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WORLD MARITIME UNIVERSITY

Malmö, Sweden

**THE REGULATION OF INTERNATIONAL
SHIPPING**

**Systemic Issues Facing States in the
Administration of Maritime Affairs and the Eradication of
Substandard Shipping**

By

GEORGE S. REYNOLDS

Jamaica

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 ADMINISTRATION AND ENVIRONMENTAL PROTECTION

2000

I certify that all the material in this dissertation that is not my own 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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Dedicated to:
My dear wife, Michelle

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ABSTRACT

Title of Dissertation: **The Regulation of International Shipping: Systemic Issues Facing States in the Administration of Maritime Affairs and the Eradication of Substandard Shipping.**

Degree: **MSc**

This dissertation is a study of the regulation of international shipping examining the historic, current and evolving issues and dilemmas related to such regulation.

A brief review of the evolution of international shipping and the regulatory regime is undertaken, namely as regards the increasing dependency of States on international trade and the resultant dilemma arising out of their regulatory obligations.

The process of administration of national maritime affairs is examined in relation to the duties, responsibilities and obligations of States, the formulation of maritime strategies, and the inherent dilemmas often facing maritime administrators.

The issue of the cost implications of shipping regulation, in terms of compliance and non-compliance, is analyzed from the perspectives of the various industry interests.

The international quality assurance mechanisms and control regimes, to which ships are subjected, are examined from the various industry viewpoints. Inherent problems and issues hindering the eradication of substandard shipping are discussed and courses of action to resolve them are proffered.

International co-operative efforts in the regulation of shipping and issues regarding the international standard setting process are examined for their utility and objectivity.

A number of interviews were conducted with key personnel in various sectors of the maritime industry to obtain their perspectives on these issues, so that a balanced evaluation could be done, and feasible solutions to the issues and dilemmas identified.

The concluding chapter evaluates the findings of the research on the regulation of international shipping and outlines a number of recommendations of general application.

KEYWORDS: Regulation, Compliance, Issues, Quality, Administration, Obligations.

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EXPLANATION OF TERMS

Issue	A point in question, or any matter arising as a consequence thereof; that which is in dispute or at variance between contending parties, the decision of which is of special, public or international importance.
Dilemma	A situation in which a choice has to be made between two or more equally undesirable alternatives; a state of indecision between alternatives; a difficult or problematic situation.
Coastal State	A State that possesses a coastline, maritime areas of jurisdiction and maritime interests therein.
Port State	A State in whose ports or at whose offshore terminals foreign ships routinely call.
Flag State	A State that maintains a register of ships and has ships registered accordingly; the State in which a ship is registered and whose flag the said ship is authorized to fly; the State of nationality of the ship.
Control	Mechanisms and activities intended to exert control over, to regulate and to check and verify the administration and conditions of ships engaged in international trade.
Coastal State Control	The series of legislative measures and preventive, preparedness and response mechanisms which coastal States may implement in order to protect their maritime interests against the hazards of substandard shipping and maritime casualties.
Port State Control	A system of harmonized inspection and administrative procedures which port State authorities may employ in order to verify the validity of foreign ships' certificates and documentation and that the conditions of such ships are in conformity with the certificates and international rules and standards.
Flag State Control	The system employed by flag Administrations to ensure that ships registered under their flag are continuously maintained in accordance with statutory requirements and international rules and standards.

LIST OF ABBREVIATIONS

BIMCO	Baltic and International Maritime Council
CARICOM	Caribbean Community
CDI	Chemical Distribution Institute
CLC 92	1992 Protocol to the International Convention on Civil Liability for Oil Pollution Damage, 1969
COLREG 72	Convention on the International Regulations for Preventing Collisions at Sea, 1972
EEZ	Exclusive Economic Zone
EQUASIS	European Quality Shipping Information System
EU	European Union
FSI	Flag State Implementation
IACS	International Association of Classification Societies
ICS	International Chamber of Shipping
ILO	International Labour Organization
IMB	International Maritime Bureau
IMCO	Inter-Governmental Maritime Consultative Organization
IMO	International Maritime Organization
ISF	International Shipping Federation
ISM Code	International Management Code for the Safe Operation of Ships and for Pollution Prevention
ITF	International Transport Workers Federation
JMI	Jamaica Maritime Institute
LLMC 76	Convention on Limitation of Liability for Maritime Claims, 1976
MARPOL 73/78	International Convention for the Prevention of Pollution from Ships 1973, as modified by the Protocol of 1978 relating thereto
MOU	Memorandum of Understanding
OCIMF	Oil Companies International Maritime Forum
OECD	Organization for Economic Cooperation and Development
PSC	Port State Control

SIRE	Ship Inspection Report Exchange database
SIRENAC	Systeme d'Information RElatif aux Navires Controles; Paris MOU database on PSC inspections
SOLAS 74	International Convention for the Safety of Life at Sea, 1974
STCW 78	International Convention on the Standards of Training, Certification and Watchkeeping for Seafarers, 1978
STCW 95	International Convention on the Standards of Training, Certification and Watchkeeping for Seafarers, 1978, as amended in 1995
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea, 1982
UNCTAD	United Nations Conference on Trade and Development

CHAPTER 1

INTRODUCTION

The regulation of international shipping has been characterized by controversial issues for as long as ships have been operating. The primary basis for such issues has been the perceived effect of regulation on the economic viability of international shipping. The various entities within this industry each have their own interests to protect. As such, their attitudes and conduct are governed by how they perceive regulation in relation to these interests. Notwithstanding, regulation is the key means of ensuring global quality in international shipping, namely maritime safety, marine environmental protection and the eradication of substandard shipping. In order to understand the fundamental issues concerning the regulation of international shipping, an examination of these various perspectives is therefore essential.

International shipping is a profit-oriented business that has become increasingly competitive over the last two decades. Similarly, the proliferation of international ship registries has meant increased competition to attract ship-owners to various flag States. Whilst competition and profit orientation are good on the one hand, however, there have been drawbacks with regards to the management of ships and the administration of flag States' responsibilities. All too often ships have been operated for maximum profit at the expense of safety and marine pollution prevention. Similarly, flag States have, in some cases, neglected to give full and complete effect to their international obligations with respect to the application and enforcement of prescribed rules and standards for ships flying their flags. These drawbacks have led to continuous efforts by concerned States, within international forums such as the International Maritime Organization (IMO) and the International Labour Organization (ILO), to improve the standards of ships and Flag State Control. Accordingly, the IMO and the ILO, being common ground where representatives of States can meet and discuss issues, have facilitated the entry into force of various conventions. Such conventions stipulate the internationally accepted rules and standards that are to be applied to ships so as to ensure that ships are not operated at the expense of safety and the marine environment.

The regulation of shipping implies additional costs to the ship owners: to what extent are they willing to compromise profitability as against observing safety and pollution obligations? Flag State Implementation and Control, when properly administered, raises the question of cost to ship owners: to what extent are flag States willing to implement and enforce rules and standards and risk losing their ship-owning clientele to other, less compliant flag States? How can the international maritime community hold them to their obligations for quality shipping? How can key industry interests be made to uphold their responsibility for quality shipping?

Is the current organization and operating principles of the international regulatory body, the IMO, conducive to the effective participation of all Member States? Do all Member States, and in particular States Parties to the various conventions, have the resources and capacity to give full and complete effect to the conventions? Is there enough emphasis placed on objective management strategies within the IMO? What are the implications of these issues and how can they be resolved or mitigated? How can Member States improve their ability to fully implement the conventions?

The topic proposes to examine these questions from the perspectives of the various industry interests, so that the fundamental issues and dilemmas can be ascertained as to their causes, nature and effects, and to draw conclusions and make recommendations to resolve them.

CHAPTER 2

THE EVOLUTION OF MARITIME TRANSPORT

2.1 Early History

From the beginning of time, the ease and speed with which people have been able to move around have been powerful influences on their conditions of living. Transportation, being the movement of persons and goods from place to place, and the various means by which such movement is accomplished, has thus been a key index in civilization, facilitating the exchange of goods and services throughout history. Among the chief landmarks in the history of transportation have been the evolving modes of water transport. This is hardly surprising given that approximately 75% of the earth's surface is covered by water and the fact that the majority of the world's population have traditionally lived within coastal regions.

Transportation by water was undoubtedly among man's earliest and best means of extending his range of activities, broadening his horizons, improving his living standards and finding ways and means of moving himself and his materials. Movement by water thus proved to be a viable transportation mode. The evolution of water transportation progressively expanded the extent of voyages. Transportation on inland waters and rivers progressively gave way to oceanic voyages and the discovery of new lands (Davies, 1984, pp.663-664).

Ocean trade was thus almost inevitable. From man's restless spirit, his search for power and wealth and a need to exchange goods served as the driving forces in his conquest of the oceans (Marshall, 1989, p.12). The greater accuracy and safety of navigation offered by constant innovations in maritime transportation continuously underpinned the development of new sea routes. A recurrent theme thus emerged. Those who possessed prowess in navigation and shipbuilding skills held the key to being able to undertake long ocean voyages and discover new lands and opportunities (Kemp, 1982, p.6).

2.2 Maritime Expansion and Influence

In time, States realized that maritime expansion and improved maritime connection between each other were the keys to profit and power. Mercantile and political enterprises thus

traditionally encouraged maritime expansion and influence over neighbouring seas, and subsequently this extended to the major oceans (Jourdin, 1993, p.101). As oceanic trade prospects increased, larger and faster vessels were developed, with major advances coming in the wake of the industrial revolution. There was also the concurrent development of new types of ships to transport a variety of novel goods, as well as improvements in facilities at ports and harbours to accommodate the greatly increasing size and variety of ships that were being built (Davies, 1984, p.666).

2.3 Maritime Power and Economic Development

The commercial use of the oceans to expand trade has been synonymous with national development and has come to represent the foremost means of international trade today. Despite maritime transportation being fraught with numerous dangers, it has traditionally been a more viable and strategic alternative to that of land. This feature has thus underscored the influence of maritime commerce upon the wealth and strength of States throughout history. Control of the seas and the trading routes was thus necessary in order to secure a share of the benefits of international maritime trade. States therefore relentlessly pursued such control, whether through the exclusion of other States, by peaceful legislative methods of monopoly or prohibitive regulations, or by direct violence (Mahan, 1957, pp.22-23).

The importance of international shipping to the economic development of States has thus been a major factor in their national priority-setting and decision-making processes. Maritime power then, has been the key to economic development, with the harnessing of this relationship giving rise to the traditional maritime States (Gold, 1981, pp.9-10). As such, efforts to regulate international shipping have had to compete against these economic and development factors. This has come to represent one of the major dilemmas facing Maritime Administrations today.

2.4 International Shipping

As the world has witnessed a transformation from isolated communities to today's integrated global community and as many developing States have started to take their place alongside the developed States in this community, the strategic importance of maritime transport cannot be disregarded (Stopford, 1988, pp.1-2). With an estimated 90 % of the world trade of merchandise

in volume being moved by sea, accounting for some 40 % in value, maritime transport has obviously become more critical to national economies today than when those economies were less exposed internationally (Ma, 1999, p.19). Adam Smith, in the *Wealth of Nations*, considered international shipping to be the catalyst of economic development. It was cheap transport that could open wider markets and facilitate trade efficiency and economic development (Stopford, 1988, p.3).

2.5 Maritime Transportation in the 20th Century

The 20th century has been characterized by a pattern of continuous development and economy in shipping, namely through technological progress in ship construction and port handling facilities. Commercial and operating practices in international shipping have also undergone major adjustments, notably the emergence of open ship registries and the shift away from traditional registries to these more commercially attractive ones. The business of ship registries has been very controversial and open registries, often referred to as ‘flags of convenience’, are now an integral feature of the shipping industry. In particular, more ships have been registered under open registries, with non-traditional maritime States such as Panama, Liberia and the Bahamas accounting for large percentages of the world’s total tonnage. Beneficial ownership, however, continues to reside in the hands of nationals and business entities of traditional maritime States. *Appendix 1* illustrates the current status of international shipping in relation to tonnage distribution and beneficial ownership.

With an ever-increasing reliance on international trade, the advent of globalized markets and major increases in production quantity and variety, international shipping has witnessed major transformations. These range from design and construction applications to the management and operation of ships and the economics of shipping. Technology, particularly management information systems, has had an overlapping influence in all these areas, with the primary result that ships have become even more complex and specialized. New designs have increased size and space utilization for cargo carrying. Time factors have become increasingly cost-critical and have underpinned the need for increased efficiency in port and terminal operations. Crews have had to be more highly trained in technical ship related areas as ship equipment and systems

become increasingly complex. Support services to ships have had to be commensurately upgraded. And, the interface between maritime transport and other modes of transport has grown considerably; multi-modal transport arrangements now form an integral part of the movement of goods across continents and oceans.

2.6 Manning

Notwithstanding all of these advances, however, the seafaring profession has not necessarily enjoyed similar growth. The increased attractiveness of shore-based careers and a general lack of promotion and viability have resulted in a reduction in the number of persons becoming officers or remaining in sea-going jobs for long periods. Coupled with an estimated 30% failure rate during training, the overall situation has been causing much concern through the industry. According to the joint Baltic and International Maritime Council/International Shipping Federation (BIMCO/ISF) 2000 Manpower Update, the world fleet is currently 16,000 officers short of its optimum requirement, albeit that there is a surplus of some 224,000 ratings. This implies a 4% shortfall in the required number of officers. The number of ships in the world fleet is expected to grow by 1% per annum, whilst recruitment and outflow are expected to remain at existing levels. As such, the report predicts that by 2010 there will be a shortage of some 46,000 officers, representing 12% of the optimum requirement (Institute for Employment Research, 2000, pp.1-8). Such a development is clearly adverse for the industry and as such, speedy rationalization of the problem and the implementation of short and long-term solutions must be undertaken as a matter of priority.

2.7 Projections for the 21st Century

International shipping today stands at a pivotal point. The growing trade inter-dependence between States necessitates greater efficiency and economy. With technological applications driving world trade and production, and influencing the design, construction and operation of ships, still further developments can be expected. The size and complexity of ships will continue to grow. The support infrastructure for multi-modal transportation will expand. The learning curve for seafarers and support staff will be raised, and the economics of shipping will become increasingly critical to survivability.

2.8 The Regulatory Dilemma

From the earliest chapters of the history of shipping, authoritative control, whether local, national, regional or international has been integrally linked to shipping. Today, each State views shipping from its own national perspective in order to identify and capitalize on any advantages open to it (Farthing and Brownrigg, 1997, pp.81-82). Broadly speaking, the regulation of shipping falls under the categories of commercial and economic regulation, and technical and liability regulation.

Generally, commercial and economic regulations have the effect of eroding to some extent, free competition in terms of price, cargo availability and the ability to trade and the freedom of choice, thus causing distortions in the marketplace. Similarly, technical and liability regulations, laying down standards for compliance, penalties for non-compliance and associated liabilities, have an impact on the commercial and economic aspects of shipping (Farthing, 1987, pp.22-31). Compliance thus has a price, as does non-compliance.

From the ship-owner's perspective, the cost of compliance is often weighed against profitability and the cost of non-compliance. Most adopt a position of general compliance. However, an indiscriminate few choose to operate either on the border or outside the regulatory threshold, invariably evidenced by substandard ships. These few show little or no regard for regulatory requirements and pose major threats to life, property and the environment.

From the national perspective, the regulatory regime adopted by a State determines the attractiveness of its flag for ship-owners, the effectiveness of its control mechanisms, the ease of maritime trade at its ports and overall, its effectiveness as a maritime State. All too often, States have placed primacy on ensuring the ease of trade and the attractiveness of their flag, as against the effectiveness of control mechanisms. It has often been difficult to balance these factors, especially in developing States where ease of trade attracts more ships and thus greater trade, on which they are so dependent. The resultant dilemma is a basic one in the long line of dilemmas which maritime administrators have to deal with today.

CHAPTER 3

THE REGULATORY REGIME OF MARITIME TRANSPORT

3.1 Maritime Law

The term maritime law has often been defined as “the body of rules, concepts and legal practices governing certain centrally important concerns of the business of carrying goods and passengers by water.” Generally, it is used to denote any legal matters pertaining to the sea: the laws of the sea (Young, 1982, p.11). However, a distinction has been mooted regarding the term law of the sea, which is considered to be the international public law dealing with the legal rights of States regarding the multifarious use of the oceans and its resources. As such, an emerging and more appropriate perception of maritime law is that it refers to “the entire body of laws, rules, legal concepts and processes that relate to the use of marine resources, ocean commerce and navigation” (Mukherjee, 2000, pp.1-3)

3.2 Strategic Evolution

Maritime law has had a vastly different evolution from that of the laws of the land. Traditionally, there have always been well-defined boundaries on land, whether national or otherwise, within which the laws of the land have fallen. The laws of the sea, on the other hand, govern an area that initially had no defined boundaries. An area that was shared by many States often unknown to each other, but which became a meeting place for individuals from these various States. The desire for improved international relations grew and underscored the need for the embodiment of miscellaneous maritime customs into a commonly accepted single doctrine or set of standards; a doctrine that could be used as the basis for the rational regulation of maritime disputes (Livanos and Halpin, 1978, pp.11-12). Early maritime law, as with other branches of law, developed from a series of standards and eventually emerged as a codification. Today’s concept of maritime law emerged in the Eastern Mediterranean from standards established mainly by the Phoenicians, the Rhodians, the Greeks and the Romans to regulate such matters as (Farthing and Brownrigg, 1997, pp.1-3):

- The treatment of shipwrecked sailors;
- Court jurisdictional powers relating to maritime matters;
- Rules regarding blockades and piracy;
- The settlement of disputes relating to maritime contracts;
- The role of prize courts;
- Insurance;
- Salvage;
- The carriage of goods by sea;
- The concept of unmolested navigation; and
- The use of warships to protect maritime commerce.

However, whilst there was considerable influence and acceptance of these legal elements among most littoral States at the time, they were widely viewed by individuals within such States as “foreign elements” and often times not readily understood nor accepted. As a result, States invariably created “a competitive law substitute” that was more homogenous with their national law; national maritime law thus emerged (Livanos and Halpin, 1978, p.12). Today, such governmental involvement in various aspects of shipping has become an inescapable tradition.

The Rhodian Code in particular, governing maritime commerce and navigation, was the first comprehensive maritime code as such, providing for exclusive jurisdiction over national and adjacent seas, perpetuating freedom for national commerce and trade and a restriction on that of other States. This has become a common concept, in fact a recurring theme and dilemma throughout the history of maritime affairs; freedom of the seas construed as national freedom at the expense of other States. The disparate application of this concept subsequently led, in much later years, to the now well known pronouncements (*Mare Liberum*) of the Dutch philosopher, Hugo Grotius (1583-1645), who contended that no State had any legal entitlement to proprietary rights over the seas (Farthing and Brownrigg, 1997, pp.2-7).

Given the incessant naval conflicts and political struggles within Europe during Grotius’ time, the principle of protection also emerged; the right to protect against attack, invasion, interference and injury and to protect national health, industries and resources. In *De Jure Belli Ac Pacis*, Grotius subsequently gave recognition to the occupation of the seas under given circumstances for the protection of coastal States and advocated the compromise concept of transit and

innocent passage through such “territorial seas” (Anand, 1983, pp.131-137). This further influenced the need to establish fishing boundaries, or as Smith (1980, p.20) suggests, “to maintain a part of the liberty or freedom of the seas that had been historically guaranteed, and subsequently to maintain national wealth and power.”

Similarly, the impact of colonialism on the global spread of early maritime law cannot be ignored (Young, 1982, p.12). According to Anand (1983, p.1), modern law of the sea, like other rules of international law, is largely a product of European or Western Christian civilization, a product of the European mind and European beliefs, and based on European States’ practices. This factor has generally given rise to a fundamental premise and discomfort among maritime States today.

3.3 Safety and Environmental Protection Concerns

History has repeatedly shown that man’s use of the sea has given rise to numerous issues that have had major impacts on international relations. Among the more commonly known issues are those relating to boundary disputes, fisheries conflicts, and freedom of navigation and access to trade. Invariably these have been given greater prominence because they have been treated as critical factors on the foreign policy agendas of the maritime powers. Less publicized, but equally important, have been those issues relating to rules and standards for safety and pollution prevention, which have oftentimes become “highly politicized when linked with other policy areas” (Barston and Birnie, 1980, pp.1-2).

The sea has always held perils for those who sail them. The proficiency of early mariners was gained purely through daring and subsequent experience. They were generally ignorant of critical safety practices and whilst being ill prepared, their ships were similarly ill equipped. Sea voyages were thus extremely hazardous and insecurity was an ever-present reality, particularly during winter. As such, it was commonplace to effect bans on sailing during such periods. However, from these early times, unscrupulous ship-owners routinely ignored these bans and dispatched their ships to sea, thereby exposing them to unnecessary hazards in their anxiety to earn higher profits. Against this background there thus emerged a recurring theme of legislative efforts to curb the abuses of such unscrupulous ship-owners. It is an indisputable fact, however,

that regulatory efforts to control shipping, particularly safety, have been traditionally regarded as a hindrance to free trade and economic viability (Boisson, 1999, pp.45-48).

Increased desire for profitability consequently facilitated the scope for greater compromise of safety standards. This has become a constant dilemma in international shipping and remains a primary consideration in the issue of shipping economics versus regulation (Farthing, 1993, p.25). Regrettably, concerns for safety only began to come to the fore in the wake of maritime disasters, spurring changes in the individual and collective behaviour of those engaged in maritime activities (Boisson, 1999, p.49). Coupled with this, the relatively new issues of marine environmental degradation did not attract much concern, with pollution of the oceans from ships remaining largely unregulated (Farthing, 1993, p.30).

This view of indifference was not confined to the industry players however, as governments were equally short sighted. At the International Maritime Conference in Washington D.C. in 1889, the general view of the 27 participating maritime States was that while the adoption of international maritime safety practices and the establishment of a permanent maritime commission might be desirable, they were not then feasible. This was due to their lack of uniformity on maritime views and their nationalistic concerns about loss of sovereignty over maritime matters (Farthing, 1993, pp.27-28).

3.4 Regulation in the 20th Century

The regulation of international shipping during the 20th century has followed a somewhat haphazard path and is attributable to a number of factors. Firstly there was the spill-over of controversies and issues among the traditional maritime powers from the 1800's regarding:

- The use and freedom of the seas;
- Economic viability and the impact of safety regulation;
- Nationalistic concerns regarding sovereignty and general political short-sightedness *vis-a-vis* the development of cohesive international maritime policy.

Secondly, there were the disruptive impacts of World War I and World War II. Third were the cessation of colonialism and the emergence of the newly independent ex-colonies to form the developing third world. And finally, there has been the continuous economic disparity between the developed States and those of the third world. Safety regulation, whilst making considerable

gain throughout the century, has been constrained by these factors. Overall, the approach has been reactive, rather than pro-active, driven mainly by those maritime States that were in one way or another affected by particular events. Generally speaking, several factors incited the maritime powers to subsequently embark on the “internationalization of maritime law” (Boisson, 1999, pp.52-53) namely:

- Problems of the high seas: In order to prevent anarchy and dangerous situations for maritime navigation, it was prudent to set conditions for exercising the freedom of the high seas;
- Foreign ships in port: The regulatory and administrative diversity of national conditions for the control of ships in port resulted in considerable uncertainty, with vessels often having to meet contradictory safety conditions. Additionally, navigational and seaworthiness certificates had no international validity;
- Regulation of competition: In light of fierce international competition and repeated disasters, the maritime powers became increasingly convinced that economic rivalries could endanger safety and have an adverse effect on the reputation of the industry. The maritime powers concluded that international standards for ships would have great utility in enhancing safety, and prevent less scrupulous States from obtaining a competitive edge through deliberately indulgent legislation; most importantly, such standards would not penalize States adopting strict regulation; and
- Repeated accidents and disasters, namely the *Titanic* disaster of 1912.

As a result, the maritime powers established various processes for co-operation in their drive to achieve safe and efficient maritime transport, primarily:

- Uniformity and harmonization of local regulations through bilateral arrangements;
- International conferences to establish universal rules; and
- Inter-governmental organizations to eventually oversee the formalization and adoption of international instruments.

The catastrophic nature of the 1912 *Titanic* disaster had an enormous impact on public opinion and accelerated the international co-operative efforts to implement collective safety policies. The first International Convention on Safety of Life at Sea was adopted in 1914; its purpose was to codify the various technical solutions, designed to reduce maritime accidents, into a uniform set of international rules.

In 1948 an international agreement was drafted on the establishment of the Inter-Governmental Maritime Consultative Organization (IMCO), which is today’s International Maritime

Organization (IMO), so renamed in 1982. The general objective of IMCO was to oversee the technical aspects of international shipping, including safety and pollution prevention, namely by (United Nations, 1995, p.293) providing machinery for co-operation and the exchange of information among governments. Sadly, the Convention did not enter into force until 1958, when it was ratified by 21 States. The 10-year gap was attributable to widespread differences about the role of the organization. Since then, the IMO has facilitated the adoption and entry into force of numerous conventions aimed at regulating the various technical and legal aspects of shipping (see *Appendix 2*).

Concurrently, in the aftermath of World War II, new developments concerning the law of the sea emerged. Many coastal States, concerned about their security, proposed that the territorial sea be extended. The situation was compounded by the coincidental emergence of newly independent ex-colonies that expressed the desire to obtain exclusive access to coastal marine resources. The result was increasing disparity in claims concerning the extent of territorial seas. This anomalous situation gave rise to friction and confrontation between various governments (Britton, 1986, pp.74-80), forcing the world community to introduce some degree of control. Starting in 1958, three international conferences have been held, under the auspices of the United Nations (UN), to address the emerging issues concerning the law of the sea. The current United Nations Convention on the Law of the Sea, 1982 (UNCLOS) consolidates the disparate views on maritime jurisdiction and the use of the seas with sovereign and institutional responsibilities for maritime safety and pollution prevention. Congruence and rationalization of jurisdictional issues and responsibility for technical shipping issues have been effected under the auspices of coastal, port and flag States, and a “competent international organization”, this being the IMO.

3.5 The Broad Concept of Maritime Regulation Today

It is obvious that “freedom of the seas does not imply an absence of regulation.” Rather, it implies that the regulation of international shipping is more of an international application than a national one, albeit that it is through the actions of States that such regulation is effected (Ma, 1999, p.160).

The regulation of international shipping today falls under three broad categories: technical, economic and social. The technical aspects focus primarily on maritime safety and marine pollution prevention. The economic aspects invariably concern regulation “according to specific economic principles, such as fair competition (anti-trust), protection of national fleets,” and the carriage of goods by sea, while the social regulations establish frameworks for the working conditions of seafarers. Maritime regulations can be further subdivided (Ma, 1999, p.161) into:

- Those established by professional bodies within the industry, such as classification societies, to regulate professional conduct and technical standards;
- Those established by government agencies to regulate domestic maritime activities and to give effect to international obligations;
- Those that are purely of a national nature; and
- Those that are international in application and established by governments through appropriate international organizations, such as the IMO or the ILO.

Maritime law determines the scope, content and application of shipping regulations. As such, shipping regulations must be considered against the basis of the following maritime law concepts (Stopford, 1988, pp.152-153):

- Ship registration confers nationality on a ship and brings it within the regime of the national law of the flag State;
- The national law of the flag State governs the ship-owning entity, whether an individual or a body corporate, and the ship. This covers such issues as company law, taxation and applicable maritime laws;
- The laws of the State in whose territorial waters or port a ship is currently located or operating are applicable to the ship throughout the duration of its stay therein; and
- International rules and standards, enshrined in international conventions, are binding on the ships of all States Parties, albeit that ships of non-Party States shall be subject to ‘no more favourable treatment’ than that applicable to ships of States Parties.

CHAPTER 4

THE ADMINISTRATION OF MARITIME AFFAIRS

4.1 National Interests

The term 'national interest' has traditionally been used as a "rationale for State action" and is intricately linked to the various policy objectives of States. Broadly speaking, a national interest is a stake or issue, usually political, legal, economic or military, which has a major impact on the survival and well being of a State and its nationals. National interests then, are the basis on which a State establishes its national objectives and develops its national strategy and policies for the attainment of those objectives. They determine the manner in which a State administers its maritime affairs and its subsequent conduct and functioning in the international arena (Nuechterlein, 1995, pp.106-114).

4.2 Rights and Obligations of States

Customary international law is binding on all States and is one of the primary material sources of public international law. One of the main concepts of customary international law is that all independent States, being members of the international community, enjoy certain rights, powers and privileges, whilst having certain correlative duties and obligations. These rights and correlative duties are the essence of their independence. The recognition of a State by other States, as such, depends on the belief that the government thereof has the ability to effectively handle its given power, fulfil the customary duties of a State and effectively participate in the international community (Boixell, 1998, pp.8-24).

Invariably, States become faced with the dilemma of balancing their conduct between their national interests and their international duties and obligations. The critical importance of both sets of considerations makes the task immeasurably difficult, particularly in the maritime arena where international commonality is most pronounced. Careful strategizing is therefore crucial to the effectiveness of a State's management of its maritime affairs.

Another fundamental concept of law regarding a State's obligations, this time its treaty obligations, must be highlighted here. When a State becomes a Party to an international

convention, it becomes obligated to uphold the provisions of the convention, and can be bound by other States Parties so to do. Similarly, the State can bind other States Parties to uphold the convention provisions provided that it, the State, has given full and complete effect to the convention. Giving such full and complete effect to the convention means implementation; incorporating the provisions into national legislation and giving it the force of law within its jurisdiction. Suffice to say, nevertheless, the other States Parties can still bind the particular State to the provisions of the convention even if it has not implemented the provisions into its national legislation. It is thus prudent that States Parties to international conventions effect implementation as a matter of priority.

4.3 The Doctrine of State Responsibility

The doctrine of State responsibility denotes the condition under which a State is legally obligated to make appropriate amends following conduct that constitutes a breach of any of its international obligations with respect to other States. Such conduct extends to acts or omissions committed by organs of the State acting in an official capacity as in the *Caire* case, or private entities within the State as in the *Trail Smelter* Arbitration. It represents “the consequence of, and the sanction against, non-performance by States of their international obligations (Smith, 1988, pp.5-34). But the doctrine cannot be logically restricted to solely making amends; it must cater to the prevention of breaches. Smith (1988, p.83) refers to the principle of good neighbourliness, espoused in the *UN Declaration on Principles of International Law Concerning Friendly Relations and Co-operation Among States*. The declaration encourages States “to take due account of the interests and well-being of the rest of the world, in social, economic and commercial matters”. For example, international opinion has become increasingly supportive of the obligation of preventing trans-boundary pollution which, speculatively, may become applicable to ship source marine pollution.

The doctrine therefore imposes on States the duty to act responsibly towards their neighbours and the international community, respecting their rights and interests and avoiding conduct that would breach their legal obligations thereto. This is particularly applicable to a State’s

administration of its maritime affairs and the observance of its international maritime obligations.

4.4 National Maritime Strategy

Strategy is the “art of employing all elements of the power of a State, or States, to accomplish the objectives of a State or an alliance in peace or war.” Strategy involves the use and close integration of economic, political, cultural, social, moral, spiritual and psychological power. There is no clear-cut line of demarcation between military, economic and political matters. All are inextricably linked and each component strategy must be based on the realities of the other components (Burke, 1997). The national maritime strategy of a State, therefore, will inevitably incorporate political, economic and naval components into an all-encompassing approach to the attainment and retention of sea-power. Strategy is therefore a consolidation of a host of international and domestic issues and differing points of view, and is best achieved by utilizing a planning framework, such as that depicted in *Appendix 3* (Lloyd, 1995, pp.1-3).

It is clear to see that there is an irrevocable international component to national maritime strategy, with alliances, mutual support of friendly nations and the utilization of international institutions being means towards the realization of national maritime objectives. As such, States that choose a uni-lateral approach face an increasingly difficult future, especially if they do not possess the economic and maritime capacity to support uni-lateralism.

4.5 The Elements of Maritime Administration

Maritime administration is a function of public administration, which, broadly speaking, concerns those policy making, regulatory and service provision functions of government that collectively contribute to ensuring that national interests are effectively protected. The process involves support and advice to the political leadership concerning policy and programme development and delivery of the requisite implementation activities.

Under the general umbrella of public administration, governments are responsible for national transport management, including maritime transport administration. Overall transport management responsibilities are factored around the economic importance of effective multi-

modal transport demand and capacity and infrastructure needs. This involves, *inter alia*, providing public support, facilities and transport services; ensuring the economy, efficiency, accessibility and adequacy of transport services; and policy-making, safety regulation, environmental protection and economic regulation.

Within this broad band of transport management considerations is the government's responsibility for effective maritime transport management and maritime administration. With increased international focus on issues such as sustainable development and integrated maritime management practices, governments must ensure that they implement appropriate maritime strategies for ensuring the quality of the marine environment, maritime safety and maritime security, along with prudent economic management of these functional areas. The primary activities of maritime administrators will therefore focus on maritime policy formulation, implementation of maritime legislation and the provision of marine services. Accordingly, these activities will come under the scope of international shipping; domestic shipping; specialized marine activities catering primarily to fishing vessels and pleasure craft; support services to shipping and the maritime industry; and the maritime dimensions of multi-modal transport. The overall roles and the scope of activities and responsibilities, which are integral to effective maritime administration, are depicted in *Appendix 4* (Hodgson, 1999).

4.6 The Administrative Issues

Current issues in maritime administration are best examined from the perspectives of both States in general and actual administrators. Regardless of the perspective, however, there are recurring elements that perpetuate throughout the entire scope of the administration of maritime affairs.

4.6.1 States

The projection of sea-power in furtherance of national interests is reflective of the sovereign right of a State to ultimately decide what are its various national interests and how to conduct itself in seeking to protect those interests. Each State "has the authority to refuse the demands of another State or any international body" in its national interests. Accordingly, States will invariably exercise their maritime power through appropriate channels, uni-laterally if necessary,

in order to protect or advance their national interests. The global ramifications of modern sea use, however, dictate that ethics and morals must therefore be prime considerations in the determination of national interests and objectives, the formulation of maritime strategies and policies and States' maritime practices (Nuechterlein, 1995, pp.107-108).

This represents an international responsibility on the part of States and is akin to the 'social responsibilities' of companies to the society in which they operate. Such social responsibilities have emanated largely from society's increasing consciousness of its responsibility to future generations. International responsibility in this regard is no different. Therefore, whilst companies "should not pursue their immediate profit objectives at the expense of the longer term interests of the society", States should likewise seek to act in the best long-term interests of the international community. The need for such international responsibility is starkly evident in the maritime arena, where an international commonality exists among all States. States, like companies, should therefore be "attempting to minimize any adverse effects of their actions, rather than adhering to the lowest acceptable standard" (Cadbury, 1991, pp. 49-50).

Accordingly therefore, the balance between deciding what is best 'in the national interest' as against 'in the interest of the international community and future generations' often poses a dilemma to many policy-makers. The international community will undoubtedly frown upon imprudent uni-lateral action on the part of any maritime State. However, at the same time, a State will not ignore its national maritime interests merely for the sake of appeal to the international community. The stark individuality of States and their respective political, economic and social realities inevitably lead to disparity in State action in maritime affairs. Such action, broadly classified in relation to flag States, port States and coastal States, has invariably led to international disputes of varying intensity. These issues thus underscore the importance of international consultation and co-operative efforts to consolidate and harmonize practices, an area in which the international maritime community has made considerable progress. Flag State Implementation (FSI) and Port State Control (PSC) are two of the major focal points of the IMO. Albeit, however, burning issues such as open registries, regional PSC agreements and uni-lateral coastal State action continue to capture international attention and debate.

4.6.2 Maritime Administrators

Maritime administrators, being advisers to their governments, have to justify proposed strategies and policies on the one hand and implement those that the government mandates them so to do, on the other hand. It is not uncommon therefore, that proposed strategies and policies are not accepted in full, but rather are modified or rejected in light of other national interests and objectives. Similarly, it is not uncommon for maritime administrators to have to implement and execute mandated strategies and policies that they do not consider to be in the best maritime interests of the State. This inescapable subjection to political control and decision-making can therefore present somewhat of a dilemma for maritime administrators when faced with such situations.

Given the vast dependence of States on international trade and shipping, effective maritime strategy influences a wide range of governmental policies and practices. Governments therefore place great reliance on the informed proposals of maritime administrators, rather than incessantly ‘politicizing’ their efforts. Maritime administration, therefore, cannot be considered mutually exclusive from all other aspects of the public sector. Rather, maritime administration is integral to and mutually supportive of the entire realm of public sector management because of the impacts, direct or indirect, that accrue from the State’s dependency on its effectiveness. Similarly, the manner in which a State’s maritime affairs are administered has major implications for its neighbours and the international community.

4.7 The Need for Effective Maritime Administration

Despite the prevailing administrative issues facing States and maritime administrators, the critical importance of effectiveness in the administration of maritime affairs remains unchanged. Given the economic importance of international shipping, prudent economic management of maritime affairs is a given for any maritime State. Equally important is the safeguarding of ships, crews, cargo and the marine environment. Shipping casualties today have enormous impacts on the international maritime industry. This is particularly so with ships being larger, faster, more expensive and more numerous; with their cargoes being more expensive and often extremely environmentally unfriendly; and with human life continuing to be irreplaceable and

beyond cost. The prevention of such casualties is therefore best achieved through effective maritime administration, as demonstrated by the United Kingdom. Whereas total losses of their ships in 1894 was 195, with 1,245 deaths, the implementation of the 1894 Merchant Shipping Act resulted, ten years later, in a reduction to 107 ship losses and 485 deaths. Gradual introduction of more stringent safety requirements continually yielded positive results, with losses declining to 11 ships and 14 lives by 1971 (Drewry Shipping Consultants, 1998, p.3). The maritime safety record of individual flag States is therefore a reflection of their effectiveness in regulating and controlling their merchant fleets and administering their maritime affairs.

It must also be borne in mind that the overall number and capacity of passenger ships has increased immensely in recent times. Long sea voyages are minor in comparison to the number of coastal and short international voyages on which countless thousands of passengers commute by ferry each day. The impact of any one casualty can be disastrous. The *Dona Paz* disaster in 1987 in the Philippines (4,386 lives lost) and the *Estonia* in 1994 (912 lives lost) (Hooke, 1997, p.173, p.199) are reflective of the magnitude of modern maritime casualties. Similarly, the grounding of the *Exxon Valdez* in 1989, wherein 258,000 barrels of crude oil were spilled, exemplifies the catastrophic nature of environmental degradation and the costs of counter-measures associated with large-scale ship source pollution. Damages were estimated at US \$25 million for the vessel; US \$3.4 million for the lost cargo; and US \$ 1.85 billion for the clean-up operations (National Transportation Safety Board, 1999, p.v).

These incidents are mere illustrations of the profound implications of maritime casualties today and underscore the critical importance of effective maritime administration, particularly in the areas of safety and environmental management. The political and social implications must also be considered. Good neighbourliness and State responsibility underscore the quality of external maritime relations whilst social issues such as employment and the provision of quality services to the public have similar implications internally. Effective maritime administration, therefore, is paramount to the political, economic and social aspects of national interests.

CHAPTER 5

THE COST OF SHIPPING REGULATION

5.1 General Attitudes Towards Regulations

Many people with vested interests in international shipping consider maritime regulations to be an intervention into and a hindrance to the development of shipping activities. Undoubtedly, maritime regulations have a cost implication, particularly for ship-owners and shipping companies. Regulations are considered by maritime administrators, on the other hand, to be necessary and “in the general interest of the shipping community”. Given that there is a general attitude of apathy towards the regulation of shipping, few regulations have “ever been implemented in a straight-forward manner.” Questions of over-regulation, as against under-regulation, the cost burden associated with regulation and the disparate regard paid to maritime regulations necessitate an understanding of their cost implications (Ma, 1999, pp.166).

5.2 The Economics of Maritime Regulations

According to Ma (1999, p.167) “economic activity is, by nature, human intervention into the natural environment.” This implies therefore that international shipping is an intervention by man into the marine environment. The implications of sea use are most vividly portrayed whenever there are maritime casualties that result in loss of lives and pollution of the marine environment. The only guaranteed way in which such casualties can be eliminated is to have absolutely no shipping activities or to reduce such activities to a considerably low level. Such an approach is both illogical and unrealistic. International shipping generates immeasurable benefits for the national economies of all States and for the international community as a whole. It is widely accepted, therefore, that these benefits far outweigh the risks. Prudent management, characterized by the implementation and enforcement of appropriate international rules and standards, is the key method for guaranteeing the sustainable safety of international shipping and the prevention of marine pollution. Such management guarantees that the risks of maritime casualties are minimized and that any negative effects are controlled, do not become irreversible, and cause minimal economic disruption (Ma, 1999, p.167). In practice however, the situation is

not quite as clear-cut. Unscrupulous ship-owners and substandard ships abound. As such, governments and maritime administrators must analyze and address a number of issues. Firstly, how to discourage unscrupulous ship-owners against non-compliance and the maintenance of unsafe and environmentally unfriendly practices; and secondly, how to offer incentives and alternatives to compliant ship-owners who observe quality ship-management practices. The answer (Ma, 1999, p.171) lies in the following approaches:

- Imposing administrative costs for consistent non-observance of prescribed standards;
- Imposing punitive and corrective costs *i.e.*, fines and compensation for economic breaches of applicable rules and standards; and
- Applying preventive costs to establish support infrastructure, such as shore-based reception facilities for ship generated waste, or to require additional assurances against possible economic breaches. These are often beneficial, being invariably below the punitive or corrective costs and the additional benefits that accrue from the actual preventive measure.

Cost benefit analysis is thus becoming an increasingly important means of avoiding economic futility and widespread apathy towards maritime regulations.

5.3 The Governmental Perspective

Governmental involvement in shipping covers three main aspects: political, economic and social. Such involvement, whether at the national or international level, is focused on protecting national maritime interests. The natural tendency of all States is to look at shipping from their own national perspectives and to identify means of gaining maximum advantage (Farthing and Brownrigg, 1997, p.82). Naturally then, national regulations often aim to protect and promote the viability of the national merchant marine on the one hand, and also to regulate national and foreign ships' operations so as to assure maximum safety and minimal pollution. Accordingly, governments have to establish the necessary support infrastructure, enact appropriate maritime legislation and provide marine services to shipping in general.

The extent to which individual States observe these requirements reflects on the quality of their national fleet and their ability to administer their maritime affairs. However, such quality has costs in terms of the implementation and maintenance of standards, conditions and services.

Governments are cognizant of this and accordingly, they employ various financial methods to effect quality assurance. Flexibility and prudence in the development, implementation and enforcement of optimized maritime regulations are universal requirements. Concurrently, governments utilize a combination of financial and legislative deterrents, incentives and cost-recovery schemes. These, respectively, protect their interests from imprudent ship operations, encourage ship-owners to act prudently, and offset the costs of service provision. Administrative, punitive and corrective costs serve as deterrents. Favourable taxation and dues regimes offered to prudent and compliant ship-owners serve as incentives. And specific fees, levied against ships calling at ports and offshore facilities, serve to offset the costs of providing services such as pilots, navigational aids and waste reception facilities. In order to achieve optimized regulation and shipping activity, due cognizance has to be given, therefore, to the cost burdens imposed on ship-owners, as well as to competitive flag and port regimes of other States.

5.4 Insurance

Quality assurance in shipping operations is also the forte of the marine insurance industry. Substandard ships and imprudent ship operations cost the industry a substantial amount, particularly Protection and Indemnity (P&I) Clubs. The staggering value of modern ships, reflected in collision liability costs, coupled with the various liability regimes for pollution damage, mandate caution on the part of insurers. This is illustrated in the UK P&I Club's analysis of major claims for the period 1987-1992. There were 1,971 P&I claims made on this Club, the value of which was US \$989 million. Of these, 94 claims individually cost in excess of US \$1.6 million, with collision and pollution claims accounting for 17% and 14% respectively (UK P&I Club, 1993, pp.6-7). More recent analysis of claims for the period 1987-1997 reveals that major claims, whilst constituting only 2% in number, represent 72% of the total value of all claims made (UK P&I Club, 2000, p.2).

5.5 The Industry Perspective

The international maritime industry has consistently highlighted the relationship between economic viability and the ability to absorb the costs associated with, *inter alia*, ship maintenance and regulatory compliance. If profitability is down and daily running costs can

barely be covered, the temptation to disregard ship maintenance and regulatory requirements is then increased. Accordingly, a regulatory regime that is unrealistic and not based on careful analysis of all the issues involved will fail to secure industry-wide compliance. Such an uninformed regulatory regime will inevitably be viewed as intervening in the operation of shipping, leading to clashes and regulatory chaos.

Major criticism has been levelled by the industry against regulatory regimes and uni-lateral State action that are reactionary and merely politically inspired. Reactionary measures driven by political undertones invariably impose restrictive and financial burdens on the industry. The industry argues that such measures, apart from being burdensome, do not necessarily address the particular problem and, particularly in the case of uni-lateral action, leads to disparity among States. With shipping being an international activity, the additional financial and other burdens, which arise because of the non-uniformity of regulations across State and regional boundaries, can be very discouraging. This is particularly exemplified by the US Oil Pollution Act 1990 (OPA 90), which was enacted in the wake of the *Exxon Valdez* disaster in Alaska in 1989.

According to Farthing and Brownrigg (1997, pp.208-209):

“This legislation, which pays scant regard to IMO conventions, has had a major impact on shipping, with some shipping companies no longer prepared to take the risks involved in trading in the US. No one quarrels with its aims, only the methods employed. The cost to the shipping community in time and energy has been immense and it is, so far as the shipping industry is concerned, a monument to unacceptable uni-lateralism.”

More recently, the *Erika* disaster in late 1999, and the resultant pollution of the French coastline, have given rise to much debate about possible uni-lateral action on the part of the European Union, much to the chagrin of the industry. Despite these concerns however, the industry continues to be active in seeking solutions to the problems. The International Chamber of Shipping/International Shipping Federation (ICS/ISF) Code of Good Management Practice in Safe Ship Operation is a clear example. It provides a framework for the development and continuous review of safety and environmental management standards and practices. In fact, this initiative effectively laid the foundation for the development by the IMO, following the

Herald of Free Enterprise disaster, of a more definitive and internationally applicable quality management framework, the International Safety Management Code (ISM Code).

The industry perspective then, is very important. Prudent and effective maritime regulations cannot be developed in isolation from the shipping industry; their concerns and viability must be reflected otherwise there will be regulatory chaos, lack of confidence and widespread non-compliance (Farthing and Brownrigg, 1997, pp.200-224).

5.6 The Cost of Compliance

The costs associated with the regulation of international shipping can be quite high, particularly those related to assuring safety, efficiency and environmental protection within a quality-based shipping operation (Drewry Shipping Consultants, 1998, p.10). Maritime regulatory costs, *i.e.* the costs of quality in international shipping, can be divided into:

- Preventive and appraisal costs: expenditure related to design, review, training, audits, quality planning, prevention activities and equipment, quality measures and qualification, test and inspection activities and equipment; and
- Failure costs: expenditure related to design changes, client rejects, re-deliveries, fault finding, insurance warranty, and commission losses.

If there is no quality investment in preventive and appraisal measures, the failure cost will be high. On the other hand, however, a high initial preventive and appraisal investment is needed in order to reduce failure costs to an acceptable level. The optimal level of both costs is reached when the total cost is at a minimum. When analyzed against accrued benefits, the initially high investment in quality results in lower short-term profits and implementation setbacks. However, once this implementation phase has passed, quality costs are continuously reduced, failure costs steadily decline and profitability soars, leading to positive development. Investment in quality then, is a long-term goal; it is the essence of sustainable development (Ma, 1999, pp.177-178).

In some industries, quality related costs vary between 5% and 25% of the total turnover (Ma, 1999, p.179). In Britain for instance, failure costs have been estimated at between 4% to 15% of turnover costs; in 1978 the cost to British industry was £4.2 billion (Drewry Shipping Consultants, 1998, pp.10-11). Any reduction in failure costs then, contributes directly to profit. These quality or regulatory costs have been quantified with reasonable accuracy for a number of

international conventions, rules and standards. According to Ma (1999, p.179), implementation of the ISM Code in some shipping companies may be as high as US \$400,000, with annual recurrent costs thereafter of approximately US \$25,000. Actual cost levels will depend on the extent of the existing quality systems at the time of implementation and the method of implementation. *Table 5.1* shows the estimated cost increase associated with various international conventions for different ship types.

	Tanker (1)	Bulker (2)	Cont'r (3)	Gen'l (4)	Ferry (5)	Cruise (6)	Chem (7)	HS Ferry (8)
SOLAS (ii)	66	88	51	26	160	150	86	44
MARPOL/OPA90	108	6	6	6	14	14	10	4
Class	10	10	10	10	18	18	19	3
Port & Port State	5	6	6	4	8	8	6	5
Flag State	2	2	2	2	3	4	2	1
Insurance	16	11	11	9	14	16	13	3
Commercial	4	4	6	2	6	4	3	2
Company	78	77	79	58	145	155	84	30
Average inc. p.a.	288	202	168	113	363	363	216	84

Note 1 - Column Headings:
 (1) Tanker - Suezmax (150,000 dwt) 12 years old.
 (2) Bulk Carrier - Panamax (60,000 dwt) 10 years old.
 (3) Containership (2,000 teu) 10 years old.
 (4) General Cargo Breakbulk Ship (15,000 dwt) 20 years old.
 (5) Ro-Ro Passenger/Vehicle Ferry (10,000 dwt) 14 years old.
 (6) Cruise Ship (15,000 dwt) 11 years old.
 (7) Chemical Carrier (20,000 dwt) 10 years old.
 (8) Fast Ferry.

Note 2 - SOLAS figures: Include ISM Code and new STCW Convention requirements - for bulk carriers the cost of strengthening forward structure is included.

Table 5.1:

Indicative Safety and Environmental Protection Costs Rise by Ship Type
 (Average annual recurring costs plus annualized capital costs over period 1998-2002)
 Source: **Drewry Shipping Consultants Limited, 1998.**

Other specific examples of the cost implications of maritime regulation include the issue of manning. Manning costs currently account for approximately 50% of operating costs. Given that ship-owners had been steadily reducing the numbers of ships' officers in order to reduce costs, a world-wide 4% shortage of officers developed by the mid-1990's. This shortage is

expected to grow to approximately 12% by 2010. Concurrently, with serious concern being expressed about human error contribution to approximately 80% of all maritime casualties, the IMO amended the International Convention on the Standards of Training, Certification and Watch-keeping for Seafarers 1978 (STCW 78). The 1995 amendment (STCW 95) calls for higher standards of competence and quality assurance mechanisms for maritime training and seafarer certification. As such, given the existing shortage of competent officers and the renewed demand for higher quality throughout the shipping industry, manning costs will inevitably rise. It is estimated that such increases would be 5% in 1999, with a 6 – 8% increase, over the next five years, for officers on more specialized ships (Drewry Shipping Consultants, 1998, p.12-13).

Similarly, the issue of pollution prevention regulations and their cost implications are worth an examination. Firstly, the OPA 90 requirement that only double-hull tankers may trade in the US, when first introduced, witnessed a price differential of some US \$10m over single-hull newbuildings. This price differential has steadily decreased as the construction of double-hull tankers has become more common and their design reconfigured. However, extra maintenance and safety assurance costs for individual ships amount to approximately US \$500,000 annually. In addition, depending on condition and previous standards of maintenance, extra costs to cover enhanced surveys and consequential work may amount to US \$300,000 – \$500,000 annually (Drewry Shipping Consultants, 1998, p.70).

5.7 The Cost of Non-Compliance

Given these substantial costs as a direct result of regulatory requirements, some ship-owners have chosen to effect minimum compliance, even though the possibility then exists for them to incur costs for non-compliance. Invariably, such costs for non-compliance are well below those that they would have incurred had they implemented the regulatory requirements. In some instances, depending on the trading areas of their ships, national legislation is woefully inadequate. As such, these ship-owners face little or no legislative action for the operation of substandard ships. Coupled with this, ship-owners have the benefit of limitation of liability for claims from third parties arising in conjunction with the operation of their ships. Such limitation

can either be specific to an international convention, as for instance under the International Convention on Civil Liability for Oil Pollution Damage, 1992 (CLC 92), or global as recognized under the Convention on the Limitation of Liability for Maritime Claims, 1976 (LLMC 76). Unscrupulous ship-owners are fully conversant with the applicable international rules and standards, the regimes for limitation of liability and the control and legislative criteria in the areas where their ships operate. They conduct their own cost-benefit analyses and structure their ships operations so that they effect minimum compliance with minimum expenditure. If and when they are subsequently held accountable for the substandard conditions of their ships, they would have already derived enough financial benefit from the ships to either cover the costs of non-compliance or simply abandon the ships.

5.8 Cost-Effectiveness and Returns

Maritime regulatory efforts must cater to these problems. Internationally accepted rules and standards must be applied uniformly world-wide to avoid geographic loopholes, and the associated quality costs must not create an unrealistic regulatory regime. Costs for non-compliance must be sufficiently high to act as useful deterrents, while useful and effective incentives must be provided for compliant ship-owners. And lastly, maritime administrators must provide the impetus for ship-owners to implement quality assurance mechanisms into their operations, highlighting the benefits to be derived from the introduction of quality systems. Such benefits are shown in *Table 5.2*.

Recorded accidents to ships crew	: Reduced by 60%.
Man-days lost	: Reduced by 60%.
Cases referred to doctor ashore	: Reduced by 50%.
Repatriation cases	: Reduced by 75%.
Vessel deviation	: From four to none per annum.
Fatalities	: From two to none per annum.
Note: Statistics over four years.	

Table 5.2.

Benefits derived from the implementation of a quality assurance scheme

Source: Drewry Shipping Consultants, 1998. Extracted from a paper entitled: "Weighing Up The Cost-Benefits of Contracting Out Your Ship Management" – Aswin Atre, Managing Director, Wallem Ship Management Ltd.

CHAPTER 6

SUBSTANDARD SHIPS, CONTROL REGIMES AND RELATED ISSUES

6.1 Substandard Ships

Various internationally accepted rules and standards govern the construction, equipping, crewing and operation of ships engaged in international trade. The industry however, continues to be plagued by substandard shipping practices, namely non-compliance with the applicable rules and standards. IMO Resolution A.787 (19), Procedures on Port State Control, advocates that a ship is regarded as being substandard if its hull, machinery, equipment, crew or operational safety is “substantially below the standards required by the relevant conventions” or the safe manning document. It further states that:

“If these evident factors as a whole or individually make the ship un-seaworthy and put at risk the ship or the life of persons onboard, or present an unreasonable threat of harm to the marine environment if it were allowed to proceed to sea, it should be regarded as a substandard ship.”

The internationally accepted standards represent the highest practicable standards that can reasonably be imposed on the shipping industry. However, they are the minimum acceptable standards *vis-à-vis* maritime safety and marine pollution prevention. As such, substandard ships pose various dangers to those onboard, to other vessels and users of the sea, to people and property ashore and to the marine environment. Unfortunately, such dangers often materialize in maritime casualties, the list of which is well known. In order to understand the phenomenon of substandard ships then, the following remarks (O’Neil, 2000) should be considered:

“We have a duty to ask ourselves why is it, when our conventions have been ratified by so many countries, that ships still sink and oil spills still happen? Why do some fleets have an accident rate that is a hundred times worse than others? How can that be, when the countries concerned have all ratified the same conventions? The answer of course, is that accepting a convention is one thing, but implementing it is another matter. Accident rates are different because implementation varies from country to country.”

Whilst the primary responsibility for ensuring that ships comply with international rules and standards rests with ship-owners, governments, namely flag States, are responsible for

supervising compliance (Grey, 1999, p.1). It is an unfortunate reality, however, that certain ship-owners and flag States, for various reasons, fail to fulfil their commitments contained in international legal instruments. Not all ship-owners or flag States are “equally careful and strict in fulfilling their obligations,” with “some flag States lacking the resources or material capacity to oversee the safety of individual ships. This creates the conditions for the appearance and persistence of substandard ships” (Boisson, 1999, p.413). Subsequently, some ships are sailing the world’s seas in unsafe conditions, threatening the lives of those onboard, as well as the marine environment (Paris MOU on Port State Control, 1996, p.3). The issue of substandard ships, and by extension, their unscrupulous owners and operators, raises a number of questions, namely:

- How do ships become substandard?
- How do substandard ships obtain or retain certification to operate?
- Why do the unscrupulous ship-owners prevail?
- Why do some flag States accommodate substandard ships on their registers?
- How do substandard ships and unscrupulous ship-owners persistently evade the gauntlet of existing control regimes?

The proliferation of substandard ships, and the growing catastrophic risks they pose, make control of international shipping an increasing necessity, resulting in the various control regimes that exist today.

6.2 Control of International Shipping: a Quality Assurance Tool

According to the *Concise Oxford Dictionary*, control intimates “to exert control over; to regulate; to check; to verify”. In the maritime context then, control refers to mechanisms and activities to exert control over, to regulate and to check and verify the administration and conditions of ships engaged in international trade. Control procedures, *vis-à-vis* compliance with international rules and standards, apply namely to ships which come under the provisions of IMO conventions; ILO conventions are also applicable, namely the Merchant Shipping (Minimum Standards) Convention of 1976 and the appended Conventions and Recommendations. Ships of non-Parties to these conventions or below convention size shall be given ‘no more favourable treatment’, thereby ensuring that an adequate level of safety and

protection of the marine environment are assured (IMO Resolution A.787 (19)). Control is thus a quality assurance term used in relation to maritime safety, marine pollution prevention and the eradication of substandard ships. Accordingly, the various parties that are linked to or affected by shipping operations have a role to play in exercising actual control in one way or another. These parties are:

- During the design, construction and equipping of the ship:
 - The shipbuilder;
 - The classification society; and
 - The ship-owner.
- Throughout the operational life of the ship:
 - The ship-owner;
 - The flag State;
 - The classification society;
 - The insurers;
 - The charterers, shippers and cargo owners;
 - Port States; and
 - Coastal States.
- During the navigation of the ship:
 - The master, officers and crew.

In considering control as a whole, quality assurance starts with the ship's design process; each successive level effectively acts as an added assurance. In order to achieve a meaningful quality assurance system, the parties at each level have to fulfil their obligations, making it a total approach, otherwise the effectiveness of the system will be compromised (Boisson, 1999, p.195). This view is well supported throughout the industry and within the various governments. Safety in shipping, "has long been regarded as primarily a matter for the owner, the flag State and the classification society; this still remains the case, but there are others who can play an important part in buttressing safety" (Farthing, 1998, p.52). British Shipping Minister, Glenda Jackson (1998, p.1), referred to this approach as "a chain of responsibility". She stressed that:

"There is no single player who alone can change the face of shipping. There is a chain of responsibility and all the various links have a role to play in enhancing the quality of shipping. Through all of these links there is a continuum of interest. They already have a

community of purpose; what is needed now is a community of action. There is a growing recognition that the principal need now is not to develop more standards, but to implement those already in existence.”

6.3 Credibility, Transparency and Accountability

In the maritime industry, the credibility of quality assurance practices has frequently been questioned, particularly in the aftermath of maritime casualties. Chief concerns have invariably focused on their adequacy and their ability to mandate transparency and accountability. Quality practices underpin quality in shipping; this in turn depends on at least three factors. “First, it requires a collective effort, to ensure consistency and uniformity. Second, it must be based on best practice or a willingness to go that extra mile. And last, but not least, it requires transparency, or an undertaking to do everything in the open” (De Bievre, 1999, p.16).

Transparency and accountability are the cornerstones of information management, a key component in the control of shipping. Effective management of information on the conditions of ships is the means by which the various control activities and regimes can be blended into a competent whole. Quality shipping requires quality performance and quality interaction from the many parties involved, namely through quality partnerships. By embracing transparency, such partnerships can be more effective in improving the quality of shipping (Card, 1999).

Information technology has had a marked, albeit positive, effect on the management of information relating to ships’ conditions. A proliferation of databases, established by various industry interests, currently operate in relative isolation from each other. These include:

- The Ship Inspection Report Exchange (SIRE) databank operated by the Oil Companies International Maritime Forum (OCIMF);
- The Ship Inspection System database established by the chemical industry and administered by the Chemical Distribution Institute (CDI);
- The SIRENAC database utilized by the Paris MOU on Port State Control;
- The Maritime Fraud and Suspect Practices database maintained by the International Maritime Bureau (IMB);
- The ship classification databases maintained and shared by the member societies of the International Association of Classification Societies (IACS); and
- The fledgling European Quality Shipping Information System database (EQUASIS), facilitated by the IMO and administered similarly to the SIRENAC database.

The current drawback to these database applications, however, is that their utilization is more or less restricted to member organizations (Boisson, 1999, pp.436-437). The databases, coupled with on-line access, are nevertheless contributing to an improved environment of information sharing and transparency, albeit at less than optimum potential. While the outlook for improved knowledge of ships' conditions is thus bright on the one hand, however, there should be a cautious approach. The utility of database applications will depend upon what data is made available and its accessibility and transparency (Making the difference with data, 2000, p.7).

Information must be reliable, relevant and up-to-date, multi-sourced and actionable, reflecting "clearly defined yardsticks by which to judge the degree of adherence" to applicable rules and standards. If there is a lack of coherence, precision and openness, the targeting of substandard ships will be compromised (Farthing, 1998, pp.51-52). The success of any information sharing initiative depends on the willingness and objectivity of the participants, and the accuracy of interpretation, analysis and editing. These factors determine whether the information will be meaningful to the end users. The correct conclusions can only be derived by way of correct interpretation. Only then will the information be uniform, coherent, precise and directly related to the end use for which it was conceived (Making the difference with data, 2000, p.7).

6.4 Towards Quality Shipping

According to a key industry figure, "the way forward for shipping lies in developing lasting partnerships" between interests who are "prepared to accept a joint sense of responsibility" (Grey, 1999, p.2). Of this there is no doubt. The problem, however, is that such an approach requires the participants to have the right attitude towards improving shipping quality. The fact that there are substandard ships being operated by unscrupulous ship-owners clearly indicates that not all parties are interested or have the requisite attitude. This shortfall is invariably due to the self-serving interests of the individuals involved. Overall, the maritime industry has become characterized by a spectrum. At one end there are the intensely safety conscious, while at the other end are compliance evaders and rule beaters. The members of the maritime industry thus display a wide range of attitudes from the highly responsible to the plainly irresponsible. The industry has, as a result, been persistently characterized by the term substandard, namely because

the industry itself has allowed substandard ships and ship-owners to be a part of the scheme of things. The eradication of substandard ships then, must lie in the creation of a quality culture, with the inculcation of positive attitudes towards quality and an underpinning intolerance for the substandard (Iarossi, 1998, pp.27-29). The first aspect, creating a quality culture is somewhat more difficult, given that a total approach requires convincing the unscrupulous that contrary to their beliefs, quality pays; if they had such a view in the first place, there would not be a problem. As such, the quality culture faces an uphill climb. The second aspect, intolerance for the substandard, is a more practical approach, which by virtue of its effects on the target group will force them to improve compliance. Intolerance is best shown, not by making new rules and standards, but through better enforcement of the existing rules and standards, an approach that the IMO has openly adopted (O'Neil, 1999). Through impartial application of the rules, holding all parties to the applicable standards in a uniform manner, active policing and strict enforcement, the control network will become more effective. But the approach must be effected throughout the industry in a complementary manner, otherwise, the conditions will remain for the substandard to continue to exist. By closing all the loopholes, eradication will be greatly enhanced. It is the unfortunate reality of substandard shipping that necessitates such an approach. According to Hunter (1998, p.33):

“In the environment which exists today, it must be the fear of either being caught or the consequences of failure that provide the incentive for the improving of shipping standards. Once the risk of being caught is low, the substandard operator will continue to thrive.”

The inculcation of a quality culture throughout the industry therefore rests upon the attitudes of the various parties, such attitudes being shaped by their respective interests and the prevailing regulatory climate.

6.5 Shipbuilding Issues

Shipbuilding is a very technical, complex and specialized industry, which carries with it numerous layers of quality assurance. The design and plans of a newbuilding are merely the first consideration. Next, there are the issues of the shipbuilder's infrastructure: equipment, materials and personnel. There are also the issues of suppliers of materials, products and

services, as well as sub-contractors to the shipbuilder. All of these have direct implications for the quality of newbuildings (Det Norske Veritas, 1999, pp.4-10).

The economic aspects of quality assurance in shipbuilding are subject to the same economic forces that affect other industries. As such, the recession of the early 1980's forced shipbuilders to adapt their products to new market demands, namely through cost cutting. Unfortunately, cost cutting in this industry invariably manifests itself in the utilization of inferior materials such as low-tensile steel, reduced quality of workmanship and the use of less competent workforces. The quality of ships thus becomes compromised, making them more vulnerable (Boisson, 1999, p.421). Classification societies, prudent ship-owners and responsible governments are supposed to, individually and collectively, prevent such manifestations. However, they occur. Ship-owners enjoy the benefit of lower costs; classification societies are caught between their clients, the ship-owners, and the shipbuilders; and governments are concerned about the preservation of the industry.

With ship-owners often seeking to minimize expenses on newbuildings and shipbuilders similarly seeking to effect cost cutting measures which invariably compromise quality, classification societies are often times put under pressure to approve these measures. Such measures, according to IACS, constitute reduced structural standards and are also "responsible for increasing claims and problems with machinery and propulsion plants in new ships." Accordingly, the Council of IACS has been urging its member societies to resist the pressure and abide by the prescribed rules (Grey, 1999, p.16).

The relationship between governments and shipbuilding industries cannot be ignored as these industries affect national societies. Issues such as employment, technology, support industries, foreign competition, national income and the social impacts of industry decline must be considered (Hogwood, 1979, p.5). Shipbuilding industries thus have immeasurable political and economic importance to governments, who will unreservedly bolster failing industries for political utility (Farthing, 1993, p.21).

6.6 Ship-Owners

The latter part of the 20th century has witnessed major changes in ship-owning practices, with traditional, family-oriented owners giving way to corporate ownership and management of ships. The business of ship-ownership has, as a result, become largely de-personalized. In addition, with diversified financing and business practices, banks and offshore interests have increasingly become the controlling interests in ships. Often times, “true ownership is elsewhere than assumed” (Farthing and Brownrigg, 1997, p.11-12). These ownership trends have become characterized by more focus on short-term profitability and invariably less concern about the safety of ships. The managerial decisions affecting ships have thus become increasingly financially oriented, often resulting in (Boisson, 1999, pp.418-421):

- Reduced maintenance and training programmes;
- The purchase and operation of old, often poorly conditioned ships; and
- Multiple changes of flag and classification society in order to avoid the regulatory requirements of quality flags and classification societies.

Human-generated maritime accidents, whether caused by substandard actions or substandard conditions, are now considered to be 80% attributable to management, with the remaining 20% being attributable to operators (Freudentahl, 1999).

Whilst all ship-owners seek to reduce costs in one way or another, the substandard minority realize that they stand to gain significant advantage through non-compliance. As such, the existence of unscrupulous ship-owners, who put so many others at risk, is attributable to:

- Economics and a desire to cut costs through non-compliance;
- The opaqueness of international business practices and the regime of the corporate veil; and
- An allowance, by the very nature of the maritime industry, for them to circumvent the system of checks and balances.

A study by the Organization for Economic Co-operation and Development (OECD) found that unscrupulous ship-owners realize substantial savings when they minimize expenditure on safety maintenance. These savings were as much as US \$4,750 per day in operating costs for bulk carriers and US \$6,400 for product tankers (OECD, 1996, p.10). With such reduced operating costs, unscrupulous ship-owners can offer lower rates to their clients. Shippers, cargo-owners

and charterers, some of whom are equally unscrupulous, undoubtedly take advantage of the cheaper shipping services, often failing to vet the ships they utilize.

Similarly, the business relationship between ship-owners and classification societies leads to conflicts of interest, much to the advantage of unscrupulous ship-owners who can put pressure on surveyors and societies to compromise standards in order to retain business. This became evident during the lead up to the ISM Code phase 1 certification deadline of 1 July 1998 for specific types of ships. Given the global spread of shipping companies and their operations, most flag States were unable to exercise the in-depth involvement that was required. As such, classification societies assumed the majority of the ISM certification activities on their behalf.

As the deadline approached, there was a scramble to effect implementation and certification on the part of shipping companies and classification societies respectively. In all of this, flag States generally failed to implement the appropriate level of monitoring of the certification process (Authorities miss the boat in gaining ISM Code upperhand, 1999, p.7). This lack of monitoring and intense competition among classification societies for business had a damaging effect on the system's effectiveness and credibility, with unscrupulous ship-owners and operators being able to exploit "yawning loopholes" (Competing societies 'damaging ISM effectiveness', 1999, p.5).

The ISM certification statistics of IACS members reveal that, as at 31 December 1997, they had issued a total of 3,750 ISM certificates to ships on their registers. This represented some 28% of just over 13,000 ships which would require ISM certification before 1 July 1998 (IACS, 1998). By mid May 1998 this figure had risen to 6,271 ships or 48% of the total, with a final total of 9,276 ships (71%) being certificated by the deadline (Andreassen, 1999). This suggests that within 45 days they had issued accreditation to 3,005 ships or approximately 67 ships per day.

The extent to which unscrupulous ship-owners will go to evade the regulatory requirements is limited only by the degree of ingenuity they will employ. Forgery of certificates and the use of temporary, fully qualified "professional crews" to meet ISM Code certification requirements are just some of the deceptive measures employed (ISM cheats using temporary crews, 1999, p.1).

The regime of the corporate veil allows individuals to operate commercial entities, including shipping companies, with some degree of anonymity. As such, unscrupulous ship-owners often

use this to their advantage. Substandard ships may be targeted, but they can be disposed of and non-compliant ship-owners, whilst remaining unaffected and at large, can procure more substandard ships or continue to operate existing ones. Of more concern is the fact that they can remain beyond the scrutiny or reach of the law in the event of disasters involving their ships (Boisson, 1999, p.417). This dilemma is borne out in the French Commission of Enquiry into the *Erika* disaster. According to the Commission (Spurrier, 2000, p.1):

“The opaqueness of the ownership of the tanker and the difficulties in determining with certainty who were her ultimate owners were a manifestation of current practice in the commercial shipping milieu, which does not allow the real deciders to be traced, which is unacceptable”.

Then there are those flag States, which, while undoubtedly competing for tonnage, maintain conditions and practices that attract and retain substandard ships. As a result, it is often left to those parties that invariably suffer due to substandard ships and unscrupulous ship-owners, to take the brunt of the eradication effort. Insurers, port States and coastal States face the direct impacts of substandard shipping and play a vital role in the overall control effort.

6.7 Flag States

Modern ship-owners choose the State in which they register their ships based on the best advantage they can gain in relation to various recurring factors. These factors are, *inter alia*, labour cost differentials and the use of multi-national crews; taxation structures; the availability of credit facilities; political, economic and monetary stability; and the rigidity of regulatory control (Metaxas, 1985, p.10). On the other hand, States derive much needed, often considerable income from the ships they take on to their registers. The number of States providing registration services is a growing phenomenon and a testament to the economic attractiveness of ship registry. As such, the element of competition has become a well-established issue in the international ship registry arena (Ready, 1998, p.19).

Flag States, due to competition, are offering increasingly more attractive conditions of registration to entice ship-owners. As the level of economic, political, social and cost incentives become more competitive, the rigidity with which flag States enforce regulatory requirements, especially cost-generating technical ship requirements, becomes a major consideration for ship-

owners. Poor enforcement may be a direct manifestation of the flag State's desire to attract and retain greater tonnage. Or, it may be because of the flag State's failure to implement internationally accepted rules and standards; its inability to police and enforce implemented standards; or the result of varied and incorrect interpretation of standards. Regardless of the reasons, poor enforcement of safety and pollution prevention requirements, for example, contributes to the proliferation of substandard shipping, thereby posing dangers to safety, the marine environment and other States.

Every State has the right, by virtue of Article 90 of UNCLOS, to sail ships and fly its flag on the high seas. However, they each have the obligation to fix the conditions for the granting of nationality to such ships (Article 91), and to maintain a genuine link. As such, the question of whether or not a State is able to administer its registered fleet does not arise initially. However, Article 94 specifies the duties of flag States, namely:

- To effectively exercise jurisdiction and control in administrative, technical and social matters over ships flying their flag, and ensure that they comply with applicable international rules and standards;
- To maintain a register of such ships;
- To assume jurisdiction under internal law over such ships and the masters, officers and crews thereof in all administrative, technical and social matters affecting the ships;
- To ensure safety at sea with regard to such ships, namely:
 - Their construction, equipment and seaworthiness;
 - Manning, labour conditions and the qualifications and competence of crews; and
 - The use of signals, the maintenance of communications and collision prevention.
- To ensure the surveying of such ships; and
- To inquire into or investigate any reports of flagship non-compliance, maritime casualties or incidents of navigation, and furnish reports accordingly.

The right to have ships fly its flag and sail on the high seas thus imposes the above-mentioned duties. These are further expounded in Article 217, wherein flag States are to:

- Ensure compliance, by ships flying their flag, with the applicable international rules and standards for the prevention, reduction and control of marine pollution from ships. Accordingly, they shall adopt legislation or other implementation measures and provide for effective enforcement; and

- Ensure that flagships are prohibited from sailing until they can proceed to sea in compliance with international rules and standards, including requirements concerning construction, equipment and manning of such ships.

The duties and obligations imposed upon flag States are to be carried out without exception. Article 26 of the Vienna Convention on the Law of Treaties, 1969 specifies that “every treaty in force is binding upon the Parties to it and must be performed by them in good faith.” Unless a different intention appears from the treaty or is otherwise established (Article 29), a treaty is binding upon each Party in respect of its entire territory. Flagships would therefore qualify under the ‘floating island doctrine’. This concept has been advanced in a number of legal cases in the UK as well as the US. In the celebrated *SS Lotus* case, a ship was assimilated to the territory of the flag State, whilst in *R v. Anderson*, Byles J. referred to ships as floating islands. Similarly, in the case of the *People v. Tyler*, Christiancy J. suggested that a ship is akin to an elongation of the territory of the flag State (Mukherjee, 1993, pp.31-32).

If, as is the case today, flag States become derelict in their duties, they cannot be held liable for maritime casualties involving their ships unless their national law so provides. Their obligation to execute these duties is held in good faith only. The inclusion in national legislation of tort liability for actions in the maritime field raises a number of issues. These are, *inter alia*, the questions of tort actions against the State or its servants, the limitation of liability for ship-owners and the State’s need to budget for possible claims or the cost of insurance (Economic and Social Commission for Asia and the Pacific, 1985, pp.17-18).

The issue raises concerns about how non-compliant flag States can be held to perform their duties and obligations pertaining to the ships flying their flags. The realm of the law of negligence and dereliction of duty is extremely complex, especially where it involves a sovereign State. The immunity granted to a State under international law prevents it from being held liable before the jurisdictions of other States, reflecting equal sovereignty and the protection of functional independence (Boisson, 1999, p.422). Outside of reporting ship deficiencies to the flag Administrations, any attempt to hold a flag State accountable or liable for the damages caused by substandard flagships in other jurisdictions must be approached with caution.

Notwithstanding any rulings that may be made, their enforcement becomes another matter. Nevertheless, persistent dereliction of duty on the part of flag States, and damages caused by substandard flagships will inevitably give rise to the pursuance by coastal States of mechanisms to force compliance and attach liability upon flag States. In fact, there have been increasing calls for moves in this direction.

Questions have been raised about the privileged position of flag States, *vis-à-vis* their sovereign immunity, their failure to execute their duties and their resultant infringement upon the rights of other States. Lord Donaldson's report concerning the prevention of pollution from merchant ships in the UK suggests that flag States that are derelict in their obligations under international instruments could be subjected to sanctions (Boisson, 1999, p.411). This includes the withdrawal of recognition of certificates issued by them or on their behalf (Lord Donaldson, 1998, p.172). Such actions would constitute an effectual "cancellation of their authority to register ships", thereby forcing ship-owners to register their ships under more compliant flags (Boisson, 1999, p.411). Consistent with this line of thinking is the argument tabled by Roach (2000, pp.149-150). He suggests that non-compliant States are apparently vulnerable to suits to compel compliance. Whilst such actions would be unprecedented, the ultimate judicial remedy could be denial of the particular States' rights to continue to register ships under their flag until they were able to satisfactorily demonstrate their commitment and ability to uphold their duties and obligations. There are legal and practical difficulties to such initiatives, however, namely the lack of established legal principles or standards on which to address the issues (Boisson, 1999 p.411). They offer the potential for compromising the sovereign immunity of States and provide infinite scope for political and economic subjectivity. In addition, neither customary nor conventional international maritime law provides any clear-cut basis or precedent for such actions. In fact, their spirit and intent are contrary to that of Article 227 of UNCLOS, which stipulates that, in the pursuance of their rights and responsibilities, "States shall not discriminate in form or in fact against vessels of another State."

Another suggested approach has been the establishment of a network of quality registries, proposed by the Netherlands, which would aim to boost the IMO's efforts towards flag State

implementation (Dickey, 1999, p.1). This would enhance transparency and “make space” between the poorly performing flag States and the responsibly compliant (Putting our house in order, 1999, p.7).

Undoubtedly, the accountability and quality assurance requirements for flag States need to be tightened. It is obvious that serious thought is being given to the issue and that inevitably, the means will be developed to effect accountability and ensure the upholding of duties and obligations. Substandard regulatory performance may, for instance, expose flag States to civil liability actions from disgruntled ship-owners whose ships are subjected to control interventions despite having statutory compliance certification (Mukherjee, 1994, p.6).

The IMO has been making efforts to improve flag State accountability, through the auspices of the Flag State Implementation Sub-Committee. The Flag State Performance Self-Assessment initiative establishes a list of criteria and performance indicators against which a flag State’s performance can be measured. The voluntary nature of the initiative, however, allows non-compliant flag States to avoid participation, thereby compromising overall objectivity.

6.8 Manning and Social Issues

The competence of seafarers in safely manning ships has been a topical issue in recent times, especially in light of studies which suggest that some 80% of all maritime casualties are attributable to human error (O’Neil, 1994). Amid growing concerns about the role of the human element in maritime casualties and the general competence of seafarers, the IMO moved to tighten control of the training, examination and certification requirements enshrined in STCW 78 through amendments introduced in 1995, *i.e.*, STCW 95.

The effect of STCW 95 was to introduce, for the first time, a quality assurance and accountability regime for Parties to the Convention. Regulation I/8 (Quality Standards) requires each Party to ensure that all training, assessment of competence, certification, endorsement and re-validation activities carried out within their jurisdiction are subject to a quality standards system and monitored accordingly. Such activities are to be periodically evaluated by independent entities and reports submitted to the IMO.

Article IV, Regulation I/7 and Section A-I/7 (Communication of Information) require Parties to communicate to the IMO information on the steps that have been taken by the Party to give the Convention full and complete effect. Such information will be reviewed by the IMO and those Parties that adequately demonstrate that they have given full and complete effect to the Convention will be identified in a 'white list'. Failure by a Party to be white listed runs the risk of non-recognition of their certificates of competence and having their seafarers' employment on foreign ships terminated or rejected by the flag Administrations of white listed Parties. Shipping companies will thus avoid employing such seafarers because their ships will be targeted for control inspections in relation to safe manning.

This network of quality seafarers has the effect of adding a new control level, that of 'Training State Control', to the overall control regime for international shipping. Quality standards and accountability requirements put the onus on the States Parties. They are now to be held accountable, by virtue of their Training State Control obligations, to meaningfully contribute to the safety of ships and the prevention of marine pollution. Surely, with this precedent, similar quality assurance and accountability mechanisms can be established to hold respective States directly responsible for their obligations to the international maritime community. This increased competence requirement for seafarers will, however, undoubtedly increase manning costs, thereby tempting unscrupulous ship-owners to defray the increases to other areas such as ship maintenance or shipboard living conditions.

Seafarers employed on substandard ships invariably have first hand knowledge of the precarious conditions of these ships. As such, they form a frontline control level and can, through reports to the appropriate authorities, draw attention to existing deficiencies. However, many of them are reluctant to do so as they run the risk of compromising their employment. Shipboard and shore-based bureaucracy that effectively protects unscrupulous ships' officers and ship-owners adds to their reluctance. Accordingly, the prospects of seafarers reporting unsafe and inadequate shipboard conditions is severely diminished (Chapman, 1992, pp.20-40). External control, focusing on seafarers' treatment and conditions of employment and accommodation, must therefore be an integral part of the overall control regime.

The reporting of substandard conditions on board ships by seafarers is an invaluable quality assurance device. The protection of crews in the wake of such reports is an issue which crew supplying States and flag States, in particular, have to prudently manage if they are to inculcate a sense of responsibility among seafarers in general. Much work needs to be done in this area, particularly in relation to transparent grievance procedures under which seafarers can lodge complaints and report ship deficiencies, knowing that their rights will be assured (International Labour Office, 1987, pp.60-61).

6.9 Classification Societies

Recently, classification societies have been the subject of much criticism regarding substandard ships. The societies face a number of dilemmas, some of which form the basis for the criticism. Chief among these is the manner in which they are contracted. Classification societies were originally established to operate on behalf of insurers to ascertain and report on the conditions of ships (Davies, 1984, pp.666-667). However, current business relationships, particularly where the societies solicit business from ship-owners, suggest possible conflicts of interest.

Ship classification comprises “the development of independent technical standards for ships and the verification of compliance with these standards throughout the ships’ life” (Det Norske Veritas, 1999, p.1). As such, if a classification society declines to issue compliance certification to a technically substandard ship, it may lose that ship-owning client to another, less scrupulous society that is willing to compromise standards. ‘Class hopping’ therefore poses a major business dilemma for classification societies, and an even greater dilemma for regulatory authorities *vis-a-vis* the proliferation of substandard ships. Notwithstanding, quality classification societies, namely IACS’ members, have established initiatives to plug such loopholes; their Transfer of Class Agreement is testament to this.

The practice of having classification societies conduct statutory work on behalf of flag Administrations, whilst still being in the employment of the respective ship-owners, increases the scope for the compromising of standards. Here two considerations come to mind.

Firstly, the concept of Classification State Control, akin to the quality assurance and reporting requirements enshrined in STCW 95, should be considered. Like maritime training institutions

that operate on a commercial basis, classification societies should be subjected to a quality standards regime by Maritime Administrations in the States in which they are established. Reports on their quality, reflecting feedback from flag States and port States, would be submitted to the IMO for assessment and publication in a list of quality classification societies. This would necessitate the development beforehand, of benchmark classification standards and practices akin to those regarding maritime training espoused in STCW 95. Thereafter, flag States would be reasonably expected to utilize only those classification societies that are included in the list.

This brings into focus the second concept, that of re-defining the business relations of classification societies. The classification of ships undoubtedly remains a purely business matter between ship-owners and classification societies, but here the relationship should end. Flag States should ideally only register ships that have been classed by a white listed society. Statutory work, if it is to be delegated, should be contracted only to listed societies of the flag States' choice, thereby severing the business relationship between ship-owners and classification societies. The flag States then become the clients of the classification societies. By extension, concerns regarding the quality of a classification society's work can be channelled to the Classification State or to the IMO. The elements of transparency and accountability can then be better assured and the existing dilemmas addressed. In addition, such an approach would make the classification societies "more regulatory, more answerable to governmental authorities in one respect or another, and empower them to better impose rules", a vision that is shared by a number of industry interests (Gray, 2000, p.3).

A major consideration to the Classification State Control approach is objectivity. Invariably, such classification States would also be flag States. As such, the quality control criteria they establish for classification societies under their effective jurisdiction could have potential ramifications for other flag States. The quality control criteria could, for instance, include specifications about the quality of the flag States on whose behalf the classification society may undertake statutory work. Such requirements can quite clearly become subjective. They should therefore be excluded, and the focus should be on the technical and quality management capabilities of the respective classification societies.

6.10 Insurers, Shippers and Charterers

Despite the more favourable short-term business prospects offered by substandard shipping entities, industry interests stand to lose in the long run from two perspectives. Firstly, substandard ships invariably encounter delays and additional costs, whether due to mechanical or other deficiencies, control interventions or maritime casualties. In fact, from as early as 1997 the European Union (EU) revealed plans to directly penalize cargo-owners when the substandard ships they utilized were detained within EU ports for major deficiencies (What is a responsible person, 1997, p.1). Owners and charterers of substandard ships will similarly face financial penalties, with charterers of dangerous and unsafe ships being targeted if it can be shown that they should reasonably have known the risks (Bray, 1997, p.1).

Insurers in particular, having been faced with mounting claims, are now more inclined to determine the quality of the ships they are to insure. Their inspection systems have proven to be another quality assurance hurdle which unscrupulous ship-owners have had to face. Without insurance ships will operate in a legal vacuum, thus giving insurers an invaluable surgical tool against substandard shipping (Herlofson, 1999, pp.10-11). Notwithstanding, it is still feasible for hull insurers, for instance, to earn more through higher premiums derived from insuring high-risk ships owned by substandard entities. The positive implications, however, are that many substandard ships are failing to be insured and, by extension, are becoming liabilities to their owners (Boisson, 1999, pp.431-433).

The second perspective concerns the self-regulation process of the industry itself. If substandard ships are continuously utilized without quality assurance mechanisms, including vetting, being meaningfully applied, then governments will intervene, possibly even to a greater extent than might be desirable (Boisson, 1999, p.431). This point was stressed by the European Commission: “shipping had to accept tough policing of existing regulations to give hope of stamping out the culture of evasion” (Bray, 1997, p.5).

Admittedly, the industry has taken heed in some sectors. Charter parties involving the transport of oil increasingly contain environmental protection clauses, ship age and safety management requirements, inspection clauses and ship compliance guarantees from the owners (Boisson,

1999, pp.436-437). Given the multi-faceted nature of the maritime industry, a fragmented approach to quality assurance will negate the efforts of the compliant entities. As such, there is greater need and scope for dialogue and co-operation between the various entities on general issues that affect safety, particularly the assurance of the conditions of ships they utilize (Farthing and Brownrigg, 1997, p.203). Information on ships' conditions held by insurers, the oil industry and the chemical industry needs to be appropriately pooled if any meaningful attempt is to be made to identify the substandard ships and the unscrupulous ship-owners.

The way forward for quality shipping lies in developing lasting partnerships between quality owners and responsible charterers who recognize and accept the need for safe and efficient shipping (Gray, 1999, p.2). Such partnerships, embracing strict membership and quality principles, could be used as quality benchmarks to reasonably guarantee the standards of ships which their members utilize. Ships operated by non-members of such partnerships would naturally attract more control attention. The obvious incentive for quality operators is thus implicit. Such initiatives, nevertheless, need to be monitored by those government authorities that have the task of determining their effectiveness and gauging the necessity for intervention.

6.11 Port States

Port State Control is the inspection of foreign ships in national ports for the purpose of verifying that the conditions of the ships and their equipment comply with international rules and standards and that they are manned and operated in accordance with applicable laws. This control regime, arguably, became necessary because of the deficiencies of other control regimes. Notwithstanding, it provides port States with a mechanism for safeguarding their maritime interests and effectively complements the other control regimes. The authority for exercising PSC is national law, albeit based on relevant international conventions, namely SOLAS 74; Load Lines 66; MARPOL 73/78; STCW 95; and Tonnage 69. As such, port States must be Parties to these conventions and have promulgated the necessary legislation before they can legally and practically exercise PSC.

PSC effectively involves the boarding and inspection of foreign ships, the imposition of remedial action if necessary to correct deficiencies, and possible detention due to unseaworthy conditions

(Hoppe, 2000, p.9). To a large degree the PSC mechanism has come to be responsible for most public action against substandard ships (Boisson, 1999, p.440). On the one hand this is to be reasonably expected given the large global flow of shipping traffic through ports. However, the primary responsibility for ensuring compliance rests with the flag States; they are often times overwhelmed by the sheer numbers and global spread of ships on their registers. The PSC regime therefore allows the flag States, to some extent, to keep track of the conditions of their ships outside of statutory surveys and inspections.

The recognition that uni-lateral PSC efforts have limited utility in the international quality assurance process has fostered the regional approach to PSC, with nine regional memoranda of understanding (MOUs) being implemented or contemplated world-wide. These cover Western Europe and Canada; South America; the Asia-Pacific region; the Caribbean; the Mediterranean; the Indian Ocean including East Africa; West and Central Africa; the Persian Gulf; and the Black Sea (see also *Appendix 5*). The United States, albeit a single State, operates its own equivalent PSC regime. These PSC regimes are envisioned to form the basis for a global PSC regime, inclusive of a harmonized system of data collection and information exchange, inspection procedures and training (Hoppe, 2000, p.14). The prospect of such a network is certainly encouraging, however there are a few considerations on the existing regional realities.

The Paris MOU, the Tokyo MOU and the United States, by virtue of their size and available resources, have established themselves as the leading PSC regimes. With their integrated information systems and well-trained inspectors, they have been able to establish an efficient safety net within their prescribed areas of responsibility, thereby effectively driving out the more substandard ships. The question then is what happens to these substandard ships. They simply change their operating areas to those of less efficient PSC regimes. The less efficient regional PSC regimes, particularly those comprising developing States, are certainly in need of the basic infrastructure. If these regions are to avoid becoming operating areas of convenience, then their ability to identify and sanction substandard ships must be improved. Notwithstanding, individual States must demonstrate their commitment to this end.

Nevertheless, there remains a concern that increasingly stringent action in one or more regional PSC regimes will have a correspondingly deleterious effect on others, especially if they are unable or ill prepared to effect similar actions. The recent misfortune of the *Erika* has for instance, amid suggestions of accelerated phasing out of single-hull tankers from Europe, raised concerns that other areas will become the dumping ground for these tankers (Brussels *Erika* backlash shapes up, 2000, p.5). Harmonized practices between regional regimes are especially important therefore, as regionalism, more so than uni-lateral State action, generates much uncertainty and distorts international quality objectives.

Another aspect of PSC, which has surfaced in recent times, concerns claims that PSC is being used as a means of flag discrimination. Cyprus has claimed that the *Anais* was detained in Antwerp in October 1999, whilst undergoing a change of flag to Cypriot registry, for lack of statutory certificates, albeit that these were being examined at the time for registration purposes as part of a flag State inspection. They also cited a similar detention of the *Gin* in Denmark in 1998 during another flag State inspection (Lowry, 1999, p.1). Similar claims have also been made by the Panamanian authorities against the Japanese, citing that the Japanese were singling out Panamanian ships for unjustified treatment (Stares, 1999, p.1). Needless to say, a State will not readily accept that one of its flagships has been detained because it is in a deplorable or unseaworthy condition; the condition of a ship is a reflection on the flag State. Detentions can therefore become very contentious issues, albeit that the scope does exist for port States to be excessive in their control activities relative to certain flags.

Overall, maritime States have to consider the issues of regionalism and PSC from two perspectives; disparities in the capabilities of regional PSC regimes, and the controversies arising out of control actions. The arguments may be well made and varied among the various parties, however, an irrevocable fact is that PSC remains the most effective mechanism for verifying the conditions of ships engaged in international shipping. The present control actions being generally applied will, unless there is a marked improvement in the quality of ships calling at ports, inevitably become more stringent as port States seek to protect their interests and generally give effect to international rules and standards.

The ultimate sanction of a State banning ships from entering its ports, or for that matter, the members of a regional PSC agreement jointly doing so, is becoming an increasingly attractive remedy. Such a right is borne out in the Convention and Statute on the International Regime of Maritime Ports, 1923. Article 17 states, *inter alia*, that “nothing in the Statute affects the measures which a Contracting Party may feel called upon to take in pursuance of general international conventions to which it is a Party, or which may be concluded subsequently”. Professor Pitman Potter referred to this as “States legal rights to exclude aliens and alien vessels from their ports; the right to arbitrary exclusion or at least its equivalent in rights of regulation” (McDougal and Burke, 1987, pp.107-108). The delegation of Cyprus, in addressing the 54th Session of the IMO’s Maritime Safety Council (MSC 54/23 Annex 23, 1987, p.2), appropriately summarized this concept:

“A port State has the right to refuse entrance of another flag State’s ships to its national ports when the latter State’s ships are not in conformity with the relevant international conventions, provided that both States are Parties to the said conventions.”

Needless to say, unless there is harmonized and global application of such bans, the affected ships will simply be re-deployed to other, more convenient areas and ports. The global PSC regime thus has immeasurable prospects, however, shared commitment, interfacing of information and harmonized actions are pre-determinants of success.

6.12 Coastal States

The history of maritime casualties indicates that most casualties occur within close proximity to coasts. Such areas are invariably characterized by hazards to ships and navigation. Shoals, reefs, rocks and tidal streams are but a few. Coasting and transiting traffic density is usually higher, especially in confined areas and straits used for international navigation. And some areas such as archipelagoes are equally as hazardous to navigate within. Coupled with this, the proliferation of coastal and short international passenger shipping adds to the potential for casualties of notable impact. As such, coastal States are often times confronted with the prospects or realities of maritime casualties affecting their citizens, coastal populations, coastlines, coastal zone resources and economic activity (Boisson, 1999, pp.35-36).

Faced with this reality, many coastal States often ponder how their interests can be better protected against such eventualities. The answer to this question is multi-faceted. Firstly, coastal States must rationalize their maritime standing. The acceptance, implementation and observance of international conventions, namely SOLAS 74; MARPOL73/78; Load Lines 66; STCW 95; COLREGS 72; and Tonnage 69 gives them the right to bind other States to the requirements of these conventions. Without this firm footing, a coastal State will find it difficult to realize any true protection of its maritime interests against substandard shipping. This initial approach should be viewed from three perspectives: prevention, preparedness, and response and compensation.

Given the high risks of casualties within coastal areas, the utility of the Intervention Convention of 1969 and its Protocol of 1973 becomes evident. These instruments are particularly useful in the wake of maritime casualties that give rise to actual pollution or threats to coastal areas and related maritime interests. The Convention and its Protocol permit the coastal State to take appropriate measures on the high seas to prevent, mitigate or eliminate such pollution or threats. Naturally, if casualties occur within its maritime areas of jurisdiction, the coastal State's actions are governed by national law. But how does a coastal State guard against the risks posed by substandard ships transiting its territorial sea.

Generally, ships have the right to innocent passage through the territorial sea. They may only be excluded if they engage in those acts outlined in Article 19 of UNCLOS, including acts of wilful and serious pollution. Otherwise, such passage, including that of substandard ships, remains innocent and should not be prevented by the coastal State. Coastal States may, however, maintain positive control over the passage of ships within their jurisdiction through the use of mandatory reporting systems and the enactment of legislation governing the safety of navigation, the regulation of maritime traffic and the preservation of the environment (UNCLOS, Article 21). Coastal States may also (Article 22), where deemed necessary, implement traffic separation schemes for ships exercising the right of innocent passage through their territorial sea.

Another preventive strategy is to offer viable alternatives to ships and thereby discourage them from engaging in practices akin to substandard shipping. The provision of shore-based reception facilities for ship-generated waste is an example. Such facilities, properly implemented and managed, and supported by stringent policing and enforcement, make it more worthwhile for ships to deposit their waste therewith. The costs of establishing and maintaining reception facilities are, however, prohibitive to many coastal States. Initial costs would invariably need to be funded and the cost contribution by visiting ships, being resultantly high, would make the particular ports less attractive to shipping companies. This creates a dilemma for many coastal States, especially developing States that face more critical land-based pollution problems. This is illustrated by the case of Kingston Harbour in Jamaica. It will cost approximately US \$70 million over the next five years to implement and maintain the critical parts of any remedial work on the harbour's marine quality (The world around us, 1999, December). Against such overwhelming financial considerations, ship source pollution management becomes increasingly difficult to justify and pursue as against other, more immediate coastal zone management issues. The Search and Rescue Convention of 1979, the Salvage Convention of 1989 and the Oil Pollution Preparedness, Response and Co-operation Convention of 1990 are particularly relevant regarding preparedness. Of course, should a pollution incident occur, coastal States must be in a position to obtain optimum compensation. Pollution liability conventions are thus very important instruments.

Lastly, coastal States that have significant cabotage activity involving non-convention vessels need to exercise efficient Flag State Control over them. Failure to do so will defeat any measures taken in relation to international shipping, as one part of the problem will remain un-addressed.

Coastal States then, are in a rather precarious position. They have the right to establish conditions for the entry of foreign ships into their internal waters and ports. However, this right does not extend to the Exclusive Economic Zone (EEZ) or territorial sea. Although certain acts will allow them exclusionary rights against offending ships within these areas, in general the global prospect of regulating or pre-determining the right to innocent passage for particular ships is not

immediately on the horizon. Coastal States therefore have to contend with being legally armed to effect conventional prevention, preparedness and response to maritime casualties or the risks posed by substandard ships. This of course, does not impede their right to enforcement for violations of applicable conventions as enshrined in their legislation. Article 94(6) of UNCLOS and the duty to report to flag States the facts of any case in which proper jurisdiction and control with respect to a flagship have not been executed, must also be borne in mind.

An interesting prospect in regard to maritime legislation and which should give coastal States increased deterrent options, concerns what may be termed (Ang, 1997, p.4) “criminal jurisdiction of shipping management in connection with major maritime incidents”. Legislative clauses similar to those of Sections 114 and 199(1) of the Singapore Shipping Act of 1995 effectively impose a personal duty on the owner of a flagship anywhere in the world, or a foreign ship in territorial waters. They must take reasonable steps to ensure that their ships are operated in a safe manner or risk sanctions. This duty also rests with those who are part of the “directing mind and will” of bodies corporate, such as shipping companies. Having been “entrusted with the powers” of the shipping company, they can be held to have “failed personally in their duty” if it is proven that they committed any acts of neglect with consent or connivance. Like the body corporate, they would then be guilty of an offence (Ang, 1997, pp.3-8). Such consent or connivance will surely apply to those who knowingly own and operate ‘dangerously unsafe ships’ as defined in Section 30(3) of the UK Merchant Shipping Act of 1988.

The concept of corporate manslaughter is also pursuable under the “doctrine of identification”, as demonstrated in the *Herald of Free Enterprise* litigation. It allows for a company to be held guilty of a criminal offence, if the offence is committed “by an individual whose acts or state of mind could be regarded as being that of the company, and that they had the requisite *mens rea*” (Hamblen and Edey, 1999, p.14). Where such *mens rea* is shown, the natural criminal implications also extend to the individuals concerned. However, there are inherent difficulties in this approach, namely the need to find an individual or individuals, by virtue of their acts and mental status, guilty in the first place. Arising out of public concern therefore, the (UK) Law Commission Report No.237 of 1996 proposed statutory changes to the law of manslaughter, to

include “killing by gross negligence” and “corporate killing”. These concepts, if implemented, will undoubtedly enhance the process of securing convictions for negligent shipping companies and their principals (Hamblen and Edey, 1999, p.16-18).

Such legal devices potentially offer greater protection to coastal States in general in that they will serve as greater deterrents to unscrupulous ship-owners and solidify the legal and conventional footing from which they may protect their maritime interests.

6.13 Assessments of Maritime Administrations

The abilities of maritime States to efficiently administer their maritime affairs and ensure quality in shipping are best assessed when considered in relation to the control functions of flag States; port States; coastal States; and by virtue of STCW 95, training States.

In much the same manner that the IMO’s Flag State Self-Assessment Initiative was launched, the concept should be modified so that maritime administrations are able to assess and report on their various control mechanisms. A better appreciation of the administrations’ capabilities can therefore be gained when their deficiencies are considered in relation to each specific control function. Such deficiencies may be due to (Boisson, 1999, p.423) legislative or regulatory inadequacies such as poor implementation, policing and enforcing of international standards. They may also be attributable to administrative failures, namely inadequate training and certification systems; ineffective inspection programmes; routine use of low quality classification societies and poor control of delegated services; and insufficiency of disciplinary and penal measures. Objective assessments, highlighting such deficiencies, will enable the IMO to better analyze the national, regional and global shortcomings of regulatory agencies and subsequently develop more relevant technical co-operation programmes.

6.14 Concerns Regarding Subjectivity

Despite the undeniable need to exercise effective control over international shipping there is an underlying concern about the potential for subjectivity on the part of some States. This concern is primarily related to the issues of ship registration and manning. The steady growth of open registries has depleted the closed registries maintained by the traditional maritime States. As such, these States have consistently sought to regain the ships that they lost to other, more

attractive flags. Closely associated with the primary issue of ship registries is that of seafarer employment and the use, under open registries, of cheap multi-national crews from developing States. Coupled with a decline in the number of nationals from the traditional maritime States entering the seafaring market, there has been an excess demand for seafarers even within these closed registries. This is borne out in the BIMCO/ISF manpower surveys of 1990-2000.

Open registries have thus been constantly targeted, namely on the basis of poor safety and labour conditions and economic distortions in the international shipping market. This has inculcated a misleading perception that they are associated with substandard shipping (Pace, 2000, p.3). However, substandard ships existed well before the emergence of open registries and many of them are currently registered in traditional maritime States (Vassallo, 1997, p.2).

The campaign to curtail the competitiveness of open registries has been constantly evolving. A number of the traditional maritime States, notably Norway and the UK, have introduced competitive second registries and a host of legal measures and fiscal and social incentives aimed at attracting ship-owners to their registries. Concurrently, control mechanisms have become very topical in that they offer latitude for subjective exigencies to over-ride the intended quality assurance focus, thus becoming pretexts for possible protectionism (Vassallo, 1999, p.4). In addition, economic and monetary pressures, under the guise of concerns about harmful tax competition and attempts to curtail money laundering and international fraud, are being put on offshore tax havens. Such havens are atypical of open registry States that now face possible sanctions for the preferential incentives they offer to ship-owners (Brewer, 1999, p.1).

These developments therefore inculcate much uncertainty and mistrust among maritime States, and give rise to questions about the overall objectivity of the various ship control regimes. Notwithstanding these concerns, however, quality assurance in international shipping is a vital necessity that arises not only by way of treaty obligations, but also out of a genuine need to ensure maritime safety and marine pollution prevention. Quality assurance, therefore, must never be compromised in favour of other exigencies.

CHAPTER 7

INTERNATIONAL CO-OPERATION

7.1 General

The primary basis for the regulation of international shipping, *vis-à-vis* maritime safety, marine pollution prevention and the eradication of substandard ships, lies within the ambit of UNCLOS. The provisions therein underpin the substance of the more detailed technical and social rules and standards contained in conventions emanating from the IMO and the ILO.

Given the inherent international nature of shipping and the community of interests, multi-lateral approaches to regulation have been increasingly expanded. Notwithstanding that initial attempts to do so, notably the 1889 International Maritime Conference, were largely resisted for nationalistic reasons, the current outlook is one of internationalism. Nevertheless, the reaction of the international community to uni-lateral measures is still not consistent. According to Boisson (1999, p.193), States invariably respond to uni-lateral measures by:

- Unanimously rejecting the measures;
- Acknowledging justification and broadly accepting the measures; or
- Accepting the measures on a limited basis, thereby opening the prospects for debate.

Uni-lateral measures invariably lead from *de facto* to *de jure* situations, in the process of which they generate much legal uncertainty. Owing to the diverse motivational thinking behind such measures, they also pose the problem of deviation from established international goals and objectives. Left uncontrolled, uni-lateral protective measures can, through reciprocity or otherwise, set off chain reactions that transform the protective motives into protectionism. Such approaches are contagious and can have negative impacts on the development of shipping (Boisson, 1999, pp.193-194).

On the other hand, international co-operative efforts in the regulation of shipping afford numerous advantages. Firstly, such an approach minimizes the scope for uncertainty and arbitrariness. Secondly, it brings together the representatives of the key interests in shipping, the States of the global community. Dialogue facilitates the exchange of views and opinions, gives

credibility to any resultant decisions and measures, and forms the basis for further development. Development in human society must be examined from two levels. Firstly, at the individual level it implies increased skill and capacity, self-discipline and creativity. On the other hand, a society develops as its members increase jointly their capacity for dealing with the environment. This capacity is dependent on the extent to which they understand the laws of the environment, the extent to which they put that understanding into practice by devising relevant tools, and on the manner in which their efforts are organized (Rodney, 1974, pp.1-15). This summary is equally applicable to States, particularly as it concerns the regulation of international shipping. Clear and concise understanding of applicable issues underscores the development and acceptance of international maritime conventions, the tools to which Dr. Rodney refers. As indicated by Boisson (1999, p.44), the “value and effectiveness of shipping regulation should be addressed against their foundation, their content and their implementation”. Their foundation rests on the motives, the applicable issues, who were the proposers or drafters, and what were their intentions *i.e.*, their *travaux préparatoires*.

Conventions with a truly international foundation are devoid of the uncertainties and arbitrariness that characterize uni-lateral measures. Implementation therefore becomes less of an issue. In the long run, international co-operation in the regulation of shipping enhances a harmonized approach to the application and enforcement of rules and standards, thereby minimizing disparities in application and possible geographical areas of convenience.

International co-operative efforts, however, face a variety of obstacles. In an organization, the underpinning philosophy, or organizational culture, plays an important role in determining the character and effectiveness of the organization itself. Basic elements such as the personal values and attitudes of the members, their commitment and their work discipline reflect upon the organizational culture. This underpinning philosophy is thus the key to understanding the organization as a whole and is particularly relevant to international organizations, albeit that they are far more complex and difficult to evaluate. Robbins’ definition (1998, p.595) of organizational culture, “common perceptions held by the organization’s members” is particularly apt for international organizations such as the IMO. Such perceptions are the essence of the

organization's philosophy, which takes account of the situations of the individual Member States, the institutional framework and the methodology employed in identifying problems and proposing, deciding and implementing solutions (Bartumenu, 1999, p.44).

7.2 The ILO

The Organization, formed in 1919, utilizes a tri-partite approach between representatives of governments, employers and workers to achieve its objectives, namely the establishment and maintenance of suitable labour conditions and the protection of workers. Broadly speaking, the current primary goal is "to promote opportunities for men and women to obtain decent and productive work, on conditions of freedom, equity, security and human dignity" (Doumbia-Henry, 2000, p.2). The ILO has adopted some 41 original or revised international conventions and 30 similar recommendations dealing exclusively with maritime labour conditions (ILO, 1999). More specifically, apart from convening international maritime conferences approximately once each decade, the Organization maintains the Joint Maritime Commission. This Commission is responsible for covering maritime matters on an ongoing basis between conferences. Being bi-partite, it provides immeasurable utility for the representatives of ship-owners and seafarers to negotiate directly and lay the groundwork for the standard setting process vested in the conferences. The secretariat of the Ship-owners' Group in the Commission and the Organization is provided by the International Shipping Federation (ISF), whilst that of the Seafarers' Group is provided by the International Transport Workers Federation (ITF) (Farthing and Brownrigg, 1997, pp.76-77).

Global economic conditions have had major impacts on the manner in which ships are operated; the employment opportunities for seafarers; seafarer attrition particularly in industrialized States; and varying degrees of over-tonnage. As a result of these trends, there has been a growth in the employment of multi-national crews, consisting largely of seafarers from developing States, particularly under open registry flags. Coupled with the evolution of technical changes onboard ships and the forced adoption by many seafarers of new skills, the overall regime of life at sea has changed considerably. The net result has been marginal, if any, improvements in the conditions of employment of seafarers and their living and working conditions onboard ships.

Newly built ships, restricted by tight building budgets, are invariably characterized by limitations on living comforts and proper working conditions.

Existing ships, particularly those operated by unscrupulous ship-owners, suffer from meagre maintenance and social input, with the result being deplorable structural and living and working conditions. Apart from the obvious safety and pollution risks posed by structural deficiencies, the human element side of this problematic area is even more cause for concern. Given the long periods at sea, interspersed with minimal periods in port and drastically reduced shore-going opportunities, the reduced companionship imposed by reduced crews, loneliness, stress and other psychological problems are increasingly overcoming seafarers. These are made all the worse by uncertainties about their employment prospects (International Labour Office, 1987, pp.19-24). Needless to say, the negative implications that these developments have had on maritime safety and marine pollution prevention are quite immense. The attribution of 80% of maritime casualties to the human element is thus a natural spin-off from this most untenable situation. The issue therefore needs to be urgently addressed.

Article 19 of the ILO Constitution requires Member States that ratify conventions “to take such measures as are necessary to give effect to the provisions of the conventions.” However, according to Doumbia-Henry (2000, p.6):

“These measures are not specified. It is up to the State concerned to determine the measures it will take. In the maritime field, national laws and regulations, court decisions, collective agreements and codes of practice may give rise to the crystallization of an *opinio juris* contributing to the development of custom and general principles of law. As such, a large number of Member States permit effect to be given to the conventions’ provisions by means of collective agreements among other means of application.”

This poses somewhat of a dilemma for the ILO. Against the accepted norm that a State can only be bound to its treaty obligations, it is a fundamental shortfall of a number of key ILO conventions that various important maritime States, including flag States, are not Parties. The Organization’s umbrella convention on maritime matters, the Merchant Shipping (Minimum Standards) Convention of 1976 (No.C147) has only been ratified by 40 States. Of the top 10 ship-owning States as at 31 December 1998 (UNCTAD, 1999), China and Hong Kong (China) had not ratified the Convention up to 4 July 2000 (ILO, 2000). Similarly, of the top 7 major

open registry States as at 31 December 1998 (UNCTAD, 1999), the Bahamas, Bermuda, Malta, Panama and Vanuatu had not ratified the Convention (ILO, 2000). The 1996 Protocol to the Convention had also only been ratified by Ireland as at 4 July 2000 (ILO, 2000). This Convention is the primary benchmark used in PSC activities to gauge the social conditions onboard ships (IMO Resolution A.787 (19)). Non-ratification by so many notable maritime States thus raises questions about their rationale and the overall ability of the international maritime community to effect improved quality of shipboard conditions.

Notwithstanding, the ILO, like so many other international organizations, is not a policing agency. Rather, it is a forum for the Member States to discuss and decide on international policy and standards. Outside of this forum, the onus is on them to implement, comply with and enforce such policies and standards, and hold each other accountable. However, the pre-cursor to such an end state is ratification or accession to the conventions, which, it is obvious, is generally lacking among Member States.

7.3 The IMO

7.3.1 Organizational Philosophy

The IMO, representing the primary organization involved in the regulation of international shipping, was established by international treaty in March 1948. The Organization's many objectives, enshrined in the governing Convention, can be summarized as follows:

- To provide machinery for co-operation among Governments regarding regulatory practices relating to the technical aspects of international shipping;
- To encourage and facilitate the general adoption of the highest practicable standards in maritime safety, efficiency of navigation and prevention and control of marine pollution from ships;
- To encourage the removal of discriminatory action and unnecessary restrictions by governments affecting international shipping, primarily measures that restrict the freedom of shipping of all flags to take part in international trade;
- To consider matters concerning unfair restrictive practices by shipping concerns;
- To consider matters concerning shipping and the effect of shipping on the marine environment; and
- To facilitate the exchange of information, among governments, on matters under consideration by the Organization.

The IMO is in essence a forum for consultation and the exchange of information among Member States, the manifestations of which are the international conventions that are adopted by these States. The Organization has undoubtedly made an immeasurable contribution to the global maritime community. However, controversies exist, much of which has to do with its organizational philosophy, particularly in relation to the programme of work. In order to make a meaningful contribution to the work and decision-making processes of the Organization, a Member State has to be actively involved and participate extensively in the working meetings at the various levels. Starting from the Assembly sessions held every other year, the bi-annual Council meetings, the annual meetings of the four Committees and the ongoing work programmes of the nine Sub-Committees, meaningful participation can prove costly. This is particularly applicable to developing Member States located vast distances from London.

The inherent difficulties of meaningful participation thus inhibit the ability of a large number of Member States to be actively involved in the development of rules and standards. Invariably, they only get a chance to express their views and concerns at Assembly sessions when the matter under consideration is more or less firmly decided. “The scope for a select group of Member States to effectively dominate and shape the regulatory regime of international shipping is quite real and indeed cause for concern” (Roach, 1999). This distinction is clearly illustrated when considering the participation and influence of European States, as against that of, for instance, the more distant and less developed Caribbean States. This leads in to the issue of membership of the Council. Such membership, totalling 32 Member States, comprises:

- 8 States with the largest interest in providing international shipping services;
- 8 States with the largest interest in international sea-borne trade; and
- 16 States, outside of the above-mentioned categories, that have special interests in maritime transport or navigation and whose election will ensure representation of all major geographical areas of the world.

Many Member States have voiced their concern about the effect that this membership structure of the Council has, namely, that it guarantees certain States membership at all times, whilst excluding the possibility of others aspiring to membership. In fact, so intense has the issue become that Liberia, the flag State holding the second highest tonnage of ships, protested by

declining to pay its dues in 1999. At the 21st Assembly session in November 1999, Liberia was subsequently ousted from Council membership (Clash over dues ousts Liberia from IMO council, 1999, p.1).

Notwithstanding these concerns, Member States must concentrate on demonstrating that they have a clear ability to give effect to the internationally accepted rules and standards, as well as their ability to maintain a profile as a reputable maritime State, demonstrating a responsible attitude and a serious interest. Such an approach leads to recognition, thereby increasing access to available opportunities. It is only when this has been achieved that Council membership can be feasibly considered (Brady, 2000).

Against this background, disadvantaged States need to assess their individual weaknesses and identify opportunities that will allow them to overcome the above-mentioned issues. Again looking at the Caribbean, a regional approach presents an ideal opportunity in this regard. Caribbean States, the majority of which are small islands, rely heavily on sea-borne trade and tourism, particularly cruise shipping. They have common social, cultural, and legal systems, have similar maritime interests and face similar difficulties. Many individual States have found it difficult to achieve meaningful participation at the IMO. The conditions of ships involved in intra-regional trade have been described as generally poor (Renwick, 1999, p.20). There is an overall disparity in the level of maritime development among the individual States, and there is also a scarcity of resources (Caribbean port state control two years away, 1999, p.3). On the other hand, there is a regional trading bloc, the Caribbean Community (CARICOM), as well as the infrastructure for regional maritime training, the Jamaica Maritime Institute (JMI). In addition, there is the Caribbean MOU on Port State Control. The need and scope for greater co-operation in the administration of maritime affairs are thus quite evident.

Caribbean States should therefore focus on developing their overall capacity to administer their maritime affairs. They should develop their abilities to individually and collectively manage issues such as ship registries, training and crewing, ports and harbours, marine resources conservation and coastal zone development. They also need to collectively identify the means through which they can improve their participation in the work of the IMO. Such regional

consultation and co-operation, coupled with harmonization of maritime legislation and greater integration in maritime policy-making, underscore any unified approach to maritime transport administration. Only then can common positions on international maritime matters be achieved and any meaningful case made for regional representation at the IMO. Simply suggesting regional representation based on the financial implications of individual State participation is not enough of a justification (Roach, 1999).

Of course, there is considerable merit in the concept of regional representation at the IMO, as it offers valuable utility to small maritime regions such as the Caribbean, giving them a stronger voice and greater influence. The concept should certainly be considered and advanced by the relevant States, especially in light of existing plans within the IMO to increase the Council membership to 40.

7.3.2 Management Strategies

The IMO's objective of realizing, *inter alia*, the general adoption of the highest practicable standards in maritime safety and marine pollution prevention from ships is best achieved through proper management. The elements of planning, organizing, implementing and controlling currently form an integral part of the Organization's work in this regard. But, given the complexity of its organizational philosophy, underpinned by the often self-serving national interests of the various Member States, the strategies employed can easily be questioned in relation to their objectivity.

It is common knowledge that Member States are encouraged to implement the conventional rules and standards in their national legislation and maintain mechanisms for policing and enforcing the legislated requirements. On the other hand, however, the IMO, being primarily an international forum, does not maintain any policing and enforcement mechanisms in relation to its members, much to the benefit of non-compliant Member States; this is not a part of its mandate. There are strategies available, however, that can be employed within the IMO to assist in achieving the desired end result of safer ships and cleaner seas, without any evolution into a policing role. Such strategies would focus on various maritime management areas which are mutually exclusive in their own right, but which, when managed collectively, become mutually

supportive, namely maritime safety management; maritime security management; and marine environmental protection management.

According to Hawkes (1989, p.9), maritime security is essentially those measures employed by the various interests in the maritime industry to protect against seizure, sabotage, piracy, pilferage, annoyance or surprise; protection against hostile interference with shipping operations. This concept has been further expanded by Mejia (1999) in relation to maritime safety and marine pollution prevention. These concern measures adopted to protect against maritime incidents, accidents, casualties and disasters, to protect lives and property and to protect the marine environment from the harmful effects of pollution. The wording ‘measures to protect against’ is the key consideration. Hawkes (1989, p.207) also describes security management as “managing, not of security, but for security.” Similarly, the concept translates into managing, not of safety and environmental preservation, but for safety and environmental preservation. The strategies then translate into the planning of, organizing for, implementing, and controlling of, appropriate measures to protect against maritime casualties; hostile interference with shipping operations; and pollution of the marine environment. It therefore means that the Member States of the IMO must be willing to objectively devise and apply those measures which will guarantee the desired results, albeit that this will require a subrogation of certain interests.

The previously mentioned database applications maintained throughout the industry need to be networked into a centrally managed system. From there, pertinent data on ships can be collated and analyzed, and useful information disseminated to specified users, particularly Maritime Administrations and similar regulatory and quality assurance agencies, regardless of nationality. Notwithstanding that this will be costly, as with any quality assurance project, the high initial costs will be offset by the long-term gains. The mere prospect of another disaster akin to the *Exxon Valdez* should be enough to spur an international effort in this regard.

The IMO, however, needs to make some fundamental changes to existing control and information policies, namely the IMO Ship Identification Number Scheme adopted by way of Resolution A.600 (15). The preamble to the Resolution clearly highlights the perceived utility of the scheme, namely the facilitation of enhanced maritime safety and pollution prevention,

however, the scheme is not mandatory for all convention ships and flag States. It therefore appears to be somewhat self defeating and subjective. In order to be objective and effective, the scheme needs to be made mandatory and thus become the common element in all information database applications. By extension, the requirements for ships should be such that the assigned numbers are permanently and irreplaceably affixed to the ships' hulls and superstructures in a highly conspicuous manner. The numbers would naturally be reflected on the ships' certificates. The immediate utility of such a strategy would be the increased difficulty for unscrupulous parties to use fraudulent ship's documentation and phantom ships for illicit activities. The permanently affixed number, regardless of the ship's name at the time, would offer a ready reference character. With modern information technology and access to an international database, the requisite information would be provided immediately, thereby signalling any unscrupulous intent. In addition, the detailed information on any particular ship, being available to all relevant interests, would effectively eliminate any excuses of ignorance, for instance, of flag States registering substandard ships, classification societies taking such ships into class or charterers doing business with such ships. In time, the scope for such ships to continue in operation would become increasingly diminished, eventually leading to their eradication. Similar implications would also apply to unscrupulous ship-owners and the industry interests who patronize them and their substandard ships.

The major question remaining, therefore, is to ask whether or not Member States are willing to subrogate their various self-interests for the common good and thereby spur the rest of the international maritime community in the quality assurance direction. Surely, the IMO will fail to achieve its objectives if its members, the States, do not objectively adopt and apply the requisite measures. They have a responsibility to current and future generations to be a part of the solution, not part of the problem.

CHAPTER 8

CONCLUSIONS AND RECOMMENDATIONS: MANAGING FOR QUALITY

8.1 Traditional Issues

The history of international shipping has not been without its controversies. The traditional importance of international trade and by extension, international shipping, to the development of individual States has been evidenced by the high priority they give to this activity. With vital interests often inextricably linked to viable shipping activity, States have thus had to carefully balance their maritime policies between protection of national interests and protectionism. Similar concerns have also been traditionally experienced by the various entities in shipping; they too have had to balance their primary interests against national interests.

The dilemma facing States and shipping entities is most vividly portrayed in respect of economics versus regulation, particularly safety and marine pollution prevention regulation. The economic forces that affect both States and shipping concerns have become all too well known. Given the often precarious financial positions that such States and shipping concerns may find themselves in, cost cutting and income generating mechanisms are invariably given top priority. When weighed against the inherent cost implications of technical shipping regulation, the resultant courses of action adopted can be wide ranging. The highly compliant, low-income entities simply cannot compete with low-compliant, low-income ones, much less those that are non-compliant and highly profitable. This has led to the phenomenon of substandard ships whether through:

- Ownership and operation by non-compliant and unscrupulous ship-owners;
- Registration by non-compliant flag States; or
- Fraternalization by various industry entities.

These substandard ships have been operating from the earliest times, however, more attention is now focused on them due to the magnitude of the risks they pose to people, property and the environment. The sway of public opinion cannot be disregarded either, particularly in light of growing concerns about the quality of the environment. The traditional issues of economics

versus regulation has today become a burning issue, with characteristic reactionary efforts giving way to a pro-active approach to quality assurance in shipping. Notwithstanding these overall efforts, non-compliant ship-owners, flag States and industry entities continue to exist. The eradication of substandard ships is therefore shaped by the direction in which efforts are driven. It is one thing to prescribe rules and standards and enforce them against ship-owners and industry entities, however States cannot be dealt with in the same manner. It is thus a sad reality that whilst quality compliance in shipping rests primarily with the ship-owner, with flag States being responsible for ensuring such compliance, the accountability flow literally stops there. The resultant lack of accountability to the international maritime community, on the part of flag States, is a major drawback to the overall quality assurance process.

8.2 Current Issues

The eradication of substandard ships is the primary objective of quality shipping efforts. The trail of accountability is therefore of vital importance. However, some major obstacles exist. One, as already mentioned, is that of flag States. They do not have to answer to other States *per se*, even though under international law they are expected to fulfil their obligations regarding the quality of the ships on their registers. The second obstacle pertains to the ability of some flag States to effectively maintain administrative, technical and social control over their ships. This deficiency inculcates a breakdown in their accountability process. A major concern in this regard is their knowledge of, and willingness to regulate, the conditions of their ships, particularly when statutory work is delegated to classification societies.

The third obstacle concerns the opaqueness with which the shipping industry in general is operated. Current business practices allow for the beneficial owners and directing minds of shipping companies to remain inconspicuous behind offshore operations and the corporate veil. The ability of flag, port and coastal States to hold them accountable for culpable acts thus becomes increasingly difficult.

Fourthly, shipping demand is so widespread and global that it is virtually impossible to regulate the entities with which unscrupulous ship-owners may do business. Short-term profitability and a disregard for the risks invariably spur decisions to utilize substandard and cheaper ships.

Recent initiatives however, to impose financial penalties on industry interests who utilize the services of substandard ships that are detained or otherwise subjected to PSC interventions, will certainly be of great utility in curtailing such fraternization.

The next obstacle, closely linked to existing business practices, concerns the manner in which ships may be moved from one classification society to another, or from one flag State to another. The resultant ability of unscrupulous ship-owners to avoid regulatory and quality control mechanisms adds to the overall breakdown in accountability. And lastly, the general lack of communication between States and industry entities creates a glaring gap in the general knowledge of ships' conditions. Substandard ships can therefore exist within the jurisdictions of non-compliant flag States, operate internationally and avoid control because the vagaries of national and international law, as applied, buttress the loopholes for evasion.

The question therefore arises as to why these obstacles continue to prevail and offer loopholes through which substandard ships can evade the various control regimes. The basic answer lies with the States themselves. Disparate economic strengths and by extension, the ability to regulate national and international shipping are primary considerations. When the stakes pertaining to substandard ships are balanced against national interests, priority has to be given to those that are more vital in nature. Developing States, in particular, have problems that far outweigh the less immediate fallout posed by substandard ships. While the prospects for a universally harmonized approach to quality shipping cannot be ruled out, however, quality assurance is now and will continue to be, quite disparate in application unless meaningful long-term strategies are implemented.

8.3 Managing for Quality: the Way Forward

The elimination of the various obstacles to accountability is an obvious precursor to the desired eradication of substandard ships. It therefore means that efforts have to start at the top with the States. Their pivotal role in this regard not only demonstrates willingness, it also provides the incentive for further adoption. States therefore have to introduce a greater level of transparency into their own maritime operations, as well as subrogate various interests to the international good. A total redefinition of the accountability relationships is necessary amongst and between

the States; between States and ship-owners; between States and industry entities; and between ship-owners and their industry counterparts. The highly touted concept of quality partnerships is thus a most feasible option. Networks of quality registries; regional and global PSC regimes; and quality partnerships between classification societies, ship-owners, charterers and other industry interests, effectively exclude unscrupulous entities. Without unscrupulous entities in international shipping, there will be no substandard ships. However, the efforts cannot stop there.

The basis of quality partnerships is the sharing of information. The global consolidation, analysis and dissemination of information of ships' conditions, using an indelible common means of identification, are paramount to achieving the quality assurance objectives of such partnerships. The IMO Ship Identification Number Scheme must therefore be made mandatory, both on paper and tangibly onboard ships, in order to reduce the scope for unscrupulous behaviour. In the final analysis, substandard ships must not be given any convenient operating loopholes. They must be totally eradicated. To think that uni-lateral exclusion of substandard ships from one State or region is sufficient, is extremely short sighted. Whilst one may get rid of substandard ships on the one hand, the unscrupulous industry entities will still remain. A harmonized global approach on the other hand eliminates the loopholes, as well as the unscrupulous entities. In this way, States will be an effective part of the solution, with their efforts buttressing quality, rather than evasion.

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APPENDIX 1

WORLD TONNAGE BY MAIN COUNTRY GROUPS, TONNAGE DISTRIBUTION AND OWNERSHIP OF MAJOR OPEN REGISTRY FLEETS, AND WORLD TONNAGE BY OWNERSHIP

	World Total	Developed States	Major Open Registry States	Developing States	Central & Eastern European States	Socialist States of Asia
Total Fleet (a)*	788.7 (100%)	202.7 (25.7%)	376.9 (47.8%)	150.8 (19.2%)	20.8 (2.7%)	26.0 (3.3%)

(a)* Ships of 100 grt and over, excluding the US Reserve Fleet and the US and Canadian Great Lakes Fleet.

Structure of the world merchant fleets of the main country groups, as at 31 December 1998.

(Millions of dwt and % shares)

Compiled from: UNCTAD, 1999. Source: UNCTAD Secretariat on the basis of data supplied by Lloyd's Information Services (London).

State	Total Ships	Total dwt	% Owned by Nationals
Panama	4206	142.2	0.0
Liberia	1590	91.5	0.0
Bahamas	1076	40.0	0.7
Malta	1194	37.7	0.0
Cyprus	1347	33.3	1.9
Bermuda	112	7.6	0.0
Vanuatu	122	1.7	0.0
Total (a)* (b)*	9647	354.1	2.6

(a)* Ships of 1000 grt and over.

(b)* This data is not fully compatible with the data on world merchant fleets by main country groups, which lists ships of 100 grt and over as the base.

Tonnage distribution and ownership of major open registry fleets, as at 31 December 1998.

(Number of ships, millions of dwt and percentage ownership by nationals)

Compiled from: UNCTAD, 1999. Source: UNCTAD Secretariat on the basis of data supplied by Lloyd's Information Services (London).

Country of Domicile	National Flag	Foreign Flag	Total Fleet Controlled	Foreign Flag % Share
Greece	42.3	79.0	121.3	65.1
Japan	20.2	68.7	89.0	77.3
Norway	28.8	23.3	52.0	44.7
United States	11.6	31.1	42.8	72.8
China, PR of	21.3	16.0	37.3	43.0
Hong Kong	5.8	27.8	33.6	82.7
Korea, Rep of	9.4	15.3	24.7	62.1
Germany	7.4	13.8	21.2	65.0
United Kingdom	6.3	14.9	21.2	70.2
Sweden	1.8	14.5	16.3	89.0

- **Ships of 1000 grt and over.**

World tonnage by ownership.
(Millions of dwt)

Compiled from: ISL, 1998. Source: ISL based on Lloyd's Maritime Information Services quarterly updates.

APPENDIX 2

CHRONOLOGICAL DEVELOPMENT OF KEY INTERNATIONAL MARITIME LEGISLATION IN THE 20TH CENTURY

- 1864/1877 York-Antwerp Rules of General Average (multiple amendments - 1974, 1990);
- 1910 - Collisions Between Vessels;
Assistance and Salvage at Sea (Protocol: 1967);
- 1914 - Safety of Life at Sea (multiple amendments - 1952);
- 1922 - (UK) Oil in Navigable Waters Act (*blueprint for similar legislation internationally*);
- 1923 - Regime of Maritime Ports;
- 1924 - Limitation of Liability for Ship-owners (amended: 1957. Protocol: 1979);
Hague Rules for the Carriage of Goods by Sea under Bills of Lading (Visby amendments: 1968. SDR Protocol: 1979);
- 1926 - Immunity of State-owned Ships (Protocol: 1934);
Maritime Liens and Mortgages (amended: 1967, *never entered into force*);
- 1936 - (ILO) Minimum Requirements of Professional Capacity for Masters and Officers;
- 1948 - Inter-Governmental Maritime Consultative Organization (amended: 1991, 1993);
- 1952 - Civil Jurisdiction in cases of Collision;
Penal Jurisdiction in matters of Collisions and other Incidents of Navigation;
Arrest of Sea-going Ships;
- 1954 - Prevention of Pollution of the Sea by Oil (multiple amendments) (*superseded by MARPOL 73/78*);
- 1957 - Handling of Stowaways;

- 1958 - UN Conventions on:
The Territorial Sea and the Contiguous Zone;
The Continental Shelf;
The High Seas; and
Fishing and Conservation of the Living Resources of the High Seas;
- 1960 - Safety of Life at Sea (*superseded by SOLAS 74*);
- 1961 - Carriage of Passengers by Sea;
- 1962 - Nuclear Ships;
- 1965 - Facilitation of International Maritime Traffic (multiple amendments);
- 1966 - Load Lines (multiple amendments. Protocol: 1988);
- 1967 - Liability for Passengers' Luggage;
- 1969 - Tonnage Measurement of Ships;
Intervention on the High Seas in cases of Oil Pollution Casualties (Protocol: 1973);
Civil Liability for Oil Pollution Damage (Protocols: 1976, 1992);
- 1971 - Establishment of an International Fund for Compensation for Oil Pollution Damage (Protocols: 1976, 1992);
Civil Liability in the Field of Maritime Carriage of Nuclear Material;
Special Trade Passenger Ships' Agreement (Protocol: 1973);
- 1972 - Safe Containers (multiple amendments - 1993);
Regulations for Preventing Collisions at Sea (multiple amendments - 1993);
Prevention of Marine Pollution by Dumping of Wastes and Other Matter (multiple amendments. Protocol: 1996);
- 1973 - Prevention of Pollution from Ships (multiple amendments. Protocols: 1978, 1997);
- 1974 - Safety of Life at Sea (multiple amendments. Protocols: 1978, 1988);
Carriage of Passengers and their Luggage by Sea (Protocols: 1976, 1990);

- 1976 - International Maritime Satellite Organization (Convention and Operating Agreement) (amended: 1994, 1998);
Limitation of Liability for Maritime Claims (Protocol: 1996);
(ILO) Minimum Standards in Merchant Ships;
- 1977 - Safety of Fishing Vessels (Protocol: 1993);
- 1978 - Standards of Training, Certification and Watch-keeping for Seafarers (amended: 1995);
Hamburg Rules for the Carriage of Goods by Sea under Bills of Lading;
- 1979 - Maritime Search and Rescue (amended: 1998);
- 1982 - UN Convention on the Law of the Sea;
- 1986 - UN Convention on the Conditions for the Registration of Ships (*not yet entered into force*);
- 1988 - Suppression of Unlawful Acts Against the Safety of Maritime Navigation (Convention and Protocol);
- 1989 - Salvage;
- 1990 - Oil Pollution Preparedness, Response and Co-operation;
- 1993 - Maritime Liens and Mortgages (*not yet entered into force*);
- 1995 - Standards of Training, Certification and Watch-keeping for Fishing Vessel Personnel (*not yet entered into force*);
- 1996 - Stockholm Agreement;
Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (*not yet entered into force*);
- 1999 - Arrest of Ships (*not yet entered into force*);
- Drafted* - Civil Liability for Pollution Damage from Ships' Bunkers; and
- Drafted* - Wreck Removal.

Compiled from:

Farthing, B. (1993). International Shipping: An Introduction to the Policies, Politics and Institutions of the Maritime World.

Boisson, P. (1999). Safety at Sea: Policies, Regulations and International Law.

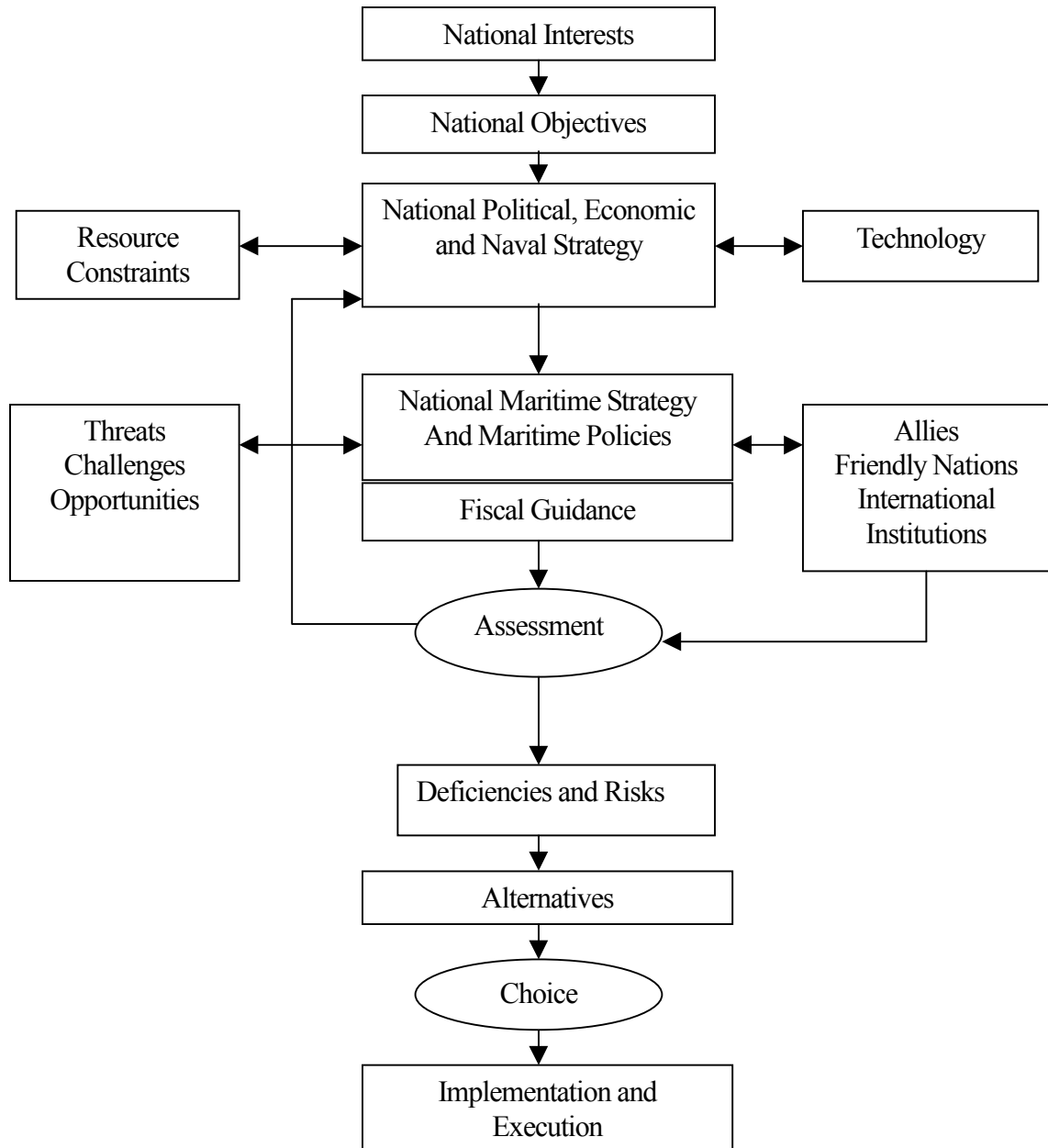
International Maritime Organization (1999). Focus on IMO: A Summary of IMO Conventions.

Singh, N. (1983). International Maritime Law Conventions, Volume 4.

Arroyo, I. (1991). International Maritime Conventions.

APPENDIX 3

MARITIME STRATEGY AND PLANNING FRAMEWORK



Adapted from: Lloyd, R. (1995). *Strategy and Force Planning*.

APPENDIX 4

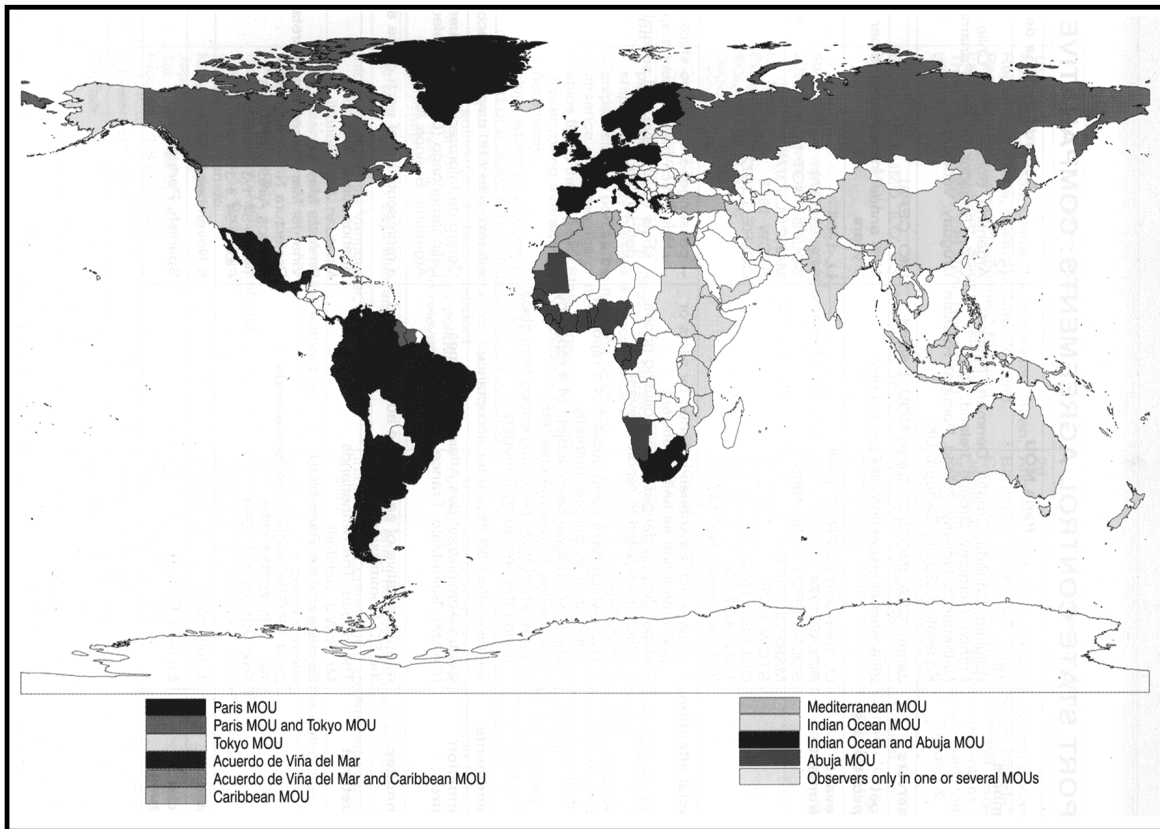
MARITIME ADMINISTRATION: SCOPE AND RESPONSIBILITIES

Scope: International Domestic Specialized Support Inter-modal	Policy Formulation	Legal Administration	Services Provision
Economic Management	Shipping Economic Services Cost Recovery Ship Registration Industry Consultation Risk/Cost Benefit Analysis	Interventionism Carriage of Goods Shipping Legislation	Ports Ferry Services Canals Aids to Navigation Pilot Services Crewing Shipping Management
Safety Management	Risk/Cost Benefit Analysis Compliance Monitoring Training Quality Assurance International Consultation Convention Implementation Vessel Regulation Control Activities	Safety & Social Aspects Inquiries/Investigations Convention Implementation	Prevention Services Preparedness Response Services Training Services
Environmental Management	Risk/Cost Benefit Analysis Compliance Monitoring International Consultation Convention Implementation Vessel Regulation Control Activities Renewable Resources Impact Assessment	Health & Social Aspects Environmental Aspects Impact Assessment Requirements Conservation/Protection Duties	Prevention Services Preparedness Training Services Response Services
Other Areas of Responsibility	Sovereignty & Protection Non-renewable Resources	Maritime Security Maritime Law & Order	Marine Parks Scientific Research Weather Services Maritime Training

Adapted from: **Hodgson, J.R.F. (1999). Principles of Maritime Administration: WMU.**

APPENDIX 5

GLOBAL PORT STATE CONTROL REGIMES



Source: IMO News Number 1:2000. International Maritime Organization.