the mid 1970's the company had 14 ships under the Ghanaian flag but by 1998 all the ships have either been sold or scrapped without replacement due to poor management, among other reasons. Since then, the register has had to depend solely on a few ships that are jointly owned. By 31st December 1998 there were 205 registered ships as depicted in Table 2-1.

Table 2-1 Statistical Summary of sea-going merchant ships of more than 100GT on the Ghanaian Registry as at 31 December 1998

TYPE OF VESSEL	NUMBER	GROSS TONNAGE	AVERAGE AGE
OIL PRODUCTS	3	5971	34
OTHER BULK DRY	1	199	80 ^α
GENERAL CARGO	5	1865	26
REF CARGO	5	7511	32
FISH CATCHING	167	93408	26
OTHER FISHING	4	2006	29
OFFSHORE SUPPLY	1	476	24
TOWING/PUSHING	16	3071	27
DREDGING	1	450	27
OTHER	2	508	9
TOTAL	205	115 465	27

Source: World Fleet Statistics, 1998.

Table 2-2 also shows the numbers and types of vessels that called at both Tema and Takoradi ports between 1994 and 1998 inclusive.

Table 2-2 Port calls (Tema and Takoradi) - Number and Types of Vessels

TEMA					TYPE OF VESSEL	TAKORADI				
'94	'95	'96	'97	'98		'94	'95	'96	'97	'98
292	221	226	287	372	General Cargo (GC)	108	90	64	95	96
107	94	110	124	155	Ro-Ro (RO)	89	67	98	108	116
80	97	134	122	89	Multipurpose Container	26	41	52	60	67
184	263	105	284	276	Cellular Container (CO)	66	88	99	84	90
94	106	115	108	78	Bulk Carriers (BU)	109	94	83	91	83
96	110	100	106	72	Tankers (TK)	40	17	10	19	23
81	102	137	79	53	Others (OT)	70	73	94	70	5
934	993	1127	1110	1095	Total	508	470	500	527	480

Source: GPHA, MIS, 1999.

Flowing from Table 2-1 and Table 2-2 it can be deduced that the average age of ships in the Ghanaian registry is 27 years. In 1998, 1575 ships called at both ports. It is logical to conclude that the need to maintain a credible system to exercise flag State and port State jurisdiction will be on the ascendancy.

2.6 Challenges of a “Gateway” Country

The primary objectives of Ghana Vision 2020 is to build the requisite capacity for effective performance to ensure that Ghana becomes the Gateway of Shipping for West Africa (NDPC, 1996). From the maritime administrative perspective, the success of the gateway programme will be dependent on the following, among other factors:

- (a) Adequate institutional and regulatory arrangements to ensure the efficient functioning of the maritime industry. This includes ratification, acceptance or accession and implementation of relevant international maritime conventions.
- (b) Adequate qualified staff to manage the Maritime Administration.
- (c) Efficient enforcement mechanism for ship registration, survey, inspection and certification.

2.6.1 Administrative Objectives and Activities in Vision 2020

(a) Programme Objectives:- Specific programme objectives stated in paragraph 578 of Ghana Vision 2020 document are as follows:

- (1) Ensuring institutional strengthening and capacity building for effective planning and formulation of maritime policies in the country.
- (2) Ensuring maximum safety of boats and vessels operations in the Volta Lake and in the territorial sea of Ghana through intensified ships/boats surveys, inspection, registration and certification of ships and boats.
- (3) Creating an open registry system in Ghana in order to increase the national tonnage capacity for the carriage of Ghanaian foreign trade, and to provide employment opportunities for Ghanaian seafarers.

(b). Programmed Activities:- The programmed activities to achieve the set objectives will focus on the following:

- (1) Establishment of a National Maritime Authority with the requisite legal framework and encompassing powers to plan, formulate and co-ordinate all maritime policies, plans and programmes in the country for harmonisation.
- (2) Revision of the Merchant Shipping Act, 1963(Act 183)² as well as other relevant laws in order to make such laws reflect modern international shipping. Other shipping Acts which have become obsolete for modern shipping will also be revised, whilst new Acts will be introduced in line with world-wide trends of shipping.

² The first major revision of the Merchant Shipping Act 1963 was done in 1989. Since then successive revisions have been carried out. The latest revision was done in 1999 but the new Bill has not yet been passed into law.

- (3) Open the ship registry to enable foreign ships to register as Ghanaian ships and fly the flag of Ghana. This will not only increase the tonnage capacity of Ghana for the carriage of its export cargo and maximise the annual revenue of the Division on Ship Registration but will also significantly increase employment opportunities for Ghanaian seafarer. Furthermore, it will help make Ghana the shipping Gateway in West Africa in support of the Gateway programme.
- (4) Establish new and attractive conditions of service, and employ qualified administrative and technical staff for the effective functioning of the National Maritime Authority.
- (5) Provide adequate logistic support for ship surveys, inspections, registration and certification both locally and externally.
- (6) Train the staff of the Authority, to enhance their efficiency.
- (7) Implementation of a lake safety project on the Volta Lake, for Lake Transportation, to consist of the introduction of proto-type boats, the removal of tree stumps and the training of boat operators on the lake.

2.7 A Strategic Perception

The issues discussed in this chapter provide the basis for the development of a clear strategic perception on safety and pollution prevention. The benefits to be derived from the sea and shipping are substantial, and so are the dangers posed and responsibilities imposed especially when viewed through Vision 2020 prism. Implementation of programme of activities need to overcome budgetary constraint and bureaucratic impediments since all sectors will be competing for priority and funding from the same central source.

The Shipping and Navigation Division will need to brace itself for specific issues like open registration of ships because of its global diverse perception. Open registry has its benefits, but its operation is under constant scrutiny, with regard to safety

and pollution issues. Lately, control by national administrations over ships flying their flags has tended to become tenuous with the growth of open registry and the delegation of survey work to classification societies. However, flag States remain ultimately responsible to ensure that they establish and maintain measures for implementation and enforcement of IMO instruments. Provision of employment opportunities for Ghanaian seafarers has its economic benefits but as it will be seen, demands of STCW 95 and ILO Convention 147, for example, have also tended to put some countries out of the crew-market.

All the above difficulties impact directly on the programme of activities of the Vision 2020 plan. A schematic view ought to be taken on Flag State Implementation bringing into focus the role of the Division responsible for Shipping and Navigation pending the setting up of a proper Maritime Authority. This has necessitated further studies into the following:

- (a) Identification of international safety and pollution prevention conventions relevant to Ghana;
- (b) Process of implementation and enforcement of international conventions and national legislation;
- (c) Identification of the existing safety and pollution prevention regulations that require revision or replacement;
- (d) The state of the present Maritime Administration and mechanisms for implementation and enforcement including the role of complementing agencies.

CHAPTER THREE

SAFETY AND POLLUTION PREVENTION CONVENTIONS, IMPLEMENTATION AND ENFORCEMENT

Safety and pollution prevention conventions set out general principles and obligations regarding the protection of the marine environment and the implementation strategies aimed at minimising accidental pollution are usually carried out within the general framework of maritime safety. Modern legislation has tried to define a convention but the most consistent of these definitions is the one given within the context of a treaty “ an international agreement in writing between two states or a number of states with provisions which become binding for those states which have ratified when the instrument enters into force” (Martin, A.(Ed), 1994, p. 406). Such instruments must be made mandatory for ship owners, masters, shipyards *etc* by national legislation. This chapter will cover international and IMO Conventions dealing with safety and pollution prevention and their relative status to Ghana followed by a brief definition of obligation and requirements imposed on State Parties. Methods of implementation of conventions and formulation of national legislation in Ghana will be reviewed. Finally existing safety and pollution prevention legislation will also be reviewed.

3.1 Conventions Relating to Maritime Safety and Pollution Prevention

A comprehensive list of the status of IMO Conventions is attached as Appendix I. A list of the status of Ghana regarding the conventions on maritime safety and marine pollution prevention and liability and compensation is contained in Table 3-1.

Table 3-1 Status of Ghana on Safety, Pollution Prevention and Liability and Compensation Conventions

MARITIME SAFETY	RATIFIED	REMARKS
International Convention for the Safety of Life at Sea (SOLAS), 1960 and 1974	Yes incl 78 Protocol	1988 Protocol not ratified
International conventions on Load Lines, 1966	Yes	1988 Protocol not ratified
Special Trade Passenger Ships Agreement (STP), 1971	No	
International Regulation for the Prevention of Collision at Sea (COLREG), 1972	Yes	
International Convention for Safe Containers (CSC), 1972	No	
Convention on the International Maritime Satellite Organisation (INMARSAT), 1976	Yes	
The Torrimolinos International Convention for the Safety of Fishing Vessels (SFV), 1977	No	
International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), 1978	Yes	1995 Amendment Ratified
International Convention on Maritime Search and Rescue (SAR), 1979	No	
International Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel (STCW-F), 1995	No	
MARINE POLLUTION		
International Convention for the Prevention of Pollution of the Sea by Oil (OILPOL), 1954	Yes	
International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties (INTERVENTION), 1969	Yes	73 Protocol not ratified
Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter (LDC), 1972	No	
International Convention for the Prevention of Pollution from Ships, 19973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78)	Yes : Annex 1 & 2	Annexes III to VI not ratified
International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC), 1990	No	
LIABILITY AND COMPENSATION		
International Convention on Liability for Oil Pollution Damage (CLC), 1969	Yes	
International Convention on Liability for Oil Pollution Damage (CLC), 1992 Protocol	No	
International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (FUND), 1971	Yes	
International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (FUND), 1992 Protocol	No	
Convention relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material (NUCLEAR), 1971	No	
Athens Convention Relating to the Carriage of Passengers and their Luggage by Sea (PAL), 1974	No	
Convention on Limitation of Liability for Maritime Claims (LLMC), 1976	No	
International Convention on Liability and Compensation for Damage in connection with the Carriage of Hazardous and Noxious Substances by Sea (HNS), 1996	No	
OTHER SUBJECTS		
Convention on Facilitation of International Traffic (FAL), 1965	Yes	
International Convention on Tonnage Measurement of Ships (TONNAGE), 1969	Yes	
Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation (SUA), 1988	No	
Protocol for the Suppression of Unlawful Acts Against the Safety of Fixed Platforms Located on the Continental Shelf (SUAPROT), 1988	No	
International Convention on Salvage, 1989	No	

Source: Compiled from IMO Index of Conventions

The main objectives and features of major conventions relating to maritime safety and pollution prevention that are of interests to Ghana are briefly described below:

3.1.1 The International Convention on the Law of the Sea, 1982 (UNCLOS)

The 1982 Convention on the Law of the Sea sets out general principles and obligations regarding flag, port and coastal state rights and responsibilities in the protection and preservation of the marine environment, maritime safety including search and rescue, and other related issues to be implemented by participating states. It provides the legal framework and prescribes the enforcement mechanism, for action at national, regional and global level to ensure a successful implementation. It is generally acknowledged that the obligations contained in UNCLOS regarding implementation of widely accepted international anti-pollution and safety rules and standards refer to the operative rules and standards contained in IMO technical conventions. For example article 94 of UNCLOS could be considered as the basic jurisdictional framework of conventions such as SOLAS, MARPOL and STCW. Ghana ratified UNCLOS in March 1983 and the Convention entered into force in 1996.

3.1.2 Maritime Safety Conventions

(a) The International Convention for the Safety of Life at Sea, 1974 (SOLAS 1974) and the 1978 Protocol

The SOLAS Convention including its protocols and amendments serve as the universal convention for the safety of life at sea. The convention applies to cargo ships of 500 gross tons or more and to all passenger ships engaged on international voyages. It does not apply to warships, troopships, and cargo ships of less than 500 gross tons, pleasure craft not engaged in trade and fishing vessels³. It prescribes a wide range of standards and regulatory measures designed to ensure adequate safety provisions for ships and their passengers and crew. The convention contains standards relating to stability, subdivision, machinery electrical installations, fire protection, detection and extinction, construction of structure and machinery; life-saving appliances; radio-communications (including GMDSS); safety of navigation

³ It should be noted that there are the Torremolinos International Convention on the Safety of Fishing Vessels, 1977 as amended and the STCW-F for fishing vessels but neither of these are in force.

and the carriage of cargoes. It also includes provisions on survey and certification that will enable governments to ensure standards are complied with and maintained.

(b) International Safety Management (ISM) CODE

Investigations into the flooding incident of the *Herald of Free Enterprise* and other incidents highlighted the lapses in shipboard operational procedures sadly attributable to the operators. As a result, on 17 November 1993 the IMO adopted Resolution A.741 (18) in the form of the International Management Code for Safe Operation of Ships and for Pollution Prevention or the International Safety Management Code (ISM Code) that was made mandatory as an amendment to SOLAS 1974 in 1994 through chapter 9 of SOLAS.

On 1 July 1998, the Code became mandatory for passenger ships, oil and chemical tankers, bulk carriers, gas carriers and cargo high-speed craft of 500 gross tons and above. For cargo ships and mobile offshore drilling units of similar category, the date of entering into force is 1 July 2002. Flag States are to implement and enforce these standards by approval of the safety management systems, certification as to meeting the requirements, verification of compliance and auditing for conformity with all measures put in place by the shipping company both ashore and on board. Ghana, considering the code to be a prudent approach to management of safety issues, ratified the amendment and is taking steps to fully implement its requirements.

(c) International Convention on Standards of Training, Certification and Watch-keeping for Seafarers, 1978 as amended in 1995 (STCW, 95)

The STCW Convention was developed by the IMCO (now IMO) in 1978 and for the first time served as a codified global standard for qualification of seafarers. It established the minimum international standards and requirements on training, certification and watch keeping for seafarers. The STCW 78 was amended in 1995. It now lays down in a code the basic principles to be adhered to in keeping navigational and engine room watches, mandatory minimum requirements for certification and knowledge, including training of masters, officers and ratings.

The STCW Convention has created an awareness of differences in education and training systems – thus reflecting national policies and practices that are required to give the full force of law through the acts or decrees of national legislation and subsidiary regulations, orders and instructions. As a binding convention, parties have to give full support by necessary administrative arrangements to ensure observance of the requirements. The obligations of the STCW 95 on member States include the responsibility for certification, approval of training programmes for Maritime Training Institutions as well as monitoring their quality standards, and communicating information to the IMO. These requirements embrace a series of activities involving MET institutions and ship owners that ought to be co-ordinated by the Maritime Administration. These activities are attached as Appendix II.

3.1.3 Marine Pollution Prevention Conventions

(a) International Convention Relating to the Intervention on the High Seas in Cases of Oil Pollution Casualties 1969 and Related Protocols

One of the legacies of the *Torrey Canyon* disaster, was the development of the 1969 Intervention Convention aimed at providing the legal basis for States faced with a threat of imminent pollution to take early action. It is a public international law convention that was developed along with the CLC 69 as a reaction to the *Torrey Canyon* disaster. The interaction between flag and coastal state rights and obligations on the high seas is the essence of the convention. In article 1, States are required to take action to prevent, mitigate or eliminate grave and imminent danger to their coastline or related interests from pollution or threat of pollution of the sea by oil, following upon a maritime casualty. On the contrary, article 6 restricts the above right in order to safeguard other legitimate interests by requiring any Party which has taken measures according to article 1 to pay compensation for measures which exceed those reasonably necessary to achieve the end stated in article 1.

Ghana has ratified the Convention that provides the prescriptive powers to action on any maritime casualties that poses a threat to its maritime interest together with provisions on prescriptive powers that other coastal States can exercise on ships flying the Ghanaian flag. In contrast, MARPOL addresses issues relating to

operational discharges of oil and other substances from ships but the Intervention Convention deals with accidental pollution.

(b) International Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972 as amended in 1987 and the 1996 Protocol (London Convention)

The convention is global in character and represents a further step towards international control and prevention of marine pollution (Focus on IMO, 1998, pp26). It prohibits the dumping of certain hazardous materials, requires a prior special permit for the dumping of a number of other identified materials and a prior general permit for other waste or matter.

Ghana has not ratified this Convention but since its inception, the Convention has been amended and a major protocol was adopted in November 1996. While the amendments have all entered into force, the protocol has so far received only one acceptance. The slow acceptance of the protocol is probably because it is intended to replace the 1972 Convention and therefore calls for a careful study by potential State parties. The growing concern on the incidence of illegal dumping of wastes provides the basis for Ghana to participate in this convention. This will enable the country to legislate effective control measures regarding the dumping of wastes.

(c) International Convention for the Prevention of Pollution of the Sea by Oil, 1954, as amended. (OILPOL 1954)

In 1954, the international Convention for the Prevention of Pollution of the Sea by Oil primarily aimed at the prevention of deliberate discharge of oil or oily mixtures from sea going vessels in specific areas called 'prohibited zones' was adopted. It entered into force on 26 July 1958 and later in 1969 and 1971 two amendments were adopted.

Ghana ratified the convention and enacted the Oil in Navigable Waters Act to address its requirements. In the mean time, transport of new types of oil and tanker sizes, transportation of chemicals and public awareness of marine environment issues grew rapidly. Thus the OILPOL 54 soon proved inefficient and the need for a

new convention became inevitable. MARPOL 73 was developed to take into account the substances of later amendments to OILPOL 54 that had not yet entered into force. The above difficulties shifted international focus on control of ship-source pollution to the more dynamic text in MARPOL 73/78 and rendered the OILPOL 54 ineffective and dormant. In this vein, it is inexpedient to further elucidate on this convention but to uphold the call for State parties to accede to the MARPOL Convention.

(d) The International convention for the Prevention of Pollution from ships, 1973, as modified by the Protocol of 1978 (MARPOL 1973/78)

The MARPOL 73/78 Convention is a combination of two treaties adopted in 1973 and 1978 respectively. The convention sets up international standards to control and prevent operational discharges of oil and other hazardous substances into the sea. It covers all the technical aspects of pollution from ships, except the disposal of wastes into the sea by dumping and applies to ships of all types. It, however, excludes pollution arising out of the exploration and exploitation of seabed mineral resources.

The 1973 Convention has two protocols dealing with Reports on Incidents involving Harmful Substances and Arbitration and five Annexes. A sixth Annex on air pollution has been added but not yet in force. Annex 1 picked up the requirements of OILPOL 54 as well as incorporating additional oil pollution measures while the other annexes dealt with a range of “new” pollution threats to the marine environment as follows:

Annex	I	Oil
	II	Noxious Liquid Substances in Bulk
	III	Harmful Substances Carried in Packaged forms
	IV	Sewage from Ships
	V	Garbage from ships

It is intended that States ratifying the convention must accept Annexes I and II but have an option to accept the remaining annexes III, IV and V. Technical constraints faced by potential State parties to Annexes I and II, delayed the entry into force of

the Annexes until the problems were resolved in the Protocol of 1978⁴, to ensure expeditious acceptance. The Protocol of 1978 to MARPOL 73 was developed at the International Conference on Tanker Safety and Pollution Prevention held in 1978. A number of measures and changes were introduced and the 1978 Protocol reflected stricter regulations and literally absorbed the parent convention and allowed extra time for the technical complex Annex II to enter into force later. It was also agreed that States, which ratify the Protocol, must also give effect to the provisions of the 1973 Convention without separate ratification, hence the adoption of the name MARPOL 1973/78. The compulsory Annexes I and II entered into force in 1983 and 1987 respectively. The optional Annexes III and V have entered into force leaving only Annex IV that is not yet in force.

Ghana has recognised the convention as fulfilling its national interests in preventing pollution and has therefore ratified Annexes I and II. Membership of the Convention ensures that Ghanaian vessels that meet the Convention requirements will be issued internationally accepted certificates by the Ghanaian authorities. Punitive measures can be taken against foreign vessels that enter Ghanaian waters and discharge pollutants. Unfortunately, there is so far no domestic legislation to implement the Convention.

Annex VI on Prevention of Air Pollution from ships was added to MARPOL in 1997 with the view to setting limits on sulphur oxide and nitrogen oxides emissions from ship exhausts and prohibits deliberate emissions of ozone depleting substances. At the same time of its adoption, a Technical Code on control of emission of nitrogen oxides from Marine Diesel Engines (NOx Technical Code) was adopted. The Annex is not optional and applies to specific ships. Ghana has not ratified the Annex and it has not yet entered into force.

⁴ The purpose of the 1978 Protocol was to enable Annex I of the Convention to be amended and implemented as soon as possible and to permit delay in implementing Annex II.

3.1.4 Liability and Compensation

(a) International Convention on Civil Liability for Oil Pollution Damage 1969 and 1992 Protocol and International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage 1971 and 1992 Protocol (The Fund Convention)

The CLC Convention entered into force on 19 June 1975 and seeks to address the financial compensation in case of pollution damage by specifying the basis and extent of liability of a ship owner (*strict liability*). Though Ghana has ratified the 1969 Convention, it is yet to ratify the 1992 Protocol, which *inter alia* enhances its coverage.

The Fund convention is supplementary to CLC 1969/92 and is aimed at:

- (a) Providing compensation for pollution damage to the extent that the protection from pollution offered by CLC 1969/92 is inadequate.
- (b) Give relief to ship owners in respect of the additional financial burden imposed on them by CLC.

The Convention was developed further in 1992 but the limits are not the same as with the CLC. The 1992 CLC and Fund Conventions entered into force on 30 May 1996. There is also a mechanism for the compulsory denunciation of the 1969 CLC and 1971 Fund Conventions and the old regime will lose its importance (Jacobsson, 1999, pp13). Ghana ratified the 1971 Convention but is yet to ratify the 1992 Protocols. The two Conventions are administered by the International Oil Pollution Compensation (IOPC) Fund. The CLC 1969/1992 and the Fund 1971/1992 Conventions are the only existing international framework offering remedies for oil pollution damage and are in operation world-wide with the exception of the United States of America where the Oil Pollution Act 1990 (OPA, 90) is preferred. The 1992 Protocols for the CLC/Fund conventions have modified the scope of coverage, compensation and preventive measures.

It is generally acknowledged that both conventions have inherent limitations like definitional problems on pollution damage, preventive measures and environmental damage. Albeit, they offer the only remedial options for now and it is expedient that Ghana considers its membership while participating in international efforts to develop yet another effective system. Contributions to the Fund are payable by importers of quantities of crude and heavy oil in excess of 150, 000 metric tonnes per annum in a fund member State. In 1998, a total of 1.66 million metric tonnes of bulk oil was received through the port of Tema (GPHA, MIS, 1999). That the total quantity of 1.66 million includes heavy or crude oil and the quantity is in excess of the 150,000 metric tonnes to qualify Ghana to apply for membership of the 1992 Fund is explicit.

The Conventions will obviously serve the interest of Ghana by according domestic oil traders the avenue to contribute up-front towards any pollution damage. Furthermore, the obligation of the Fund to pay compensation is not dependent on whether the ship causing the damage is registered in a member State or not. On the contrary, it is only member States and their residents who can benefit from the Fund for the damage suffered in the territorial waters up to the EEZ.

(c) International Convention on Liability and Compensation for damage in Connection with the Carriage of Hazardous and Noxious Substances (HNS) by Sea.

The CLC and the Fund Convention fall short of dealing with liability and compensation for pollution damage from pollutants other than oil, and so the HNS Convention which was adopted by the IMO in may 1996 has been designed as a parallel convention for hazardous and noxious substances. It is very much modeled on the CLC and the Fund Conventions with a two-tier system and provides for sharing of liability as well as for the ship and cargo contributions in one instrument alone. It has not yet entered into force and until it does the producer, owner or shipper of these substances would through the absence of an international HNS Fund escape the fair idea of shared liability.

3.1.5 Response and Co-operation

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

The OPRC Convention was adopted in 1990 and provides a global framework for international co-operation in combating major incidents or threats of marine pollution. State parties to the Convention will be required to establish measures for dealing with pollution incidents, either nationally or in co-operation with other countries, and this include shipboard oil pollution emergency plans; reporting of pollution incidents to coastal authorities; establishment of stockpile of oil spill combating equipment. Other requirements are, development of detailed plans for dealing with pollution incidents; holding of oil spill combating exercises; provision of assistance to others in the event of a pollution emergency; and reimbursement for any assistance rendered to a third party State. An important aspects of the convention is the possibility of receiving assistance and support from shipping and oil industries, as these sectors are the principal origins of marine pollution and also they have the necessary monitoring resources. Another interesting element the convention offers both industrialised and developing countries, is the possibility of prompt and effective action with the appropriate combating means to minimise the damage that can result from pollution. The Convention entered into force in May 1995 but the absence in Ghana of prerequisites laid down by the Convention partly accounts for why Ghana has not ratified the Convention.

3.1.6 Search and Rescue

(a) The International Convention on Maritime Search and Rescue (SAR), 1979 as amended in 1998

The primary objective of the Search and Rescue (SAR), 1979 Convention is to facilitate co-operation between governments and between those participating in SAR at sea. The 1979 SAR Convention imposed considerable obligations on parties by requiring States to set up the shore installations. As a result, many countries including Ghana could not ratify the convention. However, these obstacles were reviewed and in May 1998 a new version was adopted and entered into force on

1 January 2000 (IMO News, No.1 2000 pp3). The world oceans have also been divided into 13 SAR areas to facilitate global SAR operations. The SAR convention is supported by the following two technical manuals: the International Aeronautical and Maritime SAR Manual (IAMSAR) and the IMO Requirements and Guidelines for Ship Reporting System Resolution A.648 (16).

(b) Global Maritime Distress and Safety System (GMDSS)

The requirements of the GMDSS are laid down in Chapter IV of SOLAS 74. Its concept being that, SAR authorities ashore and ships in the immediate vicinity of a ship in distress will be rapidly alerted to a distress incident, with the view to assisting in a co-ordinated SAR operation with minimum delay. It entered into force in January 2000. The system also provides for urgency and safety communications and the promulgation of maritime safety information (MSI) – navigational and meteorological warnings and forecasts and other urgent safety information to ships. In other words, every ship is able, irrespective of the area in which it operates, to perform those communication functions, which are essential for the safety of the ship itself and of other ships operating in the same area.

3.1.7 Related International Labour Organisation (ILO) Conventions

The ILO Convention on the minimum internationally acceptable labour standards, Convention Number 147, 1976 entered into force in 1981 and prescribes minimum standards relating to safety, social security and shipboard conditions of employment and living arrangements that constitute important factors, which bodes on the human factor. It serves as an umbrella convention and covers all essential aspects of the human element in shipping and therefore makes reference to a number of other ILO Conventions. There is a correlation with the STCW and the ILO 147 conventions and both contribute to efforts at dealing with the human factor in shipping. Accordingly, in 1982, a joint IMO/ILO Working Group recommended the incorporation of the memorandum of understanding on port state control in Convention 147. The newly adopted West and Central Africa MOU has included Convention 147 as a relevant instrument and has incorporated the ILO publications on port state inspections and procedures for labour conditions as a replica of the Paris MOU. In accordance with Convention 147, flag states ought to enact laws and

regulations “substantially equivalent” to the articles of the convention and also to have effective jurisdiction or control of their own ships regarding safety, competency, manning, social security and shipboard conditions of employment.

3.1.8 Future Developments

(a) Anti-fouling Systems used on Ships

Anti-fouling paints are used to coat the bottom of ships to prevent sea life such as algae and molluscs attaching themselves to the hull. The compounds slowly leach into the seawater, killing barnacles and other marine life that have attached to the bottom of the ship. But studies have shown that these compounds persist in the water killing sea life, harming the environment and possibly entering the food chain. (<http://www.imo.org/imo/briefing/20007fax4>, 16 March 2000). In 1990, the IMO recognised organotin tributyltin (TBT), as one of the harmful compounds and since then, the Marine Environment Protection Committee (MEPC) was mandated to develop a legal instrument to regulate the use of shipboard anti-fouling systems, with the view to phasing out those containing TBT. In the meantime, an Assembly resolution, A. 895 (21) on Anti-fouling Systems on ships has been adopted. It is envisaged that the first prohibition of organotin compounds, acting as biocides in anti-fouling systems will take effect by 1 June 2003. Ghana will have to monitor developments at the IMO regarding regulations on anti-fouling systems and to ratify it when it is adopted.

(b) Harmful Aquatic Organisms in Ballast Water

The MEPC is also developing a new regulation aimed at addressing the environmental damage caused by the introduction of harmful aquatic organisms in ballast water used to stabilise vessels at sea. It is widely acknowledged that microscopic toxic aquatic organisms such as dinoflagellates cause harmful algae and bloom when released into the water. The introductions of these non-indigenous organisms in new locations have occurred often with disastrous consequences for the local ecosystem including fish stock. An outline of a draft legal instrument has been completed but issues of approach of application, development of a range of standards and organisation concept along with extent of its application partly account for delays in the adoption of the new instrument. It is uncertain whether the

new regulation will be a new Annex to MARPOL 73/78 or an entirely new convention on Ballast Water Management. Ghana has to monitor these developments and take advantage of any pending new regulations to safeguard the marine ecosystem.

3.1.9 Other conventions

In addition to previously mentioned conventions, instruments and requirements, there are other requirements, related to the marine environment, which ship owners have to comply with. The Conventions are:

- (a) International Conventions on Load Lines 1966 (LL);
- (b) Convention on the International Regulation for the Prevention of Collision at Sea, 1972 (COLREG) as amended.
- (c) International Convention on Tonnage Measurement of ships, 1969.

3.2 Obligations and Requirements Imposed by Conventions

The summation of obligations and requirements relating to safety and pollution prevention conventions are, regulation and control, reception and treatment facilities, monitoring/observation/surveillance, casualty investigation, communication and reporting. Others are contingency planning, provision of stockpile of equipment, international and regional co-operation and economic cost. The functions prescribed by the Conventions include prevention, control and mitigation through several stages of reaction such as prohibition, intervention, inspection and enforcement, response and co-operation, detention and sanctions, dispute settlements and liability and compensation. Appendix III is a tabular representation of a brief prescription of the Conventions.

3.3 Ratification and Implementation of Conventions

Ratification or accession to an International Convention by a state implies the state has consented to be bound to a treaty, if the parties intended to show their consent by such an act. The institution of ratification grants states the necessary time frame to seek the required approval for the treaty at the domestic level and to enact the necessary legislation to give domestic effect to that treaty (Vienna Convention, 1969). If the state fails to implement the convention, it is still subject to it in relation to other State parties though it cannot enforce the convention against them, unless the

convention becomes a part of the law of that land (Mukherjee, 1999b). The legal process by which a convention is given effect in the national law is dependent on whether the monistic or dualistic system of implementation is applicable in the State in question; and this in turn depends on the constitutional law.

- (a) Monistic System: - The monistic method of implementation is the process where the national constitution provides for adoption of a convention after it has been ratified or acceded by the State. Although there is virtually no requirement for any legislative action, the jurisdiction may require some form of approval for some kinds of treaties as pertains in Belgium, Netherlands and The United State of America (Mukherjee, 1999a). The effectiveness of such a method is however dependent on the “self-executing” nature of the convention. For example, the Salvage Convention of 1910 has been held to be self-executing. Regulatory conventions such as MARPOL 1973/78 are not considered self-executing due to the numerous obligations placed on the governments of State parties.

- (b) Dualistic System: - The dualistic system prevails in jurisdictions where all treaty obligations that have no counterparts in respective national law must be transformed into national laws through implementing legislation (Kriangsak, 1992). Even though this system is prevalent in common law jurisdictions such as the United Kingdom and other states that follow the English legal System, there are several civil law states, for example Italy and Sweden that have adopted the dualistic method.

3.3.1 The Process of Implementation

Irrespective of which method of implementation is adopted by a State consistent with their national constitutional requirements, the process involves a series of activities that has to be co-ordinated effectively. These activities include consultation with other stakeholders within the maritime industries likely to be affected by the convention. To ensure that a non-self-executing convention is given full domestic effect after ratification without undue delays, Vanchiswar suggests the process of

implementation should follow a step-by-step approach as illustrated in phases in Table 3-2.

Table 3-2 The Process of Implementation of Any International Maritime Convention Pertaining to Safety or Marine Environment Protection

PHASES	ACTIVITY
Phase I	<ul style="list-style-type: none"> a. Detailed examination of the implications of the convention including implementation and enforcement aspects, in consultation with all concerned. b. Determination of the acceptability of the provisions on the convention. c. Decision of Government to become a party.
Phase II	<ul style="list-style-type: none"> a. Prepare and enact national legislation (Primary and Subsidiary) if necessary. b. Only then become a party to the convention by ratification, acceptance or accession. c. Prepare the necessary documentation. d. Prepare any necessary Executive Orders and Instructions to officials concerned. e. Develop appropriate and adequate maritime administrative infrastructure.
Phase III	Practical implementation of national legislation through implementation and enforcement action by the officials of the Maritime Administration and measures to encourage observance.
Phase IV	Certification of ships, seafarers and issue of clearance of ships to proceed to sea, where appropriate.

Source: Vanchiswar, 1996 pp 22a.

3.3.2 Situation in Ghana

Ghana is a common law jurisdiction and belongs to the dualistic school. A look at the prevailing procedure in comparison with Vanchiswar's proposals or what pertains elsewhere could help identify the possible problems accounting for the delays. The procedure in Ghana is as follows:

- (a) The IMO sends out agenda to contracting Parties,
- (b) The Shipping Commissioner (Head of the Division) in consultation with the Sector Minister (in this case Roads and Transports) appoints delegates for the Conference ⁵;
- (c) Delegates attend the conference and usually sign convention/amendments as pre-agreed.
- (d) On returning to Ghana, Head of the Delegation or the Shipping Commissioner prepares a paper highlighting the relevance of the signed instrument to the Minister;
- (e) Minister comments and sends the document back to the Commissioner;
- (f) The document is then sent to the Attorney General's Department (Ministry of Justice) for vetting to make sure it does not conflict with other National legislation or International treaty;
- (g) The document is sent back to the Commissioner with any comments or recommendations.
- (h) Necessary changes are made before it is sent back to the Minister who then requests the Speaker of Parliament for a hearing on the issue at the same time the document is being scrutinised by the Parliamentary Select-Committee on Transport;
- (i) The document is then defended and if approved by the Parliament, the Minister then informs the Ministry of Foreign affairs who prepares an instrument of Ratification for deposition at the IMO or equivalent organisation;
- (j) Ghana then becomes a party to the convention;
- (k) A draft Bill or act goes through a similar procedure before it is passed into law (and this is where the problem usually arise);
- (l) Thereafter, implementation action is supposed to be undertaken before the convention enters into force. But this is usually the end of the matter.

In comparison with Vanchiswar's proposals, it can be deduced that Ghana does not adhere to a phased approach for adoption, ratification and implementation of

⁵ Although not an ideal arrangement, personnel from the Ghana High Commission in London sometimes represent the country at IMO Conferences.

conventions. Thus the essential stage of drafting the respective domestic legislation before ratifying a convention is clearly ignored. This anomaly and the following problems partly account for the delays in ratification and implementation of conventions:

- (a) Maritime affairs are not ranked as high priority issues at the legislature and most people are uncomfortable with maritime issues;
- (b) Lack of legal experts (delegates are usually not legal experts);
- (c) Not all Members of Parliament dealing with maritime issues are or care to know what goes into translating national conventions into domestic laws. As such maritime related documents do not get the deserved attention;
- (d) The bureaucratic process is complex and does not lend itself to quick reactions.

There are also benefits derived from active participation in all IMO deliberations and many countries such as Denmark and Sweden have aptly demonstrated this. Although the two countries are civil law States, they often participate, contribute and make proposals for amendments to existing conventions. In most cases, they start drafting their domestic legislation before the final conference for adoption of a proposal and are therefore able to ratify conventions or amendments and to pass their domestic laws almost simultaneously.

3.4 Formulation of National Legislation

Legislation consists of laws enacted by a legislature to give full effect to international conventions. They are the necessary domestic instruments required to give legal effect to the treaties usually preceding ratification and before implementation. If necessary, this is done in two forms as follows:

- (a) Primary legislation is for example Merchant Shipping Act.
- (b) Subsidiary legislation deals with the relevant (technical) regulations or rules that need to be promulgated under the aforesaid primary legislation. Until they are made, many provisions of the Merchant Shipping Act cannot operate. Some of these are rules for registration of ships, safety convention

certificate rules, life saving appliances regulations and regulation for the prevention of pollution by oil.

3.5 Regulation and Control

The essential elements of regulation and control are:

- (a) Registration and Manning:- Flag states have prerogative to register and ensure safe manning of ships under UNCLOS;
- (b) Specification, Survey and Certification: - Flag states or designated organisation are obliged to approve specification for construction in accordance with relevant conventions and to approve or endorse certificates for ships, crew, equipment and appliances after the initial survey.
- (c) The Harmonised System of Ship Survey and Certification (HSSC): - In 1988, the IMO adopted a Protocol to the SOLAS and Load Line Conventions for the introduction of the HSSC which entered into force on 3 February 2000 along with a 1990 amendment to the MARPOL 73/78 Convention regarding HSSC ⁶ (IMO News No.1, 2000). The main changes to the SOLAS and Load Lines Conventions are that annual inspections have been made mandatory for cargo ships and unscheduled inspections have been discontinued. The Harmonised system provides for a one-year standard interval between surveys, based on initial, annual, intermediate, periodical and renewal surveys as appropriate. In 1999, the IMO further adopted a resolution, A.883 (21), Global and Uniform Implementation of the HSSC. The types of surveys required under this new resolution are, the initial, periodical, renewal, intermediate, annual and additional surveys.
- (d) Inspections: - Inspections can be conducted by port states to verify the authenticity and validity of certificates in respect of foreign ships and the certificates may be accepted as *prima facie* evidence that the ship complies with the provisions of a particular convention.

⁶ MARPOL allowed for amendments to the certification and survey requirements to be accepted by the “tacit acceptance procedure” with the proviso that the amendment entered into force the same time as the 1988 SOLAS and Load Lines Protocols.

3.5.1 Flag State

The Flag State is the state whose flag a vessel is entitled to fly. Usually, before any state allows a sea going vessel to fly its flag, the vessel must be registered. This enables the State to exercise jurisdiction and control in administrative, technical and social matters. These functions span across construction; maintenance and manning of ships usually enforced through approval, surveys, certification and monitoring. In addition, the flag State is responsible for promulgating laws and regulations and for taking all other steps which may be necessary to give the applicable conventions full and complete effect. The state also ensures that, from the point of view of safety of life and pollution prevention, a ship is fit for the service, for which it is intended and seafarers are fit and qualified for their duties. All these constitute flag state implementation. The requirements are found in the following conventions (Mukherjee, 1999):

- (a) Registration, manning and other matters UNCLoS, Article 91, 94, 97;
- (b) Ship surveys– SOLAS, Load Line and MARPOL;
- (c) Regulation of certification regime under MARPOL, Load Lines including mandatory ISM Code;
- (d) Regulation of construction, equipment and seaworthiness under SOLAS, MARPOL, Load Lines, COLREGS;
- (e) Manning, training, certification and watchkeeping regime under STCW and relevant ILO convention;
- (f) Maritime labour related issues – ILO and SOLAS;

3.5.2 Port State

A port State is the state in whose port a vessel is at any particular time. It includes a situation where the vessel is destined to or has just left a port in that state (Clarke, 1994, 202). Within this meaning, a state may exercise jurisdiction over foreign ships through port state control and enforcement. Port state control consist of inspection by surveyors or inspectors of a Maritime Authority, of foreign vessels visiting a port in that country to ensure compliance with international maritime safety and pollution prevention conventions (Dayton, 1993, 15). The requirements for port state control are found in the following conventions (Mukherjee, 1999a):

- (a) UNCLOS Part XII: Main provisions: Articles 218, 266 and other provisions: Articles 217, 222 to 226 and 228;
- (b) MARPOL 73/78: Articles: 5(2) and (3), 6(2) to (5); Annex I Regulation 8A; annex II, Regulation 15; Annex III, Regulation, Annex V, Regulation 8;
- (c) SOLAS chapter 1, Regulation 19;
- (d) LOADLINE Article 21;
- (e) STCW Article X, Regulation 1/4; STCW Code Section A-1/4, Section B-1/4
- (f) ILO 147, Article 4.
- (g) Procedures for PSC set out in IMO Resolution A.787 (19).

3.5.3 Coastal State

The notion of the freedom of the high seas that accorded little or no authority over adjacent waters to the Coastal State, has been superseded by UNCLOS, permitting approximately forty percent of former `high seas` to be brought under varying degrees of coastal State jurisdiction (DOSF, 1985, pp1). A coastal States' power to control activities of foreign ships in territorial waters, internal waters, EEZ and adjacent zones in respect of safety and marine pollution is called coastal state jurisdiction under UNCLOS article 73 and it is only limited by flag state jurisdiction and safeguards provided under UNCLOS. Other jurisdictions are dictated by the intervention on the high seas on pollution issues permitted under 1969 Intervention Convention and routing measures under UNCLOS Article 211, SOLAS chapter V, COLREGS rule 10 and Resolution A. 572(14) on ships routing (Mukherjee, 1999a).

3.6 Enforcement of Conventions

Most international maritime law conventions fall within the domain of public maritime law that requires enforcement of some sort by governments of State Parties. This is particularly imperative because the conventions themselves do not create offences and must be provided for by national legislation in the form of regulatory or penal laws. Enforceable means could either be legal or administrative or both and any non-compliance of a convention provision leads to a violation with the consequences of penal, regulatory or administrative sanctions. The IMO as an Organisation has no enforcement mandate and therefore depends on State Parties to enforce the provisions of conventions as well as set the penalties for

infringements depending on the applicable jurisdiction. This calls for national penal legislation for the maritime sector since general penal sanctions within the existing national laws are unlikely to offer adequate provisions for maritime offences. In broad terms, regulatory enforcement of conventions relating to maritime safety and pollution prevention by contracting Parties are divided into two categories (Sasamura, 1984) as follows:

- (a) Enforcement conducted by Administrations or recognised organisations working on behalf of contracting Governments. This includes surveys, inspection and certification of ship in respect of design, construction and equipment.
- (b) Enforcement carried out by port and coastal States, which include port state control of ships and certificates and the surveillance and detection of discharges in breach of a convention.

Effective judicial enforcement requires that separate penal laws are drafted for the maritime sector or that sanctions should be prescribed in maritime legislation. It is imperative that special courts are designated for handling maritime cases.

3.7 National Legislation on Maritime Safety and Pollution Prevention

Ghana does not have any umbrella type environmental legislation such as an Environmental Protection Act. Matters relating to the protection of the marine environment are dealt with in a sectoral manner. On this matter, Kwakye (1999, pp2) a Director of Planning at the Ministry of Roads and Transport, noted during the National Forum on the Ghana Maritime Authority and Shipping Bills that:

there are a number of disjointed and uncoordinated maritime laws and regulations in the country resulting in functional overlaps and conflict situations which impact negatively on the rational allocation and optimum use of resources in the maritime sector.

The need for a comprehensive national environmental policy to address issue-specific problems has been identified by the Working Group of an Environmental

Action Plan (EPC, 1995). However, it is not the first time groups have been constituted to review existing legislation and policy recommendations ⁷. Numerous reasons account for this inactivity, but the major ones are political and financial. Identifiable domestic marine safety and environmental legislation are as follows:

3.7.1 The Constitution of Ghana

Post independent Governments in Ghana have had a constitutional obligation for preventing and controlling the environment. This has been demanded from them as a result of an environmental clause appearing in the three previous constitutions (1957, 1969, and 1979) and indeed in the 1992 Constitution currently in operation. Article 36(9) of the 1992 Constitution, which reflects Ghana's standard practice on this point, reads:

the State shall take appropriate measures needed to protect and safeguard the national environment for posterity; and shall seek co-operation with other States and bodies for purposes of protecting the wider international environment for mankind.

This implies that since independence, successive Governments have had the legal obligation to legislate on control and prevention of pollution including marine pollution as well as participating in international both multi/bilateral conventions and co-operating with states on a regional basis. This is imperative from the premise that the ocean is inter-linked and pollution knows no national frontiers.

3.7.2 Ghana Merchant Shipping Act 1963

Ghana passed the Merchant Shipping Act, (Act 183) in 1963 and although the provisions of the Act addressed salient subject matters in the maritime industry, the challenges of modern shipping and emergence of new IMO conventions, instruments and codes meant that the Act was out-dated and deficient in many respects. As a result, provisions are not only inconsistent with current international requirements but also sanctions in the form of fines for violation of any aspect of the

⁷ In March 1988, the Government tasked a group of experts to review existing policies related to environmental protection and to propose a strategy to address the key issues.

Act are disproportionately low and therefore do not serve the intended purpose of deterrence.

It was to address this anomaly among others that action was taken since 1989 to overhaul the Merchant Shipping Act under the auspices of a Maritime Task force. A new Bill entitled `Ghana Shipping Bill 1999` was first prepared in 1991 and still awaiting parliamentary assent. An overview of the 1999 Bill, which is at present being used, is attached as Appendix D. The highlight of changes includes the inclusion of latest version of international conventions, SOLAS, STCW 95 *etc.* The others are the creation of an open registry regime consisting of 3 separate registers for construction, fishing vessels and merchant ships; and licensing of vessels of 24 metres and below including vessels of whatever size engaged solely in inland trade.

A National forum on the Ghana Maritime Authority and the Shipping Bills was held in Accra, Ghana from 1 to 2 September 1999 to help fine tune the Bills before resubmission to parliament early 2000. It is hoped that after promulgation of the legislation, efforts will be made to develop the subsidiary legislation including the relevant technical regulations/rules.

3.7.3 Oil in Navigable Waters Act 1964 (Act 235)

The existing legislation which covers protection of marine environment from oil pollution is the Oil in Navigable Waters Act 1964 (Act 235) that was enacted after Ghana ratified the International Convention for the Pollution of the Sea by Oil, 1954 (OILPOL, 1954). The convention proved inadequate and indeed has been displaced by the more contemporary MARPOL 1973/78 and a host of amendments. Although the ratification of Annexes I and II of MARPOL by Ghana in September 1991 signified an acknowledgement of the inadequacies of the OILPOL Convention, it has not yet given full effect in the domestic legislation to the MARPOL Convention. Provision of reception facilities, redrafting of the MARPOL 73/78 Convention into national legislation, competent inspection regime or body are among factors militating against transforming the convention into domestic law and subsequent enforcement.

3.7.4 The Petroleum (Exploration and Production) Law, 1984

In 1984, a Petroleum (Exploration and Production) Law 1984 outlining terms and conditions under which exploration and production prospects could be conducted replaced a similar one enacted in 1983 by further defining obligations and responsibility for contractors and sub-contractors. For example, article 23 (17) and (18) requires contractors and sub-contractors to establish measures to deal with emergencies and to be responsible for additional measures taken to combat any pollution due to their activities. The legislation further enjoins the corporation to ensure that contractors and subcontractors adopt the best international techniques and practices prevailing in the petroleum industry in comparable circumstances.

The Petroleum Exploration and production Law, provides a reasonable basis for the control, prevention and assignment of liability on offshore terminal operations and exploration sites and reflects the spirit of Part XI of UNCLOS. In the opinion of this author, the Petroleum law meets to a large extent, the legal framework for terminal operations and exploration work. Additionally, the GNPC is involved in joint exploitation work in Angola and presumably have the requisite experience to monitor offshore terminal operations when they take off in Ghana. This will necessitate the harmonisation of this law with other marine pollution legislation. Another problem that could arise in the future is if the GNPC should enter into partnership with a prospecting company or the corporation is privatised then there could be conflict of interest and enforcement of safety standards could be compromised⁸.

3.7.5 Maritime Zone (Delimitation) Law, 1986.

The Maritime Zone (Delimitation) Law, 1986 was enacted after Ghana ratified the 1982 UNCLOS. Under article 5 of the law, the Exclusive Economic Zone (EEZ), it is stated that Ghana shall have jurisdiction in accordance with the provisions of the 1982 UNCLOS with regards to the protection and preservation of the Marine Environment. This provision in the delimitation law will pave the way for the development of national laws to adequately cover the maritime interest of Ghana within the meaning of the Convention.

⁸ The GNPC is among 27 State Owned Enterprises listed for divestiture in March 2000.
<<http://www.ghanaweb.com/GhanaHomePage.1/3/2000>

CHAPTER FOUR

INSTITUTIONAL ARRANGEMENTS AND SUB-REGIONAL PROSPECTS

In this chapter the author intends to reach a high level of understanding of the administrative and institutional arrangement for maritime safety and pollution prevention in Ghana. An overview of National Maritime Administration, response arrangements within the national context, machinery for enforcement such as flag state implementation and port state control will be made. The effectiveness of inter-ministerial co-ordination among Environmental Protection Agency, Ministry of Defence, Non-governmental organizations and Port Authorities will be evaluated with the view to developing arrangements that reflect a culture of in-ward looking and judicious utilization of resources.

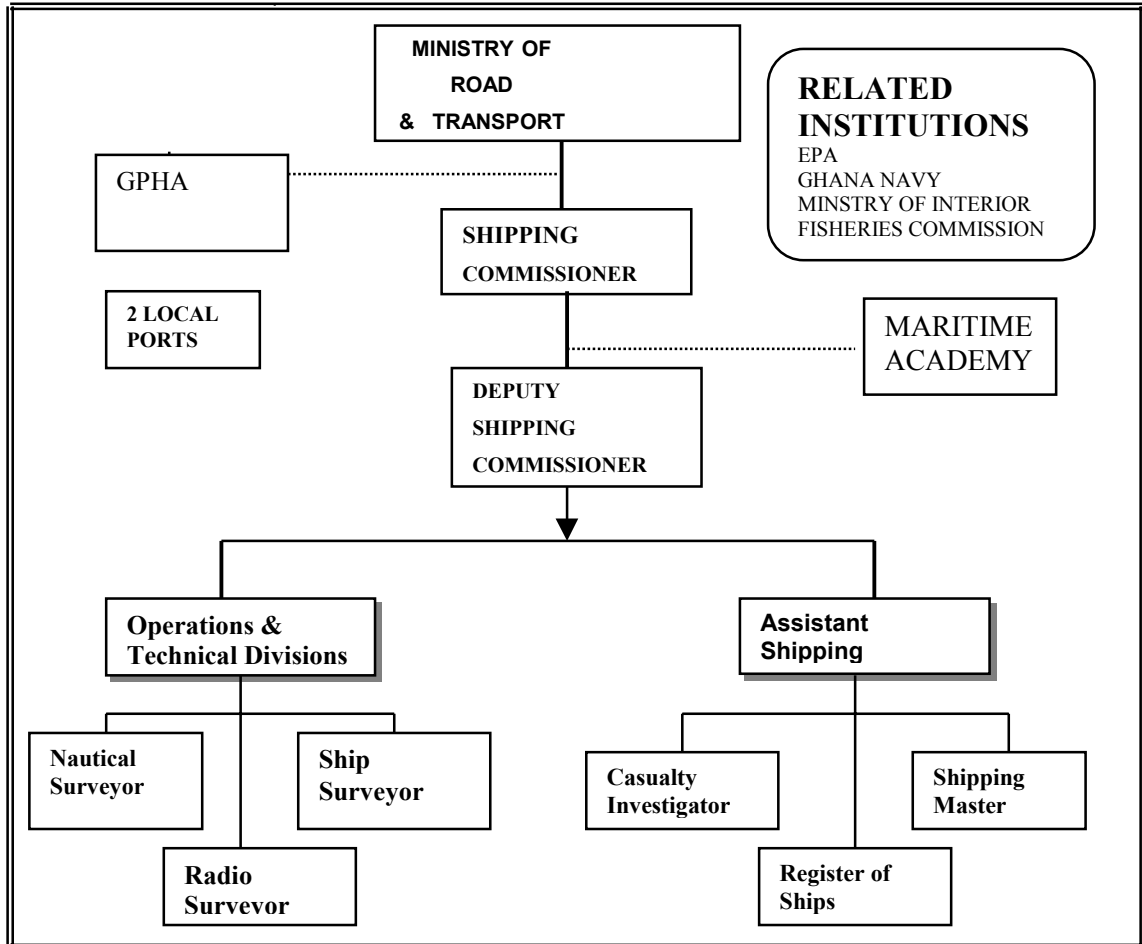
4.1 Flag State Implementation

The ability of the State to adequately implement and enforce international conventions is dependent on the level of development of its maritime administration and the possibility to convoke necessary resources to put in place even the basic systems required to carry out functions of a flag State. Basically, the maritime administration of every country is the main body, which deals with the activities of the maritime sector and calls for specialised knowledge and skills of a high order. In the above context, it can be said that there is no proper maritime administration in Ghana. However, the Division of Shipping and Navigation (SND) under the newly reconstituted Ministry of Roads and Transport (MORT)⁹ undertakes the work of a maritime administration. Although maritime activities fall within the responsibility of the MORT, there are other agencies involved in the shipping policy implementation,

⁹ The Ministry had existed as the Ministry of Transport and Communications until 1997.

with MORT playing a monitoring or facilitating role. The structure of the Ministry and related organs is shown in figure 4.1.

Figure 4 -1. Structure Of Shipping & Navigation Division



Source: Shipping and Navigation Division, 1999.

4.1.1 Functions of a Maritime Administration

The Flag, port and coastal State duties discussed in chapter 3 constitutes the functions of a Maritime Safety Administration that are intended to ensure the safety of navigation and the protection of the marine environment.

4.1.1.1 Operational Functions

The primary operational functions of a Maritime Administration are:

- (a) General Superintendence and Co-ordination;
- (b) Registration and manning of ships and related functions;
- (c) Surveys, Inspection and Certification of ships along with related activities;
- (d) Examination and certification of seafarers;
- (e) Conducting Inquiries/investigations into shipping casualties;
- (f) Dealing with matters pertaining to Preventing/Control/Combating of Marine Pollution;
- (g) Dealing with matters pertaining to Maritime Search and Rescue;
- (h) Crew matters in general;
- (i) Ensuring safety of fishing vessels and other small craft;
- (j) Deals with wrecks in national jurisdiction;
- (k) Advising the Government on all (marine) technical matters;
- (l) Port state control (general safety inspection);
- (m) Adoption and implementation of international maritime conventions;
- (n) Appointment of classification societies to act on behalf of the Administration;
- (o) Radio regulations and certification of ships and radio operators (GMDSS) in conjunction with the Telecommunications Divisions.

4.1.1.2 Policy Related Matters

In addition to the functional matters, the Maritime Administration will be responsible for some or all of the following policy related matters:

- (a) The development of shipping policy;
- (b) The continuous review of maritime legislation to ensure it remains up to date and reflects the country's needs, responsibilities and obligations under various international Maritime conventions;
- (c) The development of the broad range of subsidiary legislation (technical) which is necessary under the Shipping Law, and the review and up-dating of other principal maritime legislation; and
- (d) International relations, particularly with respect to IMO and other maritime related bodies such as ILO and International Telecommunications Union (ITU).

4.1.2 Execution of Functions

(a) General Superintendence and Co-ordination: -

The Head of the Shipping and Navigation Division in Ghana is the Shipping Commissioner who is assisted by a Deputy Shipping Commissioner and 3 Assistant Shipping Commissioners to execute the functions of superintendence and co-ordination. The public administration system in Ghana limits his authority and this affects decision-making, which ultimately delays the work of the sector. The creation of a Maritime Directorate in Ghana is in the offing to reflect IMO requirements. A draft Bill entitled Ghana Maritime Authority Bill 1999 has been completed by a Maritime Task Force and the document is undergoing refinement before being presented to the Parliament for approval in 2000. Appendix IV contains salient features of the Bill that could still attract changes.

(b) Registration and Manning of Ships: -

The registration of a ship in a State leads to the granting of nationality, serves as proof of title and enables the ship to fly the Flag of that State. Registration also affords the State the right to exercise jurisdiction in terms of legal, administrative, technical and social matters including manning issues. All these and many other requirements are found in Articles 91, 92, 93 and 94 as well as manning requirements in ILO Convention 147 that should be prescribed in the Merchant Shipping Act. As already indicated in chapter 3, the Shipping Act in Ghana is to be replaced and recognition given to the provisions of UNCLOS that are relevant to the subject of registration and manning of ships. The operation of both closed and open Registry of ships as proposed under Vision 2020 require that the Registrars are familiar with statutory provisions and procedures involved in ship registration because of its complexities. The present staff responsible for registration has not been given any formal training for their work and to take up greater responsibilities entails additional personnel with the suitable training. A training package and requirements need to be defined.

(c) Surveys, Inspections and Certification of Ships: -

Flag administration is responsible for all surveys and the granting of statutory certificates in accordance with international standards. The administration also

makes arrangements for flag State inspections to verify that their ships and foreign flagged ships comply with international requirements. The Division has only one Nautical¹⁰ and one Radio Surveyor. Surveys of large vessels and smaller craft of below 500 gross tonnage and fishing vessels have therefore been delegated to classification societies and private surveyors, respectively. The reliance on classification societies and private surveyors requires adequate expertise and experience to monitor their activities. It is clear that the present technical staff is insufficient to supervise these activities. But since the Division remains ultimately responsible for the maintenance and enforcement of accepted international standards, there is the need for adequate well-trained Staff to carry out these functions.

(d) Port State Control (PSC):-

The focus on implementing conventions is not on port states, however, the ineffectiveness of flag states in preventing or avoiding the use of sub-standard ships has brought in PSC as a last resort. Subsequently, Assembly resolution A. 742 (18) on Procedures for the control of operational requirements related to the safety of ships and pollution prevention was adopted in November 1997. Additionally, guidelines for training and qualification of requirements for Port State Control Officers (PSCO) have been developed to set the minimum standards for surveyors carrying out the inspections and the codes of conduct and procedures for PSC (A. 787 (19)). There are no officers employed by the Division to perform PSC duties and this has not been delegated. As a result, the Division relies on the Port Authority for the detection and sometimes inspection of suspected vessels before detention or otherwise. But this is inappropriate under Section 2.4.3 of Resolution A. 787 (19), which states that “ the PSCOs and the persons assisting should have no commercial interest, either in the port of inspection, or in the ships inspected, nor should PSCOs be employed by or undertake work on behalf of recognised organisations”. It is imperative to employ officers to be trained as PSCOs to perform inspection duties at the ports. If a recognised organisation has to be contracted, the

¹⁰ The Nautical Surveyor is on two years attachment to the IMO Headquarters, London since June 2000.

Division must establish proper contracts in line with IMO recommendations. This will afford the Division a leverage of control and monitoring.

There is no doubt that PSC is no substitute for effective flag State control but the Division will have to seriously review the conduct of port state control in the light of increased shipping in the wake of Vision 2020. There is no need to wait for the establishment of a proper maritime administration with the necessary appurtenance before turning to this role. After all PSC has become the necessary burden pending effective flag State implementation. Any compromise or delay will only be at great risk to safety and the marine environment.

(e) Examination and Certification of Seafarers: -

The role of the human element in maritime casualties has heightened the focus on training, examination and certification of seafarers. As noted by Vanchiswar, the human element factor as a whole is dominant in the operation of a ship, but the professional competence of the management or supervisory personnel is predominant (Vanchiswar, 1994 pp. 73). Seafarers therefore constitute the prime element that determines the standards of safety and efficiency at which the ships of the country are operated. This was given due recognition and identified in most traditional maritime States as a Government responsibility long before the advent of STCW 1978 and its successor STCW 1995. The Division had implemented the 1978 STCW Convention and the Regional Maritime Academy has been in charge of training with the Division conducting examinations. This is done through an Examination Board, consisting mainly of lecturers from the Academy and chaired by the Shipping Commissioner. The Board is responsible for establishing standards, reviewing examination questions and arranging for the holding of oral examinations for students of the Regional Maritime Academy.

Requirements of the new STCW 95 contrast sharply with the old regime. The obligations on the administration and the maritime institutions require reviewing of the 1978 version and incorporating of new provisions, well-trained lecturers and assessors with a credible quality control system. All these have been reflected in the new Merchant Shipping Bill but the Division lacks qualified Technical Officers for the

implementation and have had to depend on the Staff of the Academy. This does not augur well for proper evaluation. Although Ghana submitted a revised training programme in accordance with IMO directives for evaluation, the work is very much credited to the Academy Staff. It is hoped Ghana will be listed on the IMO 'white list' of approved maritime training countries when the list is published later. But that will just be the beginning of the work of the Division in meeting STCW 95 requirements. As a custodian State for the Academy ¹¹, the Division has first to ensure that, Ghanaian seafarers along with others in the sub-region are trained, examined and certified in accordance with STCW 95. Secondly, the Division and the Academy are open to inspection by other countries under provisions of the convention.

(f) Maritime Casualty Investigation: -

The main purposes of an investigation into a shipping casualty are to ascertain the facts, obtain all relevant information and to determine as precisely as possible the cause of the casualty. Its intention is for maritime administrations to take necessary steps to prevent, as far as practicable, the occurrence of similar casualties in the future. In this sense, many developing maritime countries have adopted the preliminary and formal stages of investigations. While it is not intended for punitive measures, the outcome of an investigation is important to the development of safety regulations and has to be undertaken by well-trained personnel. The Division does not have trained officers to undertake proper investigations and so the current practice for minor incidents to be recorded, is to appoint investigators or a committee to carry out an inquiry into the casualty. In this regard, ship masters and owners are required, under the out-dated Shipping Act, to report any casualties to the Division at the earliest possible time. However, the conduct of investigation by public servants, who are often from different departments is potentially complex and the quality of work could be jeopardised because of possible conflict of interests. The global tendency is to have an independent Branch or Board, as is the case in the UK and Australia. In this way, internal interference is avoided. This is a preferred option to the "Wreck Commissioner" system proposed in the new Maritime Authority Bill.

¹¹ The Regional Maritime Academy is a sub-regional institution under the Maritime Organisation of West and Central African region- the role of the Organisation is covered in details later in this chapter.

(g) Prevention/ Combating of Marine Pollution and Prosecution of Offenders:-

In discussing protection of the marine environment, within the ambit of the maritime administration, two roles have to be addressed. These are:

- (i) Prevention of marine pollution from ships through specifications, inspections and certification;
- (ii) The participating and /or co-ordinating role of combating incidents of marine pollution from ships.

In most developing maritime countries, prevention of marine pollution is dealt with by the maritime administration with specific issues delegated to recognised organisations while the enforcement is done by the administration through PSC. The role that poses a problem is combating pollution when it occurs. On this issue each country adopts a different arrangement, but the basic concept is that pollution issues within the ship and operational discharges is for the administration, but oil spill control and combating pollution is delegated to the agency or agencies that can best handle it. In this regard the delegated agencies responsible for oil spill control and combating are the EPA, Ghana Navy and the Ports Authority.

(h) Policy Matters:-

Development of international rules, ratification and incorporating into national legislation are central and not periphery to the work of an administration. The ratification of conventions and formulation of legislation was discussed in chapter 3 and so attempts will be made at analysing participation in the rule making process and international relations as follows:

- (i) Participation in the various IMO sessions of sub-committee, committee and conferences through appropriate professional officials are crucial to the development of domestic policies and legislation. Preparatory work for such meetings range from study and examination of documents, consultations, and proposals on composition of the delegation including obtaining Government approval and funding.

- (ii) Issues discussed at IMO are mostly technical in scope, however, because of the few technical officers at the Division, on occasion administrative officers are nominated to attend technical meetings. In most cases, depending on the subject matter, personnel from the EPA, the Navy, Port Authority and the Academy are often invited to join delegations. This results in inconsistencies in representation at these conferences with the ensuing lack of follow-up actions essential to the development of international legislation and ultimately domestic laws. Perhaps a cue can be taken from the Finnish Maritime Administration where teams of at least two persons have been assigned to each major chapter of SOLAS and STCW for example. In some cases, the same technical team have participated in meetings and attended conferences for the past 25 years. The obvious principal advantage to this sort of arrangement is that the teams are able to put together amendments and changes to domestic technical regulations before they are even adopted. This anticipatory work accounts partly for the early implementation of conventions or amendments.

- (ii) The lack of participating in sub-committee meetings and conferences by developing maritime administrations is partly attributable to insufficient funds to cover expenditure on delegation, lack of understanding of the implications of non-participation and lack of interests.

The Division is no exception in these matters and being in the civil service domain, all monies accrued from registration of ships, surveys and examination fees are paid into a Central Consolidated Account. Requesting for money from government sources for delegates attending conferences is not only bureaucratic but also sometimes frustrating. The residual effects being lack of preparations for Delegates who spend their preparatory time soliciting support or approval for funding for their trip. Until the Division is made autonomous and able to raise its own funding, this situation will persist. It is hoped if the administrators are well informed of the work of the administration, nepotism will give way to understanding. The Division can market

itself by developing brochures to educate the general public on its roles; with the advent of computers this should not be a difficult task to accomplish.

(i) Delegation of Authority to Classification Societies: -

Classification Societies are independent bodies that design ships and conduct surveys on behalf of ship owners and administrations and constitute an important role in ensuring the safety of ships and protection of the environment. The reputable societies includes Lloyds Register of Ships of London (LR), Bureau Veritas of France, Det Norske Veritas (DNV) of Norway and America Bureau of Shipping (ABS) that form part of the International Association of Classification Societies (IACS). The Division of Shipping and Navigation does not have a contract with any particular societies but accepts any society offered by the shipowner. While there is no regulation restricting the choice of a classification society, investigations into maritime casualties has been traced to poor performance of some societies that collaborate with ship owners to operate sub-standard ships. Hence it is a common practice to identify specific societies with whom to conduct business and to follow a pattern of guidelines.

4.2 Other Institutions Responsible for Safety and Pollution Prevention

4.2.1 The Ghana Navy

The Ghana Navy (GN) was established to primarily safe guard the coast of Ghana against external aggression and invasion. However, within the wider scope of the roles of the GN, there are roles related to safety and marine environment protection in Ghanaian jurisdiction. An insight into these secondary roles will help illustrate the capability and weaknesses of the GN.

(a) Securing Sea Lanes:-

Ghana has had periods of political instability and during those times, the GN patrolled regularly to ensure that the coastal and territorial waters and shipping activities were free from saboteurs. It is therefore necessary to maintain a cost-effective naval service for the protection of shipping in times of crises or to combat the piracy menace to shipping.

(b) EPA Board:-

The GN is represented on the Board of Directors of the EPA by the Director of Naval Operations (DNOP) at the Navy Headquarters. As a result, the DNOP or any Senior Officer nominated by him normally attends meetings on environmental issues. Similarly, the DNOP or any nominated Senior Officer attends IMO meetings and conferences. The problem here is that, the officers have not had any formal safety and pollution prevention training to readily appreciate the technical details of the instruments and regulations discussed at IMO meetings.

(c) Surveillance, Monitoring and Detection:-

Surveillance and monitoring patrols for the detection of oil spills are usually conducted as part of the routine naval patrols for anti-smuggling and monitoring, control and surveillance (MCS) fisheries protection patrols. While the MCS patrols are supposed to be paid for by the Ministry of Food and Agriculture (Fisheries Division) under the World Bank Fishery Capacity Building Project, the other patrols constitute routine task orders and may cover up to the 200 nautical mile EEZ. On exceptional occasions when information is received on a suspected oil spill, a ship goes out to investigate. The ability to detect infractions and identify suspected violators is crucial to any legal actions in any circumstances. However, apart from limited visual observation from the deck of a ship, the GN ships are not equipped with any Remote Sensing Systems such as photographic/video camera or Low Light Level Television (LLLTV). The Air Force that is supposed to fly the Navy for observation are also not equipped with detection equipment such as Side Looking Airborne Radar and camera registration.

The Naval Officers are also not conversant with the legal regimes in UNCLOS, other international law and the national laws under which investigations could be carried out, detection of violations under MARPOL and assessment of quantity of oil spilled. Furthermore, the officers are also not trained nor the ships equipped to collect samples for eventual analysis, vital for proving any doubts, and subsequently, for prosecution of violators. Training of both Technical and Executive Officers in relevant regulatory regimes, detection of spill and violators as well as equipping the

ships with essential equipment for detection and collection of samples, need serious attention.

(d) Oil Spill Contingency Plan:-

In the National Oil Spill Contingency Plan, the GN is to provide the role of the on-scene-commander. This arrangement is deemed appropriate since a naval ship is likely to be the first Government vessel to be at the scene. Deployment of GN duty ships in the Eastern and Western Commands allows flexibility in this arrangement ¹². It is, however, pertinent to take into account their limitations in this matter and to provide adequate training to equip the officers and personnel to perform these additional tasks.

(e) Maritime Search and Rescue:-

The role of the GN in search and rescue is extensively covered under Maritime SAR later in this chapter. Needless to say that the GN stands out as an organisation capable of playing a leading role in this discipline and to foster sub-regional co-operation on SAR. The prospects of this happening can be inferred from the success of a USA sponsored joint SAR and pollution prevention exercise organised by the US West African Training Cruise 1999 (WATC 99) with the GN along with Army elements and the Ivory Coast Navy in November 1999. The primary objectives of the exercise were to foster mutual trust, respect and co-operation among forces of participating countries and to provide training skills related to Ship-borne Disaster Management.¹³

4.2.2 The Environmental Protection Agency

(a) Present Situation:-

The Environmental Protection Agency Act, 1994 (Act 490) transformed the Environmental Protection Council into an Agency having, *inter alia*, regulatory and enforcement roles. Among its statutory functions are advisory, co-ordination, and promulgation of environmental laws, liaison and co-operation and the combating of

¹² The coastline is divided into two operational commands – East and West. Naval ships are assigned tour of duties consisting of coastal and EEZ patrols in each command throughout the year.

¹³ As contained in the exercise instructions issued by the Ghana Navy in November 1999.

pollution when they occur. Accordingly, the Agency has under its Operations Division, a Department responsible for Conventions and Projects Implementation. Personnel from this Department collaborate with the Division of Shipping and Navigation on ship-source pollution issues. The EPA is supposed to back the Ports Authority with logistics equipment for combating any pollution incident but this has always been a sore point because GPHA is a commercial entity. The Agency is also finalising the draft National Environmental Policy while attempts are being made to put in place the necessary legislation, to widen the legal scope with the institution of appropriate sanctions for violations.

(b) Sanctions:-

In July 1999, the Agency was mandated under an Executive Instrument (EI.9) to take legal action against environmental offenders. Under the Instrument, the Agency can prosecute even persons who degrade the marine environment through oil spills. The Compliance and Enforcement Network (CEN) of the EPA has two sub-committees, Legal and Enforcement consisting of agencies including the GN. This means upon information received from any naval ship, the EPA will verify and possibly prosecute any infractions. While this new instrument is proactive, the other concerns of this author are training of the personnel, inter-departmental liaison, and arrangement for combating oil pollution and the provision of reception and treatment facilities which all fall under the domain of the EPA. A look at existing arrangements in Denmark on these concerns will help elucidate the areas that further delegation can be possible and the right thing to do.

4.2.2.1 Denmark EPA - Pollution Prevention

As a domestic policy, Denmark does not have a Coast Guard besides its Navy. In most countries, the Coast Guard and other Agencies are responsible for implementing the Oil Spill Contingency Plan and combating any oil spills. However, after years of experimenting, the Danish EPA has established that it is not only cost-effective to make the Danish Navy responsible for combating pollution at sea but a high level of efficiency is also guaranteed. Hence in January 2000, the EPA transferred the role to the Danish Navy while the ports are in charge of spills within the harbours. In the meantime, the Navy has been manning the pollution prevention

ships belonging to the EPA and so has established an Environmental Division at the Danish Naval Headquarters. Selected officers and ratings are given adequate training in combating oil pollution before their deployment. During personal communications with Mr. Ivan Andersen, Head of Pollution Combating section, Section, EPA, it was confirmed that under the new arrangement, the EPA would provide the equipment and financial support for the maintenance and running of the ships. The personnel are paid in their normal employment as Defence personnel. There is a Liaison Officer employed by the EPA for the co-ordination of all requirements and tasks.

4.2.3 Ghana Ports and Harbours Authority

Ghana Ports, Harbours and Cargo Handling were consolidated into the Ghana Ports and Harbours Authority (GPHA) under the GPHA Law 160 in 1986 (PNDC L.I. 160)¹⁴. The GPHA has responsibility for the planning development and operation of the commercial seaports and fishing harbours of Ghana and provides some of the cargo handling services at the port of Tema and Takoradi. It is charged with the total management of all the seaports to include water pollution and the aversion of major accidents within the ports and its immediate environs. Furthermore, the Authority is charged with the responsibility for search and rescue in support of the Ghana Navy and vessel traffic controlling that usually fall within the ambit of a maritime Administration. Analysis of these roles is undertaken to highlight its strength and weaknesses.

(a) Pilotage/Vessel Monitoring and Controlling:-

The GPHA is responsible for the provision of pilot services and the maintenance of all lighthouses along the coastline. The Authority has in each port, communication facilities mostly VHF systems for monitoring ships calling at the ports. Contact is usually made with the ports once the vessels enter the territorial waters. This enhances the port's commercial operations and cannot be substituted for a ship reporting system that is considered valuable for an efficient SAR and ship monitoring system. A credible system for monitoring vessels in transit, particularly

¹⁴ The Port Law and Regulation is being revised as part of the ongoing port reform from a service port to a landlord port.

tankers carrying oil and oil products or dangerous substances, and to respond promptly to vessels in distress along the coast of Ghana are imperative.

(b) Pollution Prevention/Combating:-

Rules and regulations for dealing with safety and pollution issues are contained in the Port Act, 1960. Yet the implementation and enforcement of the requirements are ineffective and the possibilities of punishing offenders are non-existent. This is evidenced by the number of vessels laid up in the port or at the anchorage. During personal communication with Mr Ziem Edmond, Harbour Master of Tema Port, it was disclosed that the platforms and equipment in the inventory of the Port for combating any oil spill incident within the port area are as shown in Table 4-1:

Table 4 –1 GPHA Inventory of Oil Spill Combating Equipment

Platform/Equipment	Tema Port	Takoradi Port	Total
Tug boat	2	2	4
Oil Booms (100m each)	2	1	3
Skimmers	2	1	3

Source: Ghana Ports and Harbours Authority, 1999

Two of the tugs with their skimmers and booms were provided by the IMO, through the OPRC Fund. The IMO and EPA tested this equipment under OPRC/IMO level 2 training jointly organised in November 1997. However, the equipment is woefully inadequate to combat any oil spill within the port vicinity and cannot assist in a major spill. This situation ought to be reviewed.

(c) Maritime SAR:-

On occasions that units from the GPHA have had to conduct SAR with the Ghana Navy, a diving pontoon and a tugboat were deployed. It must be noted that not only are these platforms not well equipped for co-ordination of SAR operations but are also not suitable for use outside the territorial waters because of occasional swells.

(d) Reception and Treatment Facilities:-

Reception facilities meant to aid and encourage disposal of oily wastes, sewage and other hazardous substances at ports in Ghana are not available. Only garbage disposal facilities are provided in both ports in accordance with MARPOL Annex V. But the port does not monitor what goes into the containers. Under the present arrangement, the provision of reception and treatment facilities is to be jointly provided for by GPHA, EPA and Tema Oil Refinery but the cost of building these facilities has been the reason for the lack of consensus on the issue. Consideration ought to be given to the adoption of a different approach.

In 1996, the GPHA embarked on a Port Development Policy aimed at privatising certain functions and to make the port a Landlord port. It is envisaged that port security, pilotage and fire fighting services are among services to be retained. Transforming the Port into a Landlord port could affect existing contingency arrangements and these will have to be re-evaluated. Alternative arrangements could prove more dependable and effective in an emergency.

4.2.4 Contingency Plans

4.2.4.1 Maritime Search and Rescue Plan

Although a number of developing countries have not ratified the 1979 SAR Convention and its amended version, they nevertheless are obliged under SOLAS 74 Chapter V Regulation 15 and UNCLOS Article 98 to put in place necessary arrangements for coast watching and for rescue of persons in distress at sea around its coasts. These arrangements should include, the establishment, operation and maintenance of such maritime safety facilities as are deemed practicable and necessary with due regard to local traffic density and navigational dangers. This involves the formulation of a National Contingency Plan on SAR.

As already intimated in chapter 3, Ghana has not ratified the SAR Convention. However, the position of the country places her in the Eastern South Atlantic Search and Rescue Area. Sub-regional co-operation between Ghana and the coastal states bordering to the east and west thus assumes a greater significance. Maritime SAR

and any Contingency Plans in that respect are non-existent in Ghana. Remarkably though, the GN and the GPHA have undertaken search for and rescuing of stranded fishing vessels and on one occasion, the two organisations jointly searched for a ditched Ghana Air Force fighter aircraft. These search and rescue operations were, between the two agencies, short of a co-ordinated combined action among the other national emergency services like the Civil Aviation, Ghana Telecom, Air Force and the Division of Shipping and Navigation.

Fortunately, there has not been any serious maritime incident in Ghana requiring search and rescue on a large scale to save lives that could have aroused public outcry and bring into focus the need for an effective search and rescue organisation. But the recent crash of a Kenyan Airline into the sea off the coast of Abidjan adjacent to the western border of Ghana should signal to the Authorities that it is time search and rescue is accorded the deserved attention and to put in place the necessary arrangements. The present SAR arrangement in Ghana is an Aviation oriented organisation for aircraft in distress in the Accra Flight Information Region. Under the Africa-Indian Ocean Region Air Navigation Plan requires Ghana to maintain a Regional Co-ordination Centre (RCC) in Accra. In this context, a SAR organisation has been established at the Airforce Headquarters, with the Armed Forces and Police required to provide personnel and equipment for any operations, while the Director of the Civil Aviation is the liaison with other international organisations on SAR matters.

Under the IMO/ICAO arrangements as laid out in the International Aeronautical and Maritime SAR Manual (IAMSAR), with the Accra Region aviation SAR Plan, it can be said that Ghana has a part of the set-up for the joint SAR. Regrettably, it is also plagued with problems like lack of trained personnel, shortage of up-to-date equipment, lack of participation and co-ordination between other relevant agencies. Albeit the ratification of UNCLOS and SOLAS conventions as a proof of the country's commitment to implement their requirements, it is limited by the wherewithal. With the amendments to the 1979 convention, it should be possible for Ghana to ratify the amended version that has already entered into force in January 2000 and to promulgate national regulations accordingly.

It is no denying that budgetary constraints will prevent the acquisition of all specialised equipment required for the conduct of a credible SAR operation. However, it is envisaged that with innovation and modification, the contemporary assets of the various agencies involved in SAR operations can be harnessed for an effective operation. The GN stands out as the most ideal organisation to play the leading role and is most appropriately proposed as the lead agency co-ordinating the activities of other agencies such as the Fisheries Department, Ministry of Health, the District Assemblies in addition to the agencies already mentioned. The Division of Shipping and Navigation will have to designate an Officer to serve as the contact point. To give effect to any national legislation and arrangements, a national contingency SAR plan should be drawn-up to reflect IMO requirements in the IAMSAR Manual. Technical assistance can also be provided for that purpose by the IMO. By sponsoring the WATC 99 joint exercise involving Ghana and Ivory Coast, the USA Government has demonstrated its commitment to assist and this should be pursued. Such national contingency planning will catalyse sub-regional co-operation in SAR planning involving Ghana and the coastal neighbours.

4.2.4.2 Oil Spill Contingency Plan

International and regional conventions or agreements stress on contingency plans for oil spills as the first remedial action following an oil pollution incident. In 1984 a Committee was constituted to draft a National Oil Spill Contingency Plan for Ghana based on actual and perceived threats. Consequently, a draft proposal was submitted but after nearly 16 years the plan has still not been finalised. It is clear that much additional work is required before a final plan is produced. In this context, this author is careful in making observations and appraisals as follows:

- (a) The geographical area of responsibility and interest designated in the proposals conforms to the present national maritime jurisdiction including the high seas in relation to matters of pollution;
- (b) Designation of the EPA as the Lead Agency in combating oil spill is appropriate considering they have the statutory authority for the enforcement

of marine pollution regulations. But delegation of combating efforts to another agency such as the Navy can prove effective;

- (c) The proposal ought to take into account out-dated regulations such as the Oil in Navigable Waters Act. Recognition should also be given to work on coastal sensitivity mapping and identification of fishing grounds that have been accomplished since the last draft and to make the necessary adjustments. The relevant charts should also be provided accordingly.
- (d) Pollution response equipment particularly from natural and local resources that have been listed are economical and environmentally friendly. But it appears the proposed coconut husk and poultry feathers are neither available nor stockpiled. No attempt has been made to stockpile equipment. Proposals on memoranda of understanding with companies, agencies and other States, where immediate help could be sought have still not been made. It is clear some work will have to be done in this respect.
- (e) Though not mentioned in the draft proposals, the National Disaster Management Organisation (NADMO) and the National Mobilisation Programmes (NMP) have proved effective in managing disasters in recent times and their inclusion in the plan could prove vital. In this case, potential conflicts of interests could be avoided.
- (f) The plan does not have set targets of recovery and defined levels of operations (tier system), essential for determining if and when external assistance is required. This needs to be considered.

The above changes will undoubtedly influence the entire profile of the existing draft plan as a vital step in promoting implementation of pollution conventions at both national and sub-regional levels. A National Oil Spill Contingency Plan for Ghana of the standard and credibility prescribed by the IMO will not only ensure the country could be ready to combat any oil spill incident but also pave the way for international agreements on co-operation.

4.3 Sub-Regional Co-operation

The United Nations Environment Programme (UNEP) developed a Regional Seas Programme in 1978 as a strategy aimed at facilitating co-operation among Governments and co-ordination of the technical work of all stake-holders in ocean matters. As a result, there are now 13 regions in the world where a regional intergovernmental agreement on co-operation in combating marine pollution incidents is either in effect or under development. This arrangement has served as a prototype for regional groupings in other maritime activities. From the point of view of the adjacent ocean, it is logical to describe the sub-regional sea area of West and Central African Region (WACAF) as consisting of coastal zones and related oceans falling within the jurisdiction of the States from Mauritania to Namibia inclusive (UN, 1981 pp5).

4.3.1 The Maritime Organisation of West and Central Africa (MOWCA):

Maritime Organisation of West and Central Africa (MOWCA) until 1999 was the Ministerial Conference of West and Central African states on Maritime Transports (MINCONMAR) that was established in May 1975 in Abidjan, Côte d'Ivoire. MOWCA is aimed at harmonising maritime and port policies and strategies of maritime states in the sector of maritime transport, ports, navigation security and maritime environmental protection (MINCONMAR, 1999). Summaries of other objectives of the Organisation are:

- (a) Ensuring sub-regional cost-effective shipping services that are high on safety and low on pollution;
- (b) Assist member states in implementation of international conventions and agreements on safety, pollution prevention and training;
- (c) To further the aims of African Maritime Charter, the Organisation of African Unity (OAU) and the UN Economic Commission for Africa (ECA).

The Organisation is made up of 25 countries. Ghana is a founding member of the MOWCA and has been making significant contributions towards its running. The Organisation has a General Assembly made up of Ministers of Transport of Member

States that serve as the supreme decision-making body. Financing is mainly from annual contributions of Member States and grants by donor agencies, which are normally project-oriented. The Secretariat is in Abidjan and is headed by a Secretary – General, who co-ordinates the activities of three specialised organs of the Organisation namely, the Port Management Association of West and Central Africa (PMAWCA), the Union of African Shippers Council (UASC) and the Association of National African Shipping Lines (ANSL) as well as two regional academies in Abidjan, Côte d'Ivoire and Accra, Ghana for francophone and anglophone countries respectively.

In keeping with the objectives, MOWCA has developed a number of programmes that have become focal points for its policies. Among them is promoting maritime safety and environmental protection through creation of contingency plans for pollution prevention and control, and the implementation of flag and port state control measures. Furthermore, MOWCA pursues a policy of closer international co-operation with governments and organisations such as the World Bank, IMO, UNCTAD, OAU, where funds in some cases have been provided for projects. Principal among the organisation is the IMO, which has provided assistance in human resource development by supporting the regional maritime academies, training specialists at the WMU and the International Maritime Law Institute, Malta. Other areas include; maritime safety and environmental protection, flag and port state control implementation procedures and facilitation of maritime transport. To this end, there are eleven on-going regional projects in the sub-region.

MOWCA has served as a successful organ in seeking funding for the implementation of international projects and has acted as the pivot point for the development of the flag State implementation and PSC capabilities within the WACAF region. In the forecast of activities on safety and pollution prevention, the Organisation has as its top priority, promotion of the ratification and implementation of MARPOL 73/78, development and implementation of training courses related to the OPRC, 1990 and regional seminars on the handling of dangerous goods.

The ability of the Organisation in fostering regional co-operation is varied and dynamic. For example MOWCA could continue to act as the central point for the Abuja Memorandum of Understanding on PSC. Besides, the continuous participation of Ghana in the membership of the Organisation is considered by this author not only as a regional obligation but crucial to national aspirations of Vision 2020. The experience of MOWCA in soliciting for external support for its projects is vital to developments in the maritime sector. Its support to the Regional Maritime Academy is considered indispensable as a cost-effective way for Ghana to meet the elaborate training requirements of the new STCW 95 and other IMO modular courses.

4.3.2 The Abidjan Convention

In March 1981, UNEP and other organisations including IMCO (now IMO) co-sponsored a conference on co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region in Abidjan, Ivory Coast. The conference led to the adoption of two legal agreements referred to as the Abidjan Convention:

- (a) Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region;
- (b) Protocol concerning Co-operation in Combating Pollution in Cases of Emergency. (Designed to attract States to participate in the parent convention).

The architects of the convention with hindsight listed the sources of pollution and identified environmental management issues for co-operative strategy including science, technology, liability and compensation aspects underscored by provisions of UNCLOS and lately by the OPRC convention. By March 2000, ten States including Ghana have ratified the Convention that entered into force in August 1984. (IMO/UNEP (WACAF)/WG.1/8, 2000. pp 22).

After a long period of inactivity, a joint IMO/UNEP Meeting of National Experts on the Emergency Protocol to the Convention was convened in Accra, Ghana from 20 to 22 March 2000. The main objectives of the meeting were:

- (a) to prepare a medium-term programme for the development of regional co-operation for preparedness and response to accidental marine pollution and examine how it could be implemented;
- (b) to consider the need to amend the Emergency Protocol, taking into account international developments since its adoption in 1981 and to propose follow-up action. (IMO/UNEP (WACAF)/WG.1/8, 2000. pp 3).

The EPA in Ghana has been charged with the establishment of environmental standards for discharges of polluting substances including industrial wastes covered under the Abidjan Convention. Under this arrangement, the EPA has initiated programmes on the Institution and Co-ordination of National Contingency Plans and Monitoring of pollution in the marine environment in the WACAF region. The gleaming prospects of oil and gas exploitation in the Tano Basin on the western border of Ghana and exploration by Ivory Coast on its side of the Basin makes this convention very important to Ghana and her western neighbour. It could serve as the basis for establishing bilateral co-operation in controlling and combating marine pollution. It is against this background that this writer upholds the USA sponsored exercise WATC 1999. Lessons learnt from this unprecedented exercise could in addition to relevant conventions provide the impetus for further dialogue on establishing co-operation in maritime safety and environmental issues in the Gulf of Guinea. Similar agreements/arrangements in combating marine pollution between Sweden, Finland and Denmark have proved successful and could provide valuable lessons. A condensed version of the Copenhagen Agreement is attached as Appendix VI.

4.3.3 Regional Co-operation on Port State Control

The Paris Memorandum of Understanding (Paris MOU) was adopted by some member countries within the European region in 1982 and has since set the pace for regional co-operation on port state control. The agreement was aimed at improving

the safety of ships and the protection of the environment and also eliminating sub-standard ships and operators. On the basis of its impact, the IMO Assembly adopted resolution A. 682(17) on Regional Co-operation in the control of ships and discharges in November 1991. Since then, six other regional agreements have been developed while two others are in the developing stages (Hoppe, 2000 pp.13). The Regional Memorandum of Understanding on Port State Control for the West and Central African Region (Abuja MOU), was signed on 22 October 1999 by 16 countries including Ghana.

The Abuja MOU consists of ten sections and its objective being to outline obligations, targets and administrative procedures for the Maritime Authorities of Member States on port state control. Though the IMO has reiterated that PSC is no substitute for flag state implementation, it is acknowledged that there are principal benefits to be derived from a co-operative approach on PSC. This includes, creation of a 'safety net' where there will not be room for sub-standard ships; exchange of information about ships through a network or data that may be developed globally by the IMO. This allows identification and monitoring of sub-standard ships and ensures there is a harmonised system of inspection within the sub-regional areas and ultimately world-wide (Plaza, 1999).

It is no denying that as the developed countries enforce their MOU on PSC, unscrupulous operators will divert their ships to ports in a region where no or less stringent PSC inspections are conducted (Hoppe, 2000, pp13). On the contrary, such diversions can have an adverse effect on port revenue of those ports enforcing proper safety standards but as evidenced by the history of maritime casualties, consequences of trading with sub-standard ships particularly oil tankers over 20 years old could prove expensive and often hazardous. While efforts are made to improve flag State implementation in Ghana, it is necessary that it takes expeditious steps to ratify the Abuja MOU and to lend support for its successful implementation.

4.3.4 IMO Regional Office

In 1999, the IMO appointed a Regional Co-ordinator for the West and Central African Sub-region (Anglophone) who is based in Accra, Ghana following the

signing of a Memorandum of Understanding between the IMO and the Ghana Government (IMO News No 2, 1999). The aim of the IMO's regional presence is to collaborate with the host country and the United Nation Development Programme (UNDP) country office to facilitate IMO's inputs into national and regional development policies. To this end, the regional offices will provide first line participation in bringing about effective development and execution of the Organisation's Integrated Technical Co-operation Programme (ITCP).

The role of the IMO in ITCP drawn up for the period 2000-2001 among other things is to provide technical advisory support, institutional support to maritime administrations, port authorities and maritime training institutions. The aim is to enhance human resource development and institutional capacity building to foster effective implementation of conventions. The recipient Government's role within the ITCP framework includes prioritisation of maritime safety and pollution prevention programmes within their national development strategies/policies, establishment or strengthening of their national maritime administrations to carry out flag state and port state obligations and to up-date their Merchant Shipping legislation.

The Regional office has so far co-sponsored two forums on the Merchant Shipping/Maritime Authority Bills and the ISM Code. Ghana is therefore not only fortunate but also strategically positioned to take full range advantage of the support and assistance to be derived from the IMO ITCP. The Government has to demonstrate practically and religiously its commitment in reviving the maritime sector in order to secure a wide range of assistance.

CHAPTER FIVE

GUIDELINES TOWARDS IMPLEMENTATION AND ENFORCEMENT

To enhance flag State implementation and enforcement of safety and pollution prevention instruments, the IMO has developed Guidelines on flag State implementation (1997, Assembly resolution A. 847 (20)). The guidelines are to complement other provisions such as article 94 and 217 of UNCLOS, which provides an understanding of flag State implementation and enforcement. Based on these guidelines and instruments, this chapter will highlight flag States obligation relating to legal framework, maritime administration, human resources development, maritime casualty investigation and delegation of authority.

5.1 Legal Framework

The initial action by a flag State following the entry into force of a convention is the implementation of its provisions through appropriate national legislation supported by a credible infrastructure. As previously discussed this has been one of the obstacles facing Ghana and most developing maritime administrations and therefore has to be given serious consideration. In this regard, the Ghana must have in place a legal and technical team to draft laws applicable to ships flying its flag and to make necessary arrangements for their enforcement. These requirements must entail the promulgation of laws that permit effective jurisdiction and control in administrative, technical and social matters of ships under its registry along with the legal basis for the enforcement of the flag State's national laws, investigation and penal processes. Another requirement is the availability of personnel with maritime expertise to assist in drafting, enacting and execution of the necessary domestic laws.

5.2 Policies and Support Infrastructure

An effective flag State control is dependent on development of policies through national legislation, assignment of responsibilities together with an administration to up-date and revise the policies where necessary and to develop a long-term strategic planning document. The timely approval of the Ghana Maritime Authority Bill and the National Shipping Bill is required to put in place a proper administrative set-up and its associated regulations. The initial work of the new Authority should constitute the development of a strategic plan to complement the National Shipping Act. Furthermore, Ghana should establish supporting units in the form of administrative units and technical or operations units in Accra and Takoradi to cater for the two ports and should be capable of administering a safety and environmental protection programme consisting of the following:

- (a) facilities and appropriate technical experts capable of effectively managing a maritime administration set-up commensurate with the register and size of the administration;
- (b) administrative instructions and interpretative bulletins to help implement international and national regulations;
- (c) means of ensuring compliance with national regulations such as inspection programmes and using independent auditors; and
- (d) resources for ensuring that investigations into casualties are conducted in addition to ensuring adequate and timely handling of cases of deficient ships.

5.3 Human Resources Development

Competent and well-trained people within the maritime industry are analogous to success hence, of all the international efforts at protecting the environment, the most significant single issue and one requiring continuous attention is people (Julian, M, 2000). In this context, the people responsible for implementing and enforcing the conventions are categorised in three levels as follows:

- (a) the first level constitute the delegates who represent their countries either at IMO meetings or on the many international industrial organisations and environmental groups referred to as non-governmental organisations (NGOs);

- (b) the second level is the personnel responsible for implementation and enforcement of IMO conventions in their respective national administration and those in the shipping industry, whether building or operating ships, and including the class societies;
- (c) the third level of people is those at sea with the ultimate responsibility for ensuring not only the safety of their ships, crews and cargoes but also that their ships do not cause pollution.

Training of maritime administrators, ship surveyors, assessors, seafarers and ship operators have become essential in safety and pollution prevention and therefore calls for a standard of the highest order. The Regional Maritime Academy in Ghana is offering valuable tuition for seafarers and lately for ship operators¹⁵. The scope of pollution protection courses that do not constitute a significant aspect of the sea-going curriculum should be expanded to include, for example, courses on Oil Spill Contingency Planning, Pollution Control and Search and Rescue.

The WMU and the International Maritime Law Institute have continued to offer courses with in-depth exposure to formulation, implementation and enforcement of maritime conventions. To date, Ghana has trained 50 students in various disciplines at the World Maritime University¹⁶. Thus with proper monitoring and coordination by the Administration, there should be a fair number of experts to manage the maritime sector while attempts are made to augment the staff. There is the need for the Administration to provide incentives and to develop an attractive package and criteria for recruitment of its staff.

5.4 Delegation of Authority

To ensure uniformity of inspection with the view to maintaining established standards, delegation of responsibilities to other organizations ought to be regulated. Consequently, the IMO has developed Guidelines for the Authorisation of

¹⁵ The Regional Maritime Academy started a Diploma Course in shipping management in 1997.

¹⁶ Figure obtained from the World Maritime University Academic Registry.

Organisations Acting on behalf of the Administration (resolution A. 739.18) and the Specification of Surveys and Certification Functions of Recognised Organisations Acting on behalf of the Administration (resolution A. 789 .19). Additionally, the IMO recommends that flag States should ensure that recognised organisations have adequate resources in terms of technical, managerial and research capabilities to undertake assigned tasks and should be of a sound reputation. In this regard, the members of the International Association of Classification Societies (IACS) offer competing qualities worth exploiting. Other requirements are the need for written agreement, authority and actions to follow in detaining an unseaworthy ship, provision of all national laws and maintenance of records or data that could assist in the development of regulations. Since ultimate responsibility rests with the Administration, there must be an oversight programme with adequate resources for continuous monitoring and communication with the recognised organisations. This can be achieved by retaining authority to conduct supplementary surveys and the provision of staff with good knowledge of the rules and regulations pertaining to both the flag State and the contracted organisation in order to ensure an effective oversight role.

5.5 Enforcement

Measures to ensure observance of rules and regulations promulgated have to be developed by every State. These includes ensuring that ships flying its flag do not sail until they comply fully with international standards, conducting of periodic inspections, establishing procedures for dealing with violations and incorporating penalties in national laws for any violations. This means control and monitoring programmes should be an integral part of a flag State's Maritime Safety Administration. It should be designed to facilitate the maintenance of internal quality standards, evaluating the effectiveness of a flag State's actions in conformity with prescribed International Standards as well as conducting a strength, weakness opportunity and threats (SWOT) analysis. An effective way of doing this can be by carrying out a Self-Assessment.

5.6 Self Assessment

Self Assessment is a mechanism developed by the Maritime Safety Committee of the IMO to assist flag States in evaluating their performance (MSC 71/23/Add.1 Annex 4). It is a criterion (internal or external) against which the success of the performance of a flag State could be assessed and copies of a Self Assessment Form (SAF) voluntarily submitted to the IMO. The two criteria are:

- (a) Internal Criteria: - Internal criteria are those directly relevant to the operation of the flag State as an Administration and are designed to give a clear indication of the effectiveness of a flag State Administration in fulfilling its obligations under the instruments (Plaza, 1999). The pertinent components of internal criteria are questionnaires pertaining to legal framework, enforcement, recognised organisations acting on behalf of the Administration and casualty investigation.

- (b) External criteria: - It refers to information, in particular port State control and casualty accident data, which may also be indicators of the way in which a flag State is performing.

Though the criteria are intended to assist flag States and the IMO in determining the strength and weaknesses of respective maritime administrations, the countries that require it most are apprehensive in using the SAF. As a maritime expert commented “the reason could be because some developing maritime countries are skeptical that the evolution of assessment arrangements will be used by developed countries to discredit their own administrations with the potential of infringing on their sovereignty” (Allan, 2000 p.77). However, far from being used as a tool for eliminating less developed maritime administrations, the SAF will afford the IMO information required to determine areas of priority for technical co-operation and to advise donor countries. Therefore, neglect by countries to complete the SAF is at a great loss to technical assistance in enhancing domestic efforts.

5.7 Casualty Investigations/Formal Safety Assessment

Investigation and reporting of maritime casualties are highlighted in UNCLOS and in a number of IMO instruments, along with the Guidelines given in the Code for the Investigation of Maritime casualties and Incidents (resolution A. 849.20) as amended by resolution A. 881(21). As a general guideline, accidents involving personal injury necessitating absence from duty of three days or more and any deaths resulting from occupational accidents and casualties to ships of the flag State should be investigated, and the results made public with copies to the IMO. The IMO has designed the Formal Safety Assessment (FSA) as a structured and systematic methodology designed to arrive at a balanced regulation of maritime safety or marine pollution risks and takes account of both technical and operational human issues. The core elements of the FSA process are risk assessment and cost/benefit assessments. It is a tool meant to widen understanding of the cost-effectiveness of new safety or environmental regulations, both for the industry as a whole and for individual parties with the view to establishing equivalence of alternative options for regulations.

The Division is yet to adopt this system of assessment and the reasons are obviously lack of personnel, but in the face of limited resources and funding for implementing safety and environment regulations, the mechanism can prove vital in cost savings.

5.8 Reception and Treatment Facilities

The Annexes to MARPOL 73/78 prescribe that Parties undertake to ensure adequate reception facilities are provided so that ships can deliver waste in ports but the annexes do not specify how waste is treated or handled thereafter. It is clear that handling of waste therefore follows a Party's national waste management strategy. In this connection, it was decided that in Ghana, the EPA, Tema Oil Refinery Company and GPHA would jointly build and operate reception and treatment facilities. But, because the provision of reception and treatment facilities requires heavy financial commitment for initial investment, these facilities have still to be provided. In 1995, the IMO published a Comprehensive Manual on Port Reception Facilities to provide National Authorities with guidelines on setting up of these

facilities including legislation, funding and cost recovery. Some essential options offered are:

(a) The Responsibility:

(i) Private Sector:- Provision of waste reception and treatment facilities by private companies can prove cost-effective but has to be licensed. One disadvantage of such a system is that it may lead to an unhealthy form of price competition, thereby handicapping technologically based companies. However, restricting entrance to the market can curb the competition.

(ii) Public Enterprise:- This is the direct involvement of Government in establishing reception and treatment facilities on a free-market basis. The advantage is that depending on the availability of sufficient funds it will lead to rapid build-up of a comprehensive waste handling system. The disadvantage is that the Government operating the facilities exercises the control and enforcement of the rules.

(iii) Other Options:- The role of Parties other than the Government such as processing of waste by Terminal Operators, Tank Cleaning Operators, Waste Collection Companies, Waste Treatment Companies, Bunker Stations and Ship Repair Yards should be evaluated and co-ordinated by National Authorities.

(b) Financing and Cost Recovery:

The objective of a cost recovery mechanism will be to generate revenue to cover operating costs of the facilities but because of the high investment costs, Government participation and or international assistance is necessary. Optional mechanisms are:

(i) The Fee System:- This means a ship pays a charge per lot or per ton of waste delivered, the charges being differentiated according to the type of waste. The system provides disincentive to ships and may lead to illegal

discharges. Also, where private companies are used, they may be interested in only the profitable wastes but this can be regulated through high level Government involvement in monitoring and enforcement.

(ii) Inclusion of Cost of Disposal in Port Dues: - This is adding a surcharge to the existing port dues and tariffs and the charges differentiated for particular ship categories. It provides an incentive for ships to discharge waste to the ports. The disadvantage is that waste that should have been disposed elsewhere could be imported since ships have to pay the dues regardless. But ships with good management systems onboard and ships making a specific number of port calls within a year could be exempted from paying for the rest of the year. However, port dues are a sensitive issue and thus make this option difficult to implement although Sweden has adopted the system that seems to be operating well.

(iii) Free of Charge System: - A system where ships are not charged directly for the waste disposal and this could prove difficult because the facilities will have to be maintained and Government subsidies or specific tax may be inadequate to cover costs. Though the image of a port may be enhanced by free of charge facilities, there is no evidence to suggest that this could attract ship operators in the absence of trade. The system however does not require extensive control and enforcement.

5.9 Regional Co-operation

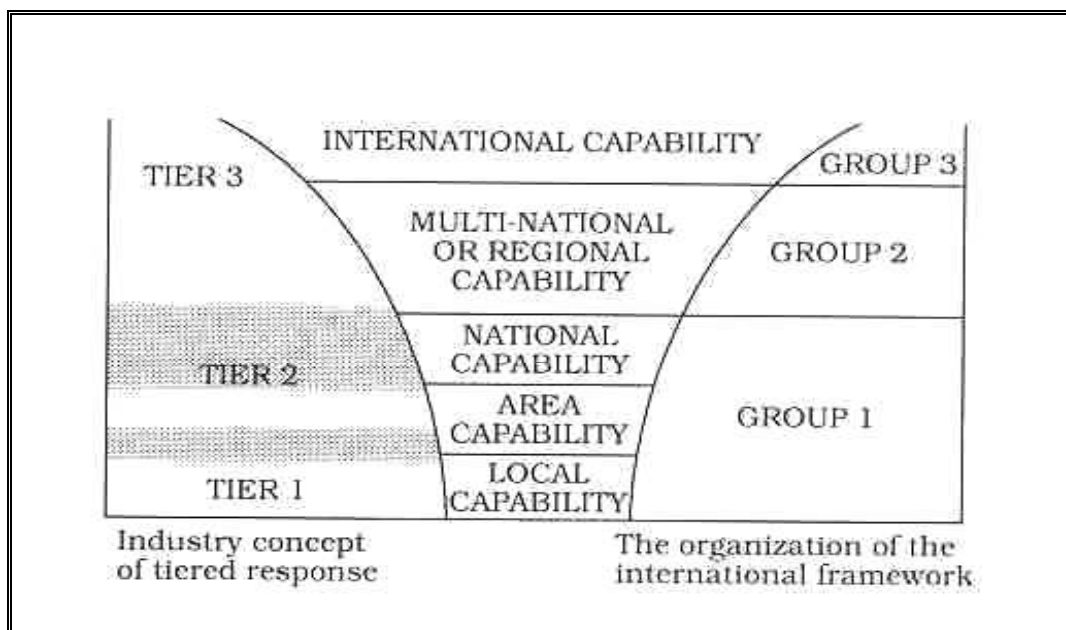
Proper implementation and enforcement of safety and marine environment conventions like MARPOL, SOLAS, SAR, STCW and OPRC require regional co-operation. It has been argued that co-operation, for example on port state control can be cost-effective and complement individual national efforts in other areas of implementation and enforcement. For example with regards to the implementation of MARPOL, adequate reception facilities in a particular country alone may not be enough. This is because if ships can dispose of their wastes only in a few ports in a region, it could prove burdensome since the lone ports could become dumping ports for all wastes that could have been disposed off elsewhere in the region. In extreme

cases wastes could still be discharged illegally. On this matter, the IMO has noted that adequacy should be applied at a Regional Level to include co-operation among State Parties as well as ports within a country (IMO, 1995 pp32). The Wider Caribbean Initiative on Ship-Generated Waste (WCISW) is a typical example formed to enhance co-operation among some 22 countries of the Wider Caribbean with the view to identifying the legal and technical obstacles to the ratification and/or implementation of MARPOL 73/78.

5.10 Contingency Planning

Contingency Planning for oil spills response should recognize the relationships between national response systems and international oil spills preparedness and response arrangements. The two planning approaches that coexist internationally are the International Industry's Concept of Tiered Response and the Governmental Arrangements at the local, national and regional levels are illustrated in figure 5.1.

Figure 5-1 The Global Framework for Pollution Response



Source: Manual on Oil Pollution – Section II

5.10.1 Tiered Response

The tiered operational response concept offers response levels as follows:

(a) Tier 1:- Concerned with preparedness and response to a small spill within the capabilities of a facility or harbour authority. The upper limit is usually seven hundred tons of spill.

(b) Tier 2:- Concerned with preparedness and response to spill that requires the co-ordination of more than one source of equipment and personnel usually from a number of sources within or outside a port area.

(c) Tier 3: - Concerned with the mobilisation of all national resources to combat a major oil spill that may even involve regional and international arrangements. This requires prior customs arrangement.

5.10.2 Governmental Arrangements

Government arrangements may be grouped as follows:

(a) Group 1: - This is the National Oil Pollution Emergency plans or the national Contingency Plan (NCP) that has to consider the geographical disposition of the country and the interrelationship between shipboard, offshore, oil handling facilities and seaport plans. Of greater importance is the organisational structure, lines of authority and reporting procedures.

b) Group 2: - This deals with any bilateral or multilateral response plans or agreements with other countries and regional response bodies. Regional Seas Programme fall within this category and because of pulling of resources together, customs issues ought to be previously arranged to enhance clearance and avoid breach of national security.

c) Group 3:- This is the global network of inter-regional plans including the operation of the IMO Oil Pollution Co-ordination Centre and the interplay among regional agreements.

5.11 Financing

With regards to the activities of maritime administration, financing remains the greatest impediment and responsibility of respective State parties. In order to fulfil the general policies of the administration there is a continuous need for investment in infrastructures together with maintenance of related resources. It is normal to plan a financial framework for the short-term that is dependent on capital budgets of the State with the plan being left open to other formulae of financing in the long-term. The initial pre-occupation of the pending Maritime Authority in Ghana should include parallel activities to the saving of human lives at sea, such as salvage of ships that could provide extraordinary income or that generated by ship registration and surveys or examination fees. There is the need to continue to invite the participation of users in certain programmes such as contributions from the Port Authority, fishing companies, oil refineries and Ship Owners Association. It should be borne in mind that central budgetary allocation is primary over the extra budgetary because of the important role of the special services for safeguarding human life at sea and pollution control. Firstly the services must be considered as priority because of their high social value and secondly as a fulfilment of international obligations.

In discussing financing, cognisance should be given to the co-operation of all government and non-government organisations and institutions related to the maritime activities and especially;

- (a) Ministry of Defence, Ghana Navy and Airforce Search and Rescue Services;
- (b) Ministry of Interior, Ghana Police Service;
- (c) Ministry of Finance and Economic Planning;
- (d) Ministry of Roads and Transports, Regional Maritime Academy;
- (e) Ministry of Food and Agriculture, Fishery Division;
- (f) Ghana Ports and Harbours Authority;
- (g) Ghana Shippers Council; and Ship Owners Association;
- (h) Volta River Authority;
- (i) Ministry of Communication, Ghana Telecommunication,
- (j) Ghana Red Cross Society
- (k) National Mobilisation Programme; and
- (l) National Disaster management Organisation.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

Ghana achieved remarkable success in reviving the economic decline through the ERP of 1983, but this success has not been without its environmental as well as social costs. The projection of living standards to a middle income status in the context of Vision 2020 Programme offer both opportunities and constraints with respect to the environment. The sustainability of economic and social development depends ultimately on proper and responsible management of the natural resources and the environment in general. In this regard, this research work emphasises the sea environment.

This study which is a review of the implementation and enforcement of maritime safety and pollution prevention regimes, re-examines the maritime environment and challenges of the Gateway programme, conventions relevant to Ghana, ratification and implementation processes and existing national maritime legislation. Other issues considered are the role of related maritime organisations and institutions at the national, sub-regional and international levels as well as strategies for implementation and enforcement.

The study reveals that Ghana's maritime transport dependency factor is comparatively high while the contemporary maritime interests constitute an integral part of development policies. The maritime sector has been extensively covered under the programme of activities of Vision 2020. However, the central role of the sector in the socio-economic development of the country is not reflected in the national priorities and allocation of resources. The discussion on safety and anti-pollution conventions as well as liability and compensation treaties covers their

relevance, flag State obligation and pre-requisites for their implementation and subsequent enforcement. It is noted that Ghana has ratified major conventions on safety and pollution prevention consistent with most developing maritime countries in the sub-region such as IMO conventions, which are relevant instruments for the implementation of the Abuja MOU on port State control in the WACAF Region. However, the Government has failed in the implementation and enforcement of these conventions.

On liability and compensation Conventions, the study discovers that a much higher priority has been given to the accession and implementation of conventions relating to safety and pollution prevention than in the field of liability and compensation. The study therefore suggests that equal priority should be given to the accession of the 1992 CLC and Fund Conventions considered to be the basic instruments for ensuring that victims of a maritime accidents which includes death and injury would be appropriately compensated. Similarly, from the point of view of national emergency planning and co-operation at regional and international levels, the study suggests that first priority should be given to the pre-requisites that will pave the way for accession of the revised SAR and OPRC Conventions.

The discussion on the processes of ratification and implementation is centred on identifying a simple approach to circumvent bureaucratic bottlenecks and red tape. After comparison with what pertains in some major maritime countries and a typical proposal on implementation processes, the flaws in the practice in Ghana is highlighted. The study identifies the problems associated with Ghana's awkward attitude as being inconsistency of the composition of delegates to international meetings, financial, political and the low priority given to maritime instruments in the legislative agenda. The study suggests that a much higher priority be given to maritime affairs. On formulation of legislation, this author concurs with provisions in the new Ghana Merchant Shipping Bill that primary legislation should be addressed through the legislature for the preservation of sovereignty and the technical regulations addressed through subsidiary legislation promulgated by the sector Minister. Changes and Amendments could be published in a Ghana Maritime Bulletin.

The study also suggests that delegates to international maritime technical conferences particularly from other agencies should have adequate knowledge in the subject matters and should remain an integral part of a Committee designated for the drafting of the technical regulations. It is noted that this approach places greater responsibility on the delegates to ensure they are abreast of developments of amendments and new regulations as well as provide timely advise to the Minister through the Maritime Authority. The study reviews the activities of the Shipping and Navigation Division MORT and notes that it is operating within a transport sector dominated by road transport. The Government is however, up-grading the Division to a Maritime Directorate with a Board of Directors to function well in meeting IMO requirements. But the author is of the opinion that creation of a Ministry of Maritime Affairs to be responsible for all maritime related issues will be the ultimate solution that can best serve the nation's maritime interests.

An analysis of the activities of the Division exposes a number of lapses on both flag and port State functions. Numerous reasons accounted for this but the most important ones are financial and lack of trained personnel. The study therefore brings to light some proposals on financial and human resources development. In the implementation of MARPOL 73/78 for example, the options for investment in reception and treatment facilities and cost recovery mechanisms are underscored in the study. The first options being public sector investment and cost recovery being surcharged as part of port dues. The study suggests that premium placed on human life and the moral obligation to safeguard and sustain the marine environment is reasonable evidence to warrant budgetary allocation to the sector and for the Government to solicit bilateral and multilateral funding. On waste disposal before arriving at the ship yard, it was found out that the IMO does not consider this contractual stipulation as being in the spirit of the MARPOL Convention (IMO, 1995).

The important role of the EPA, Ghana Navy, Ports and Harbours Authority and Regional bodies in safety and anti-pollution was very much covered in the study. Their major contributions have been acknowledged and so were their shortcomings. At the national front, the study identifies poor co-ordination, lack of extra-functional

training, equipment and platforms as deficiencies that hamper the functions of the organisations. At the regional level, it is noted that, the successes of safety and pollution prevention measures are dependent on the extent of sub-regional co-operation. But lack of funds, human resources, communication facilities and harmonised legislation could be the stumbling blocks to meaningful co-operation. The study also reveals that, National Contingency plan for SAR and Oil Spill existed only on paper and does not graduate into sub-regional or international framework. It is pointed out that though the Abuja MOU is potentially capable of eliminating sub-standard ships in the sub-region it cannot develop overnight. Vigilance by States, speedy and timely participation of all Governments are inevitable. This aspect of the study is intended to stimulate further studies into sub-regional co-operation since from the point of view of safety and pollution prevention; co-operation should be the natural thing and not the exception.

The study on IMO guidelines on flag State implementation centred on mechanisms developed to assist Governments in ensuring cost-effectiveness of implementation and to assist in the determination of priority needs. But Ghana like most developing maritime countries is apprehensively guilty of not voluntarily utilising these facilities. On the issues of Formal Safety Assessment and Self Assessment for example, this author agrees with De Bievre (2000, p.112) that:

whether the FSA will help us to pitch our actions at the right level in order to maintain a proper measure of control over ship safety and pollution risks also depends on political consideration, however, FSA can do no more than provide a basis for making decisions on risks criteria or on target levels of risks.

6.2 Recommendations

In designing an implementation and enforcement strategy, the Maritime Authority (SND) ought to approach guidelines cautiously bearing in mind its economic and political repercussions. While the maritime sector has been identified as critical to national development, the overall proposals have to do with the equitable

prioritisation, right legal framework, expertise and institutional arrangements and co-ordination. Ghana does not have the same resources, expertise and political strong-base like some of the countries cited. The guidelines proposed in Chapter 5 can not be accomplished at the onset due to budgetary constraints. But the following recommendations will help attain a safe parity between the marine environment and developments in the maritime sector:

6.2.1 Ratification and Implementation

- (a) The Authority should adopt the right tactics and procedures to motivate the authorities concerned and the public in favour of ratification and implementation. It should be stressed that benefits accorded by safety and pollution prevention measures outweigh any losses that the implementation and enforcement of the conventions might bring. This could be done through regular seminars and the publication of a Maritime Bulletin to sensitise all stakeholders beforehand;
- (b) Where Parliamentary approval has to be sought, the timings must be right, otherwise it will spell a political disaster for the Government and continue to reduce the prospects of ratification and implementation of conventions;
- (c) Composition of Delegations to International Meetings on marine related issues should be consistent, comprising persons well versed and prepared for the agenda issues. They should be well funded and should provide feedback on deliberations;
- (d) On the accession to other conventions and protocols the following need to be considered:
 - (i) 1990 OPRC and 1996 SAR Conventions as a means of ensuring co-operation and assistance in the adequate preparation and response to oil pollution incidents and SAR during maritime casualties;
 - (ii) 1992 CLC and Fund Conventions as the most attainable alternative to ensuring that the rights to appropriate compensation in the event of a maritime casualty are adequately covered;

- (iii) London Convention as a means to ensuring adequate protection against dumping of wastes. Consideration should be given to accession to the 1996 Protocol which is intended to replace the 1972 version and regulate the full operation of the principle of precautionary approach to the dumping of wastes at sea;

6.2.2 Legislation

The legislation should take into account the following:

- (a) UNCLOS should be recognised as providing the jurisdictional framework (blue print) for effective implementation and enforcement of IMO Conventions on flag, port and Coastal States in safety, navigation, preservation and control of the marine environment. In this respect, the enactment of IMO conventions should be effected in accordance with the provisions of UNCLOS, which addresses accepted shipping rules and standards;
- (b) Merchant Shipping legislation is a pre-requisite for maritime development and the effective enforcement of appropriate maritime safety and pollution prevention standards (Vanchiswar, 1996, pp23). Hence the legal ramifications of administering a maritime sector via a Bill could prove disastrous. The 1999 Ghana Shipping Bill is a continuation of that practice for almost 11 years. The present Bill addresses issues of registration, survey, inspection and certification in the primary legislation while the technical regulations yet to be drafted would be in subsidiary legislation. Early and timely approval of the Bill into an Act is crucial to forestall any legal exploitations;
- (c) Harmonising of legislation, co-ordination of accessions to conventions, promulgating domestic legislation and co-ordination and co-operation of sub-regional administrations are equally essential in ensuring common standards and strategies for safety and pollution prevention and in regulating shipping activities in the WACA Region.

6.2.3 Administration

- (a) The refinement of the Maritime Authority Bill should be expedited and the Parliamentary approval sought as a matter of priority;
- (b) The Authority must identify and operate with classification societies with credibility and as a first selection criterion, the societies must be members of the IACS. Contracts to be entered into should follow IMO Guidelines in Assembly Res. A. 739 (18). The Authority must retain monitoring and enforcement roles;
- (c) The reliance on the Port Authority to inspect ships should be discouraged but instead as Al-Jumah (1994) has noted, port Authorities should show concern for ships calling at their ports and report any sub-standard ships;
- (d) The Authorities should endeavour to utilise the IMO Formal Safety Assessment and Self Assessment methods of evaluation.

6.2.4 Pollution Prevention

- (a) To facilitate the implementation of Annexes I and II of MARPOL 73/78, the Government should redefine roles in respect of reception and treatment facilities as follows:
 - (i) Government should build reception facilities in the ports with funding from central source or external assistance. On completion, the facilities should be transferred to the port Authorities for operation and maintenance;
 - (ii) Tema Oil refinery with its expansion to treat residual oil should be mandated to accept and treat oily wastes;
 - (iii) Port charges should be surcharged to ensure cost recovery. GPHA and TOR should have a Memorandum of Understanding on payment for treatment of oily wastes.

- (b) The EPA must re-assess the role of the Navy and Airforce in Monitoring, Surveillance and combating pollution in order to provide appropriate training and adequate basic equipment. Regular allocation of funds from the National Environment Fund should be made to the navy for training, running and maintenance of equipment.
- (c) In the absence of a Coast Guard, the EPA should explore the possibility of requesting the Navy to establish a dedicated Division for Pollution Prevention with the full support of the Agency;

6.2.5 Contingency Planning

- (a) The framework for contingency planning for either Oil Spill or SAR must follow a graduated or tier response from local through national to sub-regional level. The Ghana Navy as at now is the best placed organisation to be designated lead agency for these plans;
- (c) The Authority and EPA must provide funding for regular training exercises and testing of these contingency plans. External training opportunities like the one with the USA WATC should be taken advantage of.

6.2.6 Regional Co-operation

Regional co-operation in maritime transport, port State control and pollution prevention and response should be vigorously pursued, since as Al-Jumah (1994) reiterated, it will strengthen relationship among States in the various fields of shipping and port issues.

6.3 Concluding Remarks

Though the study very much underscores the importance of the maritime sector and national and or international efforts at saving lives at sea and protecting the marine environment, there is no evidence to suggest that Ghana faces imminent threat to seafarers or the marine environment. The absence of evidence of any maritime casualties of significance to induce public outcry is perhaps the limiting factor in bringing realism to or highly prioritising maritime safety and environmental issues.

This author wishes this providence would prevail *ad infinitum*. But nobody can predict precisely what will happen in the Ghanaian marine environment and in the shipping world in the next few years. Hence on the issue of safety the author wishes to conclude with these words of Fernando Plaza (1999) that:

from a safety point of view, we should be especially vigilant on implementation aspects of IMO instruments. Safety must be considered as an investment rather than as a cost factor to the industry or the public, because undoubtedly, safety pays.

Finally, this author wishes to propose a departure from waiting for a quality failure to trigger regulatory changes, to a tendency of adopting anticipatory stances following the doctrine that “prevention is better than cure”. This is an attitude that will fully complement this study and ensure Ghana’s Gateway dream is achieved at little or no risk to life and the marine environment.

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APPENDIX II
IMPACT OF STCW 95

1. MARITIME ADMINISTRATION
 - (a) Certification
 - (i) Establish record system – issue of certificates, endorsements;
 - (ii) Provide information to other parties as requested;
 - (iii) Establish Standards of medical fitness;
 - (iv) Inspection and control procedures are more stringent;
 - (v) Penalties to be prescribed where companies or shipmasters do not comply with Convention provisions;
 - (vi) Compare STCW 78 standards with STCW 95 to determine extent of refresher and upgrading training;
 - (vii) Ensure companies comply with regulation I/14 and Codes.
 - (b) Administrations and their MET Institutions
 - (i) Approval of education and training programme;
 - (ii) Approval of simulators performance standards.
 - (c) Monitoring of Quality Standards
 - (i) Ensure internal reviews of processes and procedures;
 - (ii) Arrange for external independent evaluation reports;
 - (iii) Forward reports on MET standards to Imo (MSC) – I/8;
 - (iv) Ensure that lecturers, instructors and assessors are appropriately qualified and have relevant experience;
 - (v) Monitor training and assessment programmes and any simulators in use for compliance with Convention standards.
 - (d) Communication of information to IMO
 - (i) Impact of Article IV;
 - (ii) Impact of Regulation I/7.

2. Maritime Institutions
 - (a) Emphasis on competency based training and assessment;
 - (b) Courses need fully documented for approval;
 - (c) Quality Standards provisions;
 - (i) A quality assurance system must be in place;
 - (ii) Establish internal self-study reviews;
 - (iii) External independent evaluation and report;
 - (iv) Processes and procedures monitored by parties;
 - (v) Reports on MET institutions go to IMO via Party.
 - (d) Instructors and assessors to be appropriately qualified and experienced.
Also applies to simulator instructors and assessors;
 - (e) Radar and ARPA training by simulator now mandatory;
 - (f) Use of other simulators is encouraged, but simulator performance standards must be complied with in certain circumstances;
 - (g) New courses may be required by Administration for revalidation, refresher and upgrading training;
 - (h) Alternative certification (funeral approach) may require re-development of curricula in some countries;
 - (i) Mandatory minimum safety training for all seafarers now specified.

3. Ship Operator
 - (a) Responsibility of companies (1/14),
 - (b) Certificates and safe manning;
 - (c) Accessibility of crew documents;
 - (d) Familiarization with ship duties;
 - (e) Written policy instructions to master;
 - (f) Personnel on tankers, Ro-Ro;
 - (g) Qualified trainers and assessors;
 - (h) Quality assurance (onboard training);
 - (i) Refresher and up-dating;
 - (j) Prevention of fatigue.

Source: STCW 95 Part II.

APPENDIX III

Possible Administrative Functions derived from International Conventions

Serial	Function	Reaction
(a)	(b)	(c)
1	Prohibition	<ul style="list-style-type: none"> • Prohibition of deliberate discharges of oil and other harmful substances through regulation of ship operations. • Adoption of standards for the design, construction and equipment of ship.
2	Intervention	<ul style="list-style-type: none"> • Coastal states may take or enforce measures beyond it territorial seas to mitigate the effect of pollution on coastline and related interest consistent with international law: LOSC art 221 and the Intervention Convention. • Piracy
3	Inspection and Enforcement	<ul style="list-style-type: none"> • 1988 Protocol on Harmonised ship survey and certification for Load Lines and MARPOL • Under art 216 – 220 and 226, LOSC, flag, port and coastal states have specified rights of investigation in enforcing vessel-source pollution control measures. • Joint inspection and monitoring schemes through port state control and Regional MOUs are proving effective.
4	Response and Co-operation	Provisions for response and notification of states and relevant organisations likely to be affected by an incident of maritime casualty including promotion of contingency planning; LOSC art 198, 199, OPRC 90, MARPOL 73/78.

		Regional Protocols on contingency planning and response are being adopted with assistance of UNEP world-wide.
5	Detention and Sanctions	<ul style="list-style-type: none"> • Provisions for the detention of ships for failure to comply with conventional requirements available under MARPOL, SOLAS and LOSC in respect of Individual states and PSC MOU. • Limitation on Monetary penalties as sanctions for violation of national laws under LOSC. • MARPOL stipulates uniformity in severity of sanctions.
6	Dispute settlement	Aspects of conventions provide a variety of options ranging from informal consultations or mediations to compulsory binding judicial proceedings. LOSC art 295, MARPOL, SOLAS, OPRC, etc.
7	Liability and Compensation	Responsibility and liability are covered under the LOSC art 235 as the blue print for CLC, the Fund conventions etc. HNS convention is under development. Most UNEP Regional sea agreements also cover this subject matter.

Source: Compiled from data on Conventions, 2000

APPENDIX IV

An Outline of the Ghana Shipping Bill 1999

An outline of the Ghana Shipping 1999 that is under review before submission to the Parliament is as follows:

General Application

Part I – Restriction on Trading: Introduces cabotage and specifies that only vessels registered in Ghana can trade in Ghanaian waters.

Part II - Registration and Licensing of Ships and Proprietary Interests in Ships
The subjects of registration and licensing of vessels and related proprietary interest on ships are dealt with in this part. Qualification of persons wishing to register ships in Ghana including registration of ships chartered on bare boat basis in line with the open registry programmed objectives of vision 2020 is also covered.

Part III – National Character and Flag: National Character and flag of a ship a dealt with as follows:

- a) the Ghana Flag shall be the proper national colours for all Ghanaian ships;
- b) Custom officials are enjoined not to grant clearance for voyages until the master of the ship has declared the name of the nation, which the ship belongs in situations where any doubts exist.

Part IV – Manning and Certification: Manning of Ghanaian ships, training and certification of Ghanaian seafarers are covered under this part. The Minister is also empowered to make regulations include punishment for offenders to give effect to the STCW 95.

Part V – Engagement and Welfare of Seamen: Covers all matters pertaining to engagement and welfare if seafarers onboard Ghanaian flagged ships as well as provisions relating to crew agreement, conditions for recruitment of Ghanaian

seafarers for service on board foreign ships. Relevant ILO provisions on seamen is covered in this part.

Part VI – Log Books: Under this part, the Minister is empowered to prescribe the form and particulars of log books to be maintained.

Part VII – Prevention of Collision at Sea and Safety of Navigation: Salient issues under this part include:

- (a) obligations of ships to render assistance in cases of collision at sea and to ships in distress;
- (b) issuance of Notices to Mariners, navigational warnings and the establishment and maintenance of aids to navigation; and
- (c) penalties for non-compliance and for offences relating to aids of navigation.

Part VIII – Safety of Life at Sea: All relevant subject matters of Safety of Life at Sea under SOLAS 74 and the 78 protocol are covered in this part. The Minister is empowered to make regulations in order to give full effect to the Convention. Other enforcement issues covered are: appointment of surveyors; their powers of inspection; detention of ships; surveying of passenger and cargo ships; the issuance of certificates and validity; and issuing of certificates to non-convention ships.

Part IX – Load Lines: This part provides for marking of Load Lines, Deck Lines and the issuing of International load Line Certificate. The Minister is enjoined to make regulations relating to deck cargoes. Penalties are provided for offences relating to Load Lines.

Part X – Carriage of Bulk Cargoes and Dangerous Goods: The Minister is empowered to make regulations incorporating the conventional Codes on the carriage of dangerous goods like the International Maritime Dangerous Goods Code (IMDG Code), Codes of safe Practice for Solid Bulk Cargoes (BC Code) and International Grains Code.

Part XI – Seaworthiness of Ships: Deal with all matters pertaining to seaworthiness of a ship including powers to detain the ship that is unseaworthy and punishment for any violations of the provisions of this part.

Part XII – Wrecks: It covers the powers of the Receiver of Wrecks and the circumstances under which wrecks could be removed or sold.

Part XIII – Salvage: This part incorporates the Salvage Convention of 1989.

Part XIV – Passenger Ships: Deals with all matters pertaining to passenger ships including penalties for offences.

Part XV – Shipowners, Insurers, Port and dockwater Authorities: This part covers limitation of liabilities in respect of claims and also incorporates the provisions of the LLMC, 1976 Convention.

Part XVI – Jurisdiction and Powers of a Court of Survey.

Part XVII – Casualty Investigations: The appointment of a Wreck Commissioner to hold formal investigations into marine casualty is dealt with in this part. Provisions are also made for the right of appeal in respect of any person who is the subject of a formal investigation.

Part XIX – Miscellaneous Provisions: Contains provision authorising officers to carry out inspection of ships and also empowering the Minister to make regulations where necessary.

Part XX – Transitional Provisions: Provides for a period of transition of instruments.

Source: Ghana Shipping Bill 1999.

APPENDIX V

An Outline of the Ghana Maritime Authority Bill

The highlight of the Ghana Maritime Authority bill that is still being fine-tuned before approval by Parliament is as follows:

Part I: Establishment, Functions and Divisions of the Authority

Section 1 - Establishment

The Ghana maritime Authority shall be established as a corporate body with perpetual succession and may acquire and hold movable and immovable property for the discharge of its duties.

Section 2 – Functions of the Authority

The Authority shall be empowered under the Law to perform the following functions:

- (a) to implement the Ghana shipping act and any legislation relating to the subject of maritime;
- (b) to ensure the safety of navigation;
- (c) to fulfil flag state and port state responsibilities in an effective and efficient manner, having due regard to international maritime conventions, instruments and codes;
- (d) to deal with matters pertaining to maritime search and rescue, and co-ordinate the activities of the Ghana Armed Forces, the Ports and Harbours Authority and any other bodies during search and rescue operations;
- (e) to regulate the activities of shipping in the inland waterways including the safety of navigation therein;
- (f) to cause to be investigated maritime casualties and take such actions as is appropriate;
- (g) to oversee matters pertaining to the training, recruitment and welfare of Ghanaian seafarers,
- (h) to plan, monitor and evaluate training programmes to ensure conformity with standards laid down by international maritime conventions;

- (i) to ensure in collaboration with other public agencies and institutions as the Board of the Authority may determine, the prevention of marine source pollution, protection of the marine environment and response to marine environment incidents,
- (j) to pursue the ratification or accession and implementation of international maritime conventions in conjunction with the appropriate Ministry;
- (k) to assess the manpower needs of the maritime sector for national planning purposes;
- (l) to liaise effectively with Government agencies and institutions dealing with maritime transport matters for the purpose of achieving harmony in the maritime industry;
- (m) to initiate research into maritime transport development for effective planning and co-ordination;
- (n) to ensure an efficient cost-effective and orderly provision of services in the shipping industry in line with Government policies;
- (o) to initiate action for the promotion, establishment and development of private shipping lines;
- (p) to propose policies for the development and maintenance of maritime infrastructure such as ports and harbours in the country.

Section 3 – Ministerial Responsibility

Ministerial responsibility for the Authority shall be vested in the Minister of Roads and Transport who may give general directives in writing on matters of policy.

Section 4 – The Governing Body of the Authority and Functions

The Authority shall be governed by a Board of Directors consisting of nine (9) shall be nine (9) members, six (6) of whom shall be appointed by the President in consultation with the council of State: The Composition of the Board shall comprise the following:

- (a) a Chairperson;
- (b) the Director general of the Authority appointed under section 10 of the Bill (Act);

- (c) a representative of the Ministry of Roads and Transport;
- (d) a representative of the Ministry of Finance;
- (e) a representative of the Environmental Protection Agency;
- (f) a person knowledgeable and well versed in maritime industry; and
- (g) three persons from the private sector representing shippers, shipping agents and the Ghana Chamber of Commerce respectively. Each representative is to be nominated by the respective organizations:

At least two of the members shall be women. The Board shall be responsible for the following:

- (a) securing the implementation of the functions conferred on the Authority under this Bill (Act);
- (b) the initiation of policies for the proper management of the Authority; and
- (c) the sound and proper financial management of the Authority.

Section 5 – Tenure of Office of the Members

With the exception of the Director-General, members of the Board shall hold office for a term of four (4) years but shall be eligible for re-appointment.

Section 6-7 - Committees and Meetings of the Board

The board of Governors shall appoint Committees comprising members of the Board and non-members or both and may assign to any such Committees, functions of the Authority as the Board may determine. However a Committee that is composed solely of non-Board members may only advise the Board.

The Board shall meet for the discharge of its business at such times and at such places as the Chairperson may determine, but shall meet at least once every two months.

Section 8 – Disclosure of Interest

A member of the Board who has interest in the contract or other transactions to be entered into with the Authority shall disclose interest to the Board and be disqualified

from participating in any deliberations of the Board in respect of the contract of the transaction.

Part II – Administration and Staff

Section 9 – Divisions of the Authority

The Authority shall initially have four (4) Divisions as follows:

- (a) Technical Division;
- (b) Maritime Services Division;
- (c) Planning, Monitoring and Evaluation Division; and
- (d) Administration and Finance Division.

Each Division shall be headed by a Director. The Board shall determine the function and staff strength of each Division. Each director shall however, be responsible for the day-to-day management of his Division and shall answer to the Director-General in the performance of his functions and duties.

Section 10 – Director-General of the Authority

The Director -General of the Authority shall be appointed by the President on the advice of the Board given in consultation with the Public Services Commission. The Director-General will be responsible for the efficient organization and management of the Authority.

Section 11 to 13 – Appointment of Registrar of Ships, Registrar of Seamen, Surveyor of Ships and Receiver of Wrecks

The President shall appoint a Registrar of Ships on the advice of the Board. The registrar shall be responsible for the registration of ships, fishing vessels and such other navigation vessels as are prescribed by Law and shall perform the functions conferred on him under the Ghana Shipping Act and any other enactment.

The Authority is empowered to appoint Registrar of Seamen, Surveyors of Ships and Receiver of Wrecks to perform such duties and functions assigned to them under the Ghana Shipping Act.

The President shall also appoint a Legal Officer as Secretary to the Board and shall perform such other functions as the Board may, on the advice of the Director-General assign to him.

Other public Officers and experts may be seconded or transferred to the Authority or may otherwise be requested to give assistance to the Authority.

Part III Financial and Miscellaneous Provisions

Section 15 – Funds of the Authority

Funds of the Authority shall include appropriations made by Parliament, monies accruing to the Authority from fees chargeable under this Act and other revenues including revenue from investment, loans granted to the Authority and gifts.

Section 16 – Loans, Bank Account and Investment

The Authority may make investment, as the Board considers necessary.

Section 17 – Execution of Contracts

The Authority shall undertake contracts under its seal, which shall be authenticated by two signatures being that of the Director-General or another Member of the Board authorized by the Board and the Secretary, or another officer of the Authority authorized by the Board. The Authority may under its common seal empower any person to act as its Attorney to execute deeds on its behalf in any place outside Ghana and every deed signed by the Attorney on behalf of the Authority.

Section 18 to 21 Annual Budget, Accounts, Audits Procedures and Annual Reporting Procedures

Section 22 – Regulations

The Minister is empowered to make Regulations by Legislative Instrument for the purpose of giving effect to the provisions of this Act and for regulating any matter that falls within the scope of the functions of the Authority.

APPENDIX VI

A condensed version of the Operational Plan, Copenhagen Agreement 1971, which are most often used in the direct practical co-operation on combating marine pollution

General Principles for Co-operation within the Copenhagen Agreement

The object of this Agreement is to co-ordinate actions for protection of the marine environment, around the countries of the contracting parties, against oil pollution.

The main objectives of the co-operation are:

- (a) Collaboration regarding supervision of compliance with conventions and national regulations.
- (b) Consultations and collaboration regarding the build-up of response organisation and acquisition of response equipment.
- (c) Exchange of information on means and methods for response actions.
- (d) Reporting oil spills.
- (e) Assistance at investigations of violations.
- (f) Operational co-operation in response actions.

Operational Co-operation

Command System

Lead Country

The country, which at the beginning of the joint operation has the joint response force within its sea area of responsibility, shall be the Lead country.

If the oil during the course of operation drifts over to the area of another country, this country should take command after agreement among the countries concerned.

If the joint operation will be performed within two or more adjacent areas of responsibility, the country that has the main part of the operation within its area should be Lead Country for the whole operation.

The Lead Country Shall:

- (a) Be responsible for the overall command
- (b) Organize the co-operation
- (c) Be responsible for the necessary information
- (d) Give the forces of the contracting parties assistance
- (e) Maintain contact with the contracting parties operational commands
- (f) Be responsible for the record keeping of the operation
- (g) Be responsible for information to international bodies.

Strike Team

The operation shall, if possible, be performed by means of Strike Teams. A Strike Team is a complete system with resources to respond to an assigned oil spill.

Strike Teams should, if possible, be composed of one or more complete Teams from each country.

Supreme On Scene Commander, SOSC

The *overall Tactical command* at sea is held by a SOSC who is appointed by the Lead country.

SOSC shall organise a member of Strike Teams under the command of a national commander, NOSC.

National On-Scene Commander, NOSC

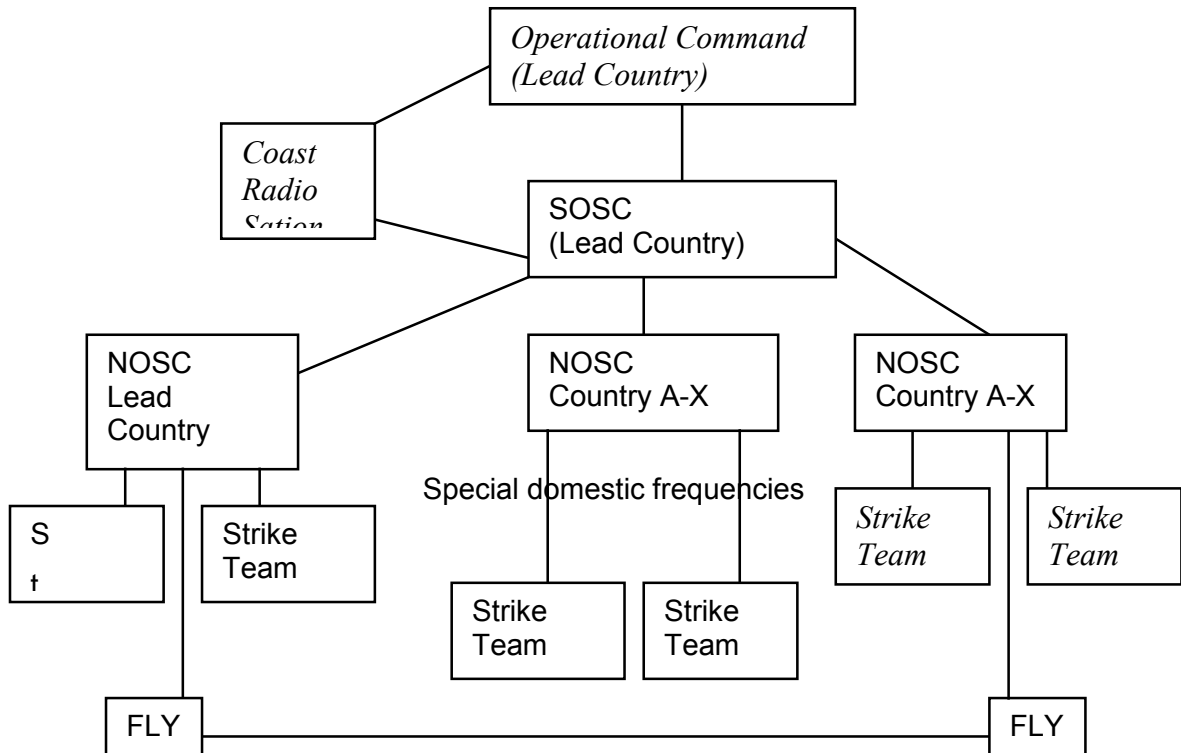
The *national tactical command* is held by one or more NOSC, under the command of the SOSC.

Liaison Officer

In a joint operation, a Liaison Officer is appointed to a degree, which is necessary.

The duties of the Liaison Officer are:

- (a) Adviser to the Command of the co-operation body
- (b) Be contact person to the operational Command of the country



Maintenance Service

General

The Lead Country organises the maintenance services of the operation. For these purposes, a maintenance station is established with a responsible Base Commander

Duties of the Base Commander

The Base Commander is responsible for necessary, maintenance service.

The base Commander shall Plan and organise

- (a) Moorage's
- (b) Base area for putting up equipment, maintenance service, parking etc.
- (c) Liaison with Operation Command, SOSC and NOSC
- (d) Equipment stock-keeping
- (e) Transport activities on land and at sea
- (f) Accommodation and catering
- (g) Repairs resources
- (h) Decontamination station for personnel
- (i) Medical care
- (j) Reception of recovered oil

Information

SOSC and NOSC shall exchange necessary information during the course of accident.

Assignment of duties

The SOSC assigns a defined own duty to each NOSC.

The NOSC assigns the duty in an appropriate manner within his Strike Team(s)

Temporary Storage of Oil

The Lead Country is responsible for acquirement of installations for reception of recovered oil

Reporting, record-keeping

The SOSC is responsible for

- (a) A reporting system
- (b) Record-keeping of the operational activities record-keeping of expenses.

Source: The Copenhagen Agreement