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WORLD MARITIME UNIVERSITY

Malmö, Sweden

**IMPLEMENTATION OF IMO'S
INTERNATIONAL STANDARDS
IN ROMANIA
WITH PARTICULAR REFERENCE
TO MARPOL 73/78**

By

DANDU C. PUGHIUC

Romania

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

MASTER OF SCIENCE DEGREE

in

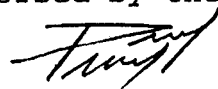
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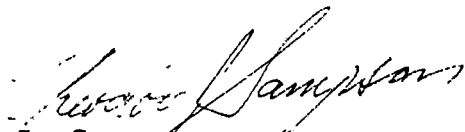
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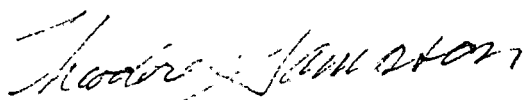
1993

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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LIST OF ABBREVIATIONS

ACOPS	Advisory Committee on Protection of the Sea
AGFUND	Arab Gulf Programme for United Nations Development Organizations
BIMCO	The Baltic and International Maritime Council
CCAS	Conference Committee on the Application of Standards
CFCs	Chlorofluorocarbons
CIS	Commonwealth of Independent States
CITES	Convention on International Trade in Endangered Species
COW	Crude Oil Washing
DWT	deadweight tons
ECB	Environment Coordination Board
EEC	European Economic Community
FOCs	Flags of Convenience
FOEI	Friends of the Earth International
FRF	Fund for Reception Facilities
FSI	Flag State Implementation Sub-committee
GEF	Global Environment Facility
GESAMP	United Nations Joint Group of Experts on the Scientific Aspects of Marine Pollution
GNP	Gross National Product
GRT	Gross Register Tonnage
HP	horse power
IACS	International Association of Classification Societies
ILO	International Labour Office

IMO	International Maritime Organization
INTERTANKO	The International Association of Independent Tanker Owners
IOPP	International Oil Pollution Prevention
LDC	London Dumping Convention
LL	International Convention on Load Lines
MAP	Mediterranean Action Plan
MARPOL 73/78	International Convention for the Prevention of Pollution from Ships, 1973 as Modified by the Protocol of 1978
MEPC	Marine Environment Protection Committee
MOU	Memorandum of Understanding on Port State Control
NGOs	Non-governmental Organizations
NNP	Net National Product
OILPOL	International Convention for the Prevention of Pollution of the Sea by Oil
OPA'90	United States Oil Pollution Act (1990)
OTC	Oil Terminal Company
ppm	parts per million
RAC	Regional Activity Center
SAR	Search and Rescue
SBT	Segregated Ballast Tank
SDR	Special Drawing Rights
SIDA	Swedish International Development Authority
SOLAS	International Convention for the Safety of Life at Sea
STAP	Scientific and Technical Advisory Panel
STCW	International Convention on Standards of Training, Certification and Watchkeeping for Seafarers
UNCED	United Nations Conference on Environment and Development

UNCTAD United Nations Conference for Trade and
Development
UNDP United Nations Development Programme
UNEP United Nations Environmental Programme
WMU World Maritime University

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Finally, my gratitude goes to the idea of World Maritime University, which I believe is one of the most outstanding achievements in the maritime world during the past decade.

ABSTRACT

The purpose of this dissertation is to provide some insights into the most timely concern within the International Maritime Organization (IMO): the implementation process. It is largely agreed that IMO's law-making function has been very successful from its inception, and in United Nations family the Organization has been seen as the smallest agency but biggest treaty maker¹. How Member States ratify and, more importantly, implement these international instruments is today the central preoccupation in IMO, as indicated by the establishment of a new sub-committee to deal with implementation. The extremely detrimental and dangerous tendency towards division within the shipping community has to be countered and the Organization is now striving to bridge the gaps.

It would be difficult in a paper of this nature to examine adequately all the aspects involved. Therefore, the scope of the dissertation is confined to environmental side of IMO's activities. The study focuses on MARPOL 73/78 as the key convention in the "green" family. It argues for the ratification of this instrument by the Romanian government and examines the difficulties encountered in setting up proper reception facilities to meet the Convention's requirements. Moreover, some means of financing such facilities are explored. It is hoped that

¹ Busha, Thomas. The impact of the UNCLOS on shipping and the role of IMO and its conventions. 1992.

the paper will be of practical value to all those who are involved in the implementation process.

Aiming to reduce the distance between Romanian shipping and the IMO, the paper sees the issue of implementation in the context of a larger trend towards improved environmental standards at the national level.

If the attention of the Romanian decision-makers is directed for a while at these issues, if public awareness of environmental-related problems is enhanced, the paper will have made its modest contribution.

CHAPTER 1

THE INTERNATIONAL SHIPPING COMMUNITY'S EFFORTS TOWARDS IMPLEMENTATION

1.1 RESPONSIBILITIES OF THE MARITIME NATIONS

The international maritime community has elaborated under IMO auspices a comprehensive network of regulations covering almost all the aspects of the shipping industry. More than 30 international treaties and several hundred codes and recommendations have been developed since the IMO's inception in 1959.

Nevertheless, the effectiveness of these measures relies on the extent to which Member States agree to be bound by them and, even more importantly, on how Governments implement their provisions. Maritime safety and the health of the seas are more dependent nowadays on the coordinated implementation of existing standards than on the elaboration of new technical requirements. The overwhelming importance of this process has been highlighted on several occasions by the Secretary-General of the International Maritime Organization (IMO) during the last three years. "The fact the major shipowning countries have all ratified the most important IMO treaties means that safety and pollution standards should be roughly the same all over the world. But in fact the safety gap between the best countries and the worst is now so great that IMO is seriously concerned." he said early this year when commenting on the establishment of a new

sub-committee to deal with implementation². Both the Maritime Environment Protection Committee (MEPC) and the Maritime Safety Committee (MSC) strongly supported the initiative, and the newborn Flag State Implementation (FSI) Sub-committee is supposed to report to both technical committees. The main task of the new body, which held its first session on 19-23 April 1993, is to identify how IMO instruments could be more effectively applied by their signatories. With regard to this, the Chairman of the Safety Committee declared in an international conference that "no standard is better than the way it is implemented." Further evidence of the importance given to the process is the theme of this year's Maritime Day: "Implementation of IMO standards - the key to success."

It is recognized that within the global efforts for "safer shipping and cleaner oceans" the responsibility can be divided into three areas:

- IMO is responsible for developing international standards in the form of conventions, codes, recommended practices and guidelines;
- Port States have the obligation to inspect ships to see that they meet IMO requirements and also to ensure that deficiencies are rectified;
- Flag States are responsible for certifying and guaranteeing that their ships conform to the IMO conventions which they have ratified.

Although the current trend is to give increasing powers to the Port State, the right and the duty to enforce and implement the standards remain basically with the Flag State.

² IMO in a Changing World. Hazardous Cargo Bulletin, Feb. 1993

The responsibilities of the maritime nations derived from the seven goals established by IMO for the Flag State Implementation Sub-committee:

1. To identify the range of flag state obligations emanating from IMO treaty instruments.
2. To assess the current level of implementation of IMO instruments.
3. To identify those areas where Flag States have difficulties in fully implementing IMO instruments.
4. To assess problems in the involvement of State Parties to IMO instruments in their capacity as Port State , Costal State and countries training and certifying officers and crews.
5. To identify the reasons for the difficulties underlined in (3) and (4) above.
6. To make proposals to assist parties in implementing and complying with IMO treaty instruments.
7. To monitor the performance of the actions taken³.

At this point it may be relevant to elaborate a bit on the concept of acceptable standards in connection with the implementation process. The absence of cooperation and the inability or unwillingness of states to make a clear distinction between acceptable and unacceptable standards is probably one of the main sources of difficulties in the implementation process. This leads to a loss of confidence and unilateral measures. When states take action unilaterally, international shipping becomes almost impossible. Therefore, international cooperation is

³Flag State Implementation: new sub-committee to meet. IMO News. 1. 1993.

crucial to the maintenance of acceptable standards. Decisions such as the now infamous U.S. Oil Pollution Act of 1990 (OPA'90) or the U.K. plan to impose tougher regulations on Ro-Ro ferries were rejected by a large part of the shipping community and by the IMO whose Secretary-General has stated:

"There is a danger in any country taking such unilateral action and setting a standard which applies in only one place," he said. "It risks real chaos and defeats the whole concept of developing international standards."⁴

Nevertheless, IMO has always welcomed individual Member States imposing more stringent requirements on their own shipping than the minimum prescribed.

Undoubtedly, the attempts to establish acceptable international standards and to ensure their implementation without alienating special interest groups or countries involve a great deal of difficulty but this seems to be, at least for the time being, the only constructive international approach.

1.2 DIFFICULTIES MET BY DEVELOPING COUNTRIES IN THE IMPLEMENTATION PROCESS.

In order to tackle the implementation issue, one should clearly identify why noncompliance is occurring. There is a general consensus on the need for implementation but when it comes to translating this into practice a lot of different approaches may be seen. Many flag administrations, particularly (but not only) those in

⁴Gilbertson, David. "Patience the virtue of IMO's consensus manager". Lloyd's List. 15 Sept. 1992.p.5

developing countries, find it very difficult to keep pace with the rapid development of IMO instruments⁵. Frequently developing countries lack sufficient financial and technical resources with which to draft adequate implementing legislation, set up effective administrative systems, hire and train enforcement personnel, or purchase the necessary equipment. Under these circumstances the lack of interest and awareness of the difficulties experienced by these countries in implementing IMO instruments becomes a real problem. The poor participation when this topic was raised on the agenda of FSI Sub-committee - only two contributions were made, Indonesia and Norway - should be a signal that something is not working properly and that improvement is needed in this respect. Increased efforts should be devoted to activities aiming at identifying the real problems faced by developing countries and eventually their solutions. In doing this, an important tool is the collection of information on implementation activities, the so-called reporting system. To a certain extent, this seems to be an obstacle encountered by both developed and developing countries. Among developed countries, the difficulties include assembling information from disparate sources, a low priority given to reporting, and insufficient personnel devoted to this activity. Among developing countries, poor reporting is more widespread and is a part of the larger and more serious problem mentioned before: their restricted financial and technical capability to implement the agreements.

An active debate on the extent to which IMO should interfere with the reporting activities of Member States

⁵ IMO document no. FSI 1/7. 26 Feb. 1993.

took place during the first meeting of the FSI sub-committee. Some members invoked the 1948 IMO Convention, which did not provide for international supervision and control, while other members were of the view that without an effective evaluation programme open to outside criticism and review, the implementation goals would not be achieved⁶. Due to the conflict of views, it was agreed that the legal implications of measuring the effectiveness of Flag States in implementing the instruments should be subject to further consideration by the IMO specialized bodies, i.e. the Legal Division and the Legal Committee.

Generally, international agreements do not impose penalties for non-compliance. Instead, their principal enforcement mechanism, at least in theory, is public pressure generated from information on implementation that the parties themselves report to the Secretariat. These reports are the only formal source of information available to all parties on how the process is working. In practice, however, not all members report complete and up-to-date information to the Secretariat and, as a result, the ability of the shipping community to know about compliance problems or to take action to enhance implementation is drastically limited. Additionally, the Secretariat usually does not have the authority or resources needed to verify reported information, or to independently monitor and assess compliance by the parties. Information on implementation is the basis for applying pressure on reluctant Governments and it plays an equally important role in building greater public support for the respective instruments.

It has been noted that better information as well as

⁶ IMO document no. FSI 1/W.P. 4, para 6.34. 21 Apr. 1993: 15.

improved public access to it, so-called "transparency", both allows for and leads to greater public participation in the decision-making process. Transparency creates an incentive for action. Exposure to public scrutiny and criticism has usually led nations to change their shipping policies and to improve their safety and environmental performances. Historically, it has been demonstrated that public opinion, rather than governmental initiative, has been the driving force behind the environmental protection. For instance, a link between democratic governments and environmental protection, stemming largely from citizen access to information and influence in the political process, is illustrated by the different developments in Western and Eastern Europe. The substantial environmental problems in Romania show how authoritarian regimes indifferent to the opinions of their citizens failed to implement international agreements on the environment. The transition to a democratic regime brought access to information and consequently the necessary public awareness. Currently an extensive programme for achieving acceptable environmental protection is being undertaken and implementation of the so called "green instruments" has become a priority.

Information regarding implementation may also enable nongovernmental organizations (NGO's) to play a more enhanced role. Because NGO's do not represent a government, their criticism of implementation efforts is less likely to be perceived as politically motivated or linked to other issues, as could be the case when one government criticizes another. Since governments are frequently reluctant to criticize one another, given their fears of harming relations, NGO's may express complaints in a manner that may make something actually happen.

Aside from the above-mentioned roles, information on implementation can also guide multilateral aid and technical assistance to countries that lack the capacity to fulfil their obligations arising from international instruments. In other words information can help to build a nation's capability to overcome the difficulties. If a party reports problems in complying, it may be provided with financial aid and technical assistance. Tying reporting to aid creates an incentive for parties to report, increases the amount of information available and encourages its function of prompting improved performance.

Despite the advantages enumerated above, the prospect of public disclosure of information still makes some nations reluctant to report. Compliance monitoring is often perceived as a punitive investigatory exercise. The word "monitoring" itself roughly translates in some languages to mean "surveillance." This creates confusion and makes Member States, particularly developing countries, fearful and in some cases prevents them from accepting stronger reporting mechanisms.

Under these circumstances, implementation of IMO instruments by developing countries should not be seen as their own regional problem, separated from global concerns. Assisting these countries in their efforts towards implementation should not be viewed as altruistic on the part of developed countries. On the contrary, seeking to bring them up to the internationally accepted standards is the only way of successfully protecting the world environment and ensuring a common future.

Apart from the difficulties in reporting, developing countries are confronted with another major obstacle: the lack of educated and trained manpower. Performance monitoring, deficiency reports, and casualty investigation

are all valuable tools to improve the situation and to enhance the implementation process, but without an adequate labour force they remain only nice phrases without any substance. In this respect, the creation of World Maritime University in 1983 under IMO auspices was probably the greatest achievement of the maritime nations in the last decade.

With regard to seagoing personnel, it is evident that a growing number of Flag States accept in their fleets seafarers trained and certified in other countries where there may be different approaches to the implementation of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) and related procedures. The shipping community has agreed on the great need for internationally accepted criteria for the approval of training institutions and for the further development of trainers and training aids. Initiated by the Secretary-General of IMO, a comprehensive review of the Convention is now underway and drastic amendments are foreseen in the near future. A sense of urgency was given to this work by the 24th session of the Standards for Training and Watchkeeping Sub-committee in April this year following a number of accidents. The loss of life and environmental pollution were in most of the cases attributable to human error. According to available statistics, more than 80 percent of all maritime casualties are caused in one way or another by man. At the same time such a major convention, which concerns all the aspects of the shipping industry from safe ship manning to proper office-based management, has to be forward looking. As it will affect every seafarer and shipping manager into the next century, the amended convention should not only set standards for today's

training but address those of the next decades as well. The principles for the convention review, as adopted by the sub-committee are:

1. To maintain the integrity of the present convention, recognizing that the existing certificates will still be in use for some considerable time to come.
2. To encourage the use of all types of simulator training for seafarers and to take this into account when assessing sea time requirements.
3. In addition to addressing the acquisition of knowledge, to emphasize the acquisition and assessment of skills and provide for a functional approach to certification⁷.

It appears that the main task is to find ways of incorporating modern training and certification arrangements into the old convention. The role of simulation and skill assessment against knowledge testing in competency certification and the issue of whether simulation should be mandatory or optional were the hottest subjects at the STCW debate. Again, one must turn to the developing countries' dilemma: how to implement? One point should be stressed in any such situation: a convention that addresses the highest technology would be of no value to countries that cannot afford to buy even the cheapest technology unless a common approach is found.

Until now the author's intention has been to identify the main difficulties lying ahead for developing countries in their efforts towards implementation. In the following section an attempt will be made to explore ways of overcoming these obstacles.

⁷Chapman, E. Stephen, and Iain Irving. "STCW - the Change Process has Started". Seaways . June 1993: 25.

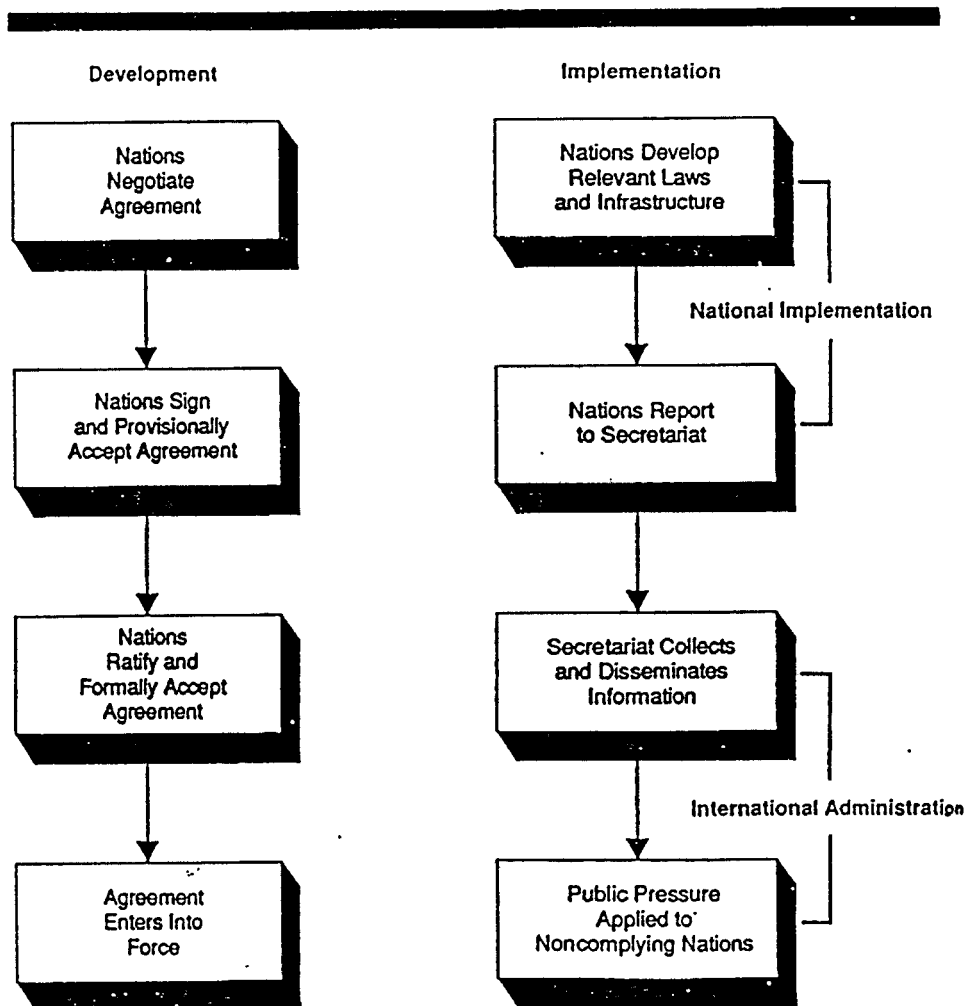
1.3 POSSIBLE GUIDELINES FOR FLAG STATE EFFORTS TOWARDS IMPLEMENTATION

It was seen that disparities in resources among Flag States and deficiencies in administration infrastructure are the main difficulties met in the implementation process. A viable set of guidelines covering this activity will inevitably consider these issues. They should have a pragmatic character and provide a concise overview of the areas that a Flag State must address in order to meet its obligations.

The major IMO conventions acknowledge the mandatory character of implementation. In other words, they state the administration's responsibilities for promulgating laws and regulations and for taking other steps which may be necessary to give conventions full and complete effect. Since implementation is a dynamic process, administrations should continuously improve the adequacy of the measures taken and, no less importantly, ensure that they are effectively monitored.

Since its inception, IMO has created a large body of international instruments covering all aspects of shipping and related maritime activities. If these are to be translated into national legislation, the procedures and stages of the process must be clearly understood. The flow-chart, in figure 1, points out the most important stages of the process.

Figure 1. Process for Developing and Implementing International Agreements.



Source: US General Accounting Office.

The draft of an instrument originates and is developed in the committees and subsidiary bodies of IMO. The next stage is the submission of the instrument to a diplomatic conference which adopts the final text of the convention and determines the conditions for its entry into force. Consent to be bound by an instrument is signified by ratification, (also known as acceptance, or

approval) or by accession. When a sufficient number of states have signified their consent to be bound, the instrument comes into force.

The most relevant for IMO's work are the international conventions and other treaty instruments (e.g. protocols and agreements). Each state agrees to qualify the exercise of its sovereignty in accordance with the limits or conditions set by the terms of the convention, undertaking implicitly or explicitly to implement requirements of the convention and enforce them within its sphere of jurisdiction. An international convention may address matters of public law or private law and may have several distinct parts: formal articles, annexes, appendices or protocols. Most of IMO's technical conventions include annexes which contain detailed technical regulations and procedures. In such cases it is often necessary to provide for a flexible and expeditious method of amendment to enable the regulations to keep up-to-date with developments in the industry and other advances. This is done by a special amendment procedure based on tacit acceptance. This means that an amendment will be deemed to have been accepted by the parties unless, by a specified date, a certain number of parties have indicated in writing their objections to that amendment⁸. This procedure is, however, only used to amend purely technical provisions. The formal treaty articles are usually amended by the traditional method, which requires that the amendments be formally accepted by a specified number (usually two thirds) of the State Parties before they enter into force.

⁸Göranson, Magnus. "The Legal Framework of the IMO". Lectures presented at WMU. 13 Apr. 1992

Another type of international regulation adopted by IMO is the "non-treaty" instrument. This may take the form of a code, recommendation, guideline, etc.. This form is used when governments conclude that a regulation, standard or practice would be appropriate to achieve the objectives of improving safety and/or preventing pollution, without necessarily being embodied in a formal treaty instrument⁹.

At the beginning of this year, IMO was responsible for developing 37 legal treaties, of which 26 are in force, and several hundred codes and recommendations¹⁰. To support their implementation, the Maritime Safety Committee (MSC) established at its sixty-first session a Correspondence Group under the leadership of the United States. According to its proposals, a Flag State Administration should:

1. Develop goals based on international instruments to which the country is party in conjunction with applicable domestic laws and regulations;
2. Implement policies through the issuance of domestic regulations which provide a course of action for achieving the stated goals;
3. Assign responsibilities within the administration to update and revise the goals and policies as necessary; and
4. formally adopt the above within a long-term strategic planning document¹¹

⁹Ibid 7

¹⁰"Secretary-General looks for speed-up of IMO measures". IMO News . 1, 1993: 24+.

¹¹IMO document no. FSI 1/6/4, Annex, para 2.2.1. 3 Feb. 1993:2.

The process logically starts with drafting the national rules. While the appropriate methods for preparing national legislation are not the same in all legal systems or national jurisdictions, certain basic principles are common to all systems, and some fundamental requirements would appear to be applicable regardless in which country the legislation is to be enacted. Perhaps the most important principle is that when a Flag State enacts domestic regulations to implement an international instrument, requirements therein should not be lower than those outlined in the instruments.

The primary objectives when drafting national legislation should be to identify:

1. The substantive areas which have to be covered by the proposed legislation;
2. The authorities and interests which would be affected by such legislation, whether in terms of burdens imposed or benefits and powers conferred on them;
3. The measures which may be necessary to enforce the legislative provisions; and
4. The difficulties (substantive and procedural) which may be foreseen in applying the requirements of the legislation and the possible means of eliminating or minimizing such difficulties¹².

In Annex 1 there is a checklist provided by IMO's Legal Division which may be of great help in this process. Furthermore, in order to ensure that the draft will be a cohesive and clear document which adequately reflects the purpose behind the proposed legislation the legislator

¹²IMO Handbook on implementing international maritime safety conventions through national legislation, London; IMO, 1987: 10-12.

should bear in mind three basic requirements:

- a. formal and logical organization of the parts;
- b. correctness of the substantive and procedural rules to be included; and
- c. clarity and precision of wording.

The simplest method to implement international conventions is incorporation by reference, stipulating that the provisions of the convention in question shall become law upon the coming into force of the legislation. In doing so, some precautions still have to be taken:

- a. Designation of the international instrument should avoid popular names or acronyms;
- b. Both national and international legislation should have the same scope and applicability; if not differences should be clearly spelt out;
- c. The amendment procedure and consequences for national legislation should be carefully and clearly defined.

Another recommendation of the above mentioned Correspondence Group regards the establishment of a support infrastructure to administer the implementation programme. In this respect the availability of appropriate manpower is crucial. It is a priority for a Flag State to have a continuity of personnel with technical expertise, and suitable qualifications to guide, direct and manage such programmes. A department in charge of manpower and compliance with the requirements of STCW Convention is of great importance while the responsibility for officers and crews remains with the Flag State. As it is known that in many developing countries there is a shortage of properly trained personnel, these states should be the first take advantage of the existing training and technical assistance facilities, among which the World Maritime

University plays a very most significant role.

Another component of the support infrastructure should be a department which ensures compliance with the requirements of the ratified conventions of the entities issuing international certificates and documentation. In most legal systems it is possible to delegate authority to organizations to assist in the surveys and inspections required by international instruments. Such delegation has to be done in and unambiguous terms and should delineate fully and clearly the scope of powers delegated, their limitations, the discretions given to these organizations and conditions when the powers may be withdrawn. As mentioned before, control of these bodies in assigning such authority, is essential in order to guarantee continuity of inspections and maintenance of established standards. Based on these requirements, the Correspondence Group formulated the following guidelines regarding the delegation of authority:

1. A formal written agreement between the administration and the organization being assigned authority should be concluded;
2. Instructions detailing actions to be followed in the event that safe conditions cannot be maintained should be elaborated;
3. The administration shall specify whether its standards go beyond the convention's requirements in any respect;
4. The organization should maintain work records which can provide administration with data to assist in interpretation of the convention's regulations;
5. The administration should determine that the organization has adequate resources in terms of technical, managerial and research capabilities to

accomplish the task being assigned.¹³

In addition to the control exercised over the subsidiary organization authorized to act on its behalf, the administration should provide for a global oversight and control programme with the aim of maintaining quality standards, evaluating performances and helping to identify areas in IMO regulations which may need improvement. Although the modern concept of quality was developed with regard to companies creating products or services, the author strongly believes it also applies to administration. In fact quality is conformance to the accepted requirements and "quality management is nothing other than systematically applied common sense."¹⁴ Introduction of a quality system may take time, but once in place it saves time. Quality benefits not only internally, in terms of awareness of responsibilities, improved monitoring and increased efficiency but externally, as well, in the form of international image and prestige. As recently emphasized by M.Storey of Sealink Stena Line, it is not sufficient to set up a quality system - after that it must be constantly monitored.¹⁵

Although it may seem to conflict with the concept of sovereignty, there is a strong belief that the provision of auditing of a maritime administration by an outside entity, at least once every five years, may be largely beneficial. It ensures compliance with the

¹³IMO document no. FSI 1/6/4, Annex, para 2.2.3. 3 Feb. 1993: 3.

¹⁴Cowling, Peter. "The meaning of the Quality". Ship Management . 1992: 30.

¹⁵Motram, David. Lectures at World Maritime University. May 1993.

Administration's stated policies and improves the country's international image.

The administrative rules and regulations covering manning, hull strength, machinery, electrical systems, automation plants, casualty investigation and circulation of information are also of great relevance for an appropriate performance. The facilities and personnel should be appropriate for the size of the fleet registered under the given flag. It is no need to add that evidence of noncompliance will indicate the need for a greater focus on those specific areas.

Finally it may be worth mentioning that the timing component of any implementation project and the financial aspect, that is the costs imposed by the process, may be vital for the success of the project. This last topic deserves special attention and shall be developed more extensively in Chapter 5 of this present paper.

Having reviewed all the above arguments, it may be concluded that implementation is a complex and dynamic process. It undergoes changes according to the size of the country's shipping industry and the overall national economic policy. At the same time the process should be open enough to permit an objective evaluation of its effectiveness. Although sometimes this may be perceived, from a nationalistic point of view, as interference in internal affairs, an outside evaluation of implementation performance might be extremely beneficial for the state itself. Such an assessment will draw the attention of the international community to deficient aspects and encourage technical assistance. There are likely to be new opportunities to upgrade performance and a better access to international resources if the process is frank and open to critics and improvements. To this end, states

should avoid restricting information on their implementation policy and seek for candid international cooperation since the final goal is a global one: improved safety and a secure environment.

In considering international cooperation within the shipping industry, one should not forget the two entities known as the Flag State and the Port State. In the next section the author will try to analyze the Flag State versus the Port State issue and the implications of this potential conflict.

1.4 FLAG STATE VERSUS PORT STATE

One original classification of the means to implement IMO instruments was suggested by Carlos Novi of the Spanish Navy League in his paper "Global Implementation of IMO's International Standards" presented in October 1990:

- inspections (of administrative nature);
- surveys (of technical aspects); and
- controls (carried out by Port States on foreign vessels).¹⁶

On the basis of his experience as a Spanish delegate to IMO, Novi considers inspections and surveys to be most important ways of ensuring compliance with the major technical conventions. They are the responsibility of the Flag State in respect of its own vessels and represent "prima facie" evidence of compliance in the form of certificates which have to be carried on board

¹⁶Novi, Carlos. Global Implementation of IMO's International Standards. IX Asamblea Fidalmar - Chile, 23-26 October 1990, Valparaiso.

permanently.

On the other hand, the control of ships by the Port State ensures the maintenance of requirements after surveys and helps to detect accidental deficiencies. From the manning point of view, control ensures that seafarers serving on board are properly trained, licensed and certificated. In pursuing these goals regional coordination of Port State control is recommended to avoid distortions of the free competition among the ports in the area. In performing such regional agreements states consult, cooperate and exchange information to ensure compliance with the relevant instruments of IMO.

As recently stated in IMO, the above mentioned relevant instruments are considered to be:

- International Convention on Load Lines, 1966 (LL'66)
- International Convention for the Safety of Life at Sea , 1974 (SOLAS '74).
- International Convention for Prevention of Pollution from Ships, amended by the Protocol of 1978 (MARPOL 73/78); and
- International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978 (STCW'78).

The new feature of the Port State Control agreements is "no more favorable treatment" for vessels flying non-party flags. In other words, ships flying the flag of a state which is not party to a relevant instrument, and which are thus not provided with certificates, shall receive a detailed inspection following the same guidelines as provided for national ships to which the relevant instruments ratified are applicable. In general, these inspections consist of visits on board ships checking the documents and certificates regarding the

purposes established. In the absence of valid certificates or documents, or if there are clear grounds for believing that the ship, her equipment or crew do not substantially meet the requirements of a relevant instrument, a more detailed inspection has to be carried out. Usually the control includes "on board operational requirements" as well.

The wording "clear grounds" covers a large number of situations ranging from a report or notification from third parties to indications that the key crew members may not be able to communicate. That gives almost discretionary powers to inspectors and therefore the visit should be carried out by properly qualified persons, authorized by the Maritime Administration, whose professional and moral probity is unquestionable. The final purpose is to ensure that deficiencies detected are rectified and in this respect appropriate action, which may include detention, should be taken. In such situations the Flag State must be notified as soon as possible through its Consul or in the latter's absence, through its nearest diplomatic representative. Each Maritime Authority performing Port State Control should report on its controls and their results, feeding a common information network preferably by means of computerized data.

Under the agreement described above, the right of states to board vessels in their territorial waters has become a de facto international obligation, giving more weight to Port State Authority against the traditional Flag State sovereignty.

In his commentary "Flag State versus Port State in maritime safety", professor A.D. Cooper of the University of Wales (Cardiff) strongly advocates that more authority

should be passed from the former to the latter as a response to the proliferation of the open registry flags. Primarily he emphasizes two objectives for the authority: monitoring performance and taking action against substandard ships. He observes that "the most obvious aspect of the registration of ships is that the ship becomes a floating part of the territory of the Flag State," referring to the concept of registration in the 1958 Convention on the High Seas further developed in 1982 and in the 1985 Draft Convention elaborated by UNCTAD. The "genuine link" supposed to exist between the state and the ship is nowadays, according to the quoted author, bypassed by a series of commercial constraints which started in 1973 with the oil crisis. The reasons for flagging out the vessels were identified as follows:

- reduced taxes
- avoidance of social security and pension constrictions
- minimized other crew costs
- modified safety and social requirements
- avoidance of training costs
- easier loans and mortgages
- subsidies
- improved access to cargo
- broader access to cabotage trades
- avoidance of flag boycotts and trade embargoes
- avoidance of confrontation with national state entities
- protection from foreign naval forces
- reduction of costs of registration.

In 1990 , 30 to 36 percent of the world merchant fleet was registered with so-called "flags of convenience" (FOCs), and the figure is likely to increase to 50 percent

in the near future.¹⁷ FOC translates as states using their capacity to register ships just to collect the registration fees. Usually they do not accept responsibility for the vessels registered and the above "genuine link" is practically non-existent.

With the increase in tonnage registered in this manner, a proliferation of competing classification societies has been observed. About fifty societies are now on the scene and only eleven of them belong to the International Association of Classification Societies (IACS) and enjoy international recognition.

Summing up the above, Cooper emphasizes the relationship between the existing situation and the growing number of casualties. Flag States such as Cyprus, Maldives, Gibraltar, Honduras, Panama and even Greece have registered a higher rate of incidents than the average, which has in fact decreased in the last decade.¹⁸ For example, Liberia's record improved following a substantial withdrawal of tonnage, while Cyprus with the fastest gain in registration recorded the worst rate of casualties in the world.¹⁹ Under these circumstances the professor concludes that among the means to improve the situation Port State Control would probably be the most effective and he may be right.

A deeper analysis of the deficiency reports received before 24 November 1992, to be prepared for consideration by the Maritime Safety Committee in its 61-st session,

¹⁷Cooper, D. Alister. "Flag State Versus Port State in Maritime Safety"

¹⁸Ibid 16.

¹⁹Cooper, D. Alister. "Flag State versus Port State in maritime safety"

shows that 50 percent concern the so-called open registers while the same registers cover only 30 to 36 percent of the tonnage.

Port State Control activity was first regulated by the Memorandum of Understanding (MOU) on Port State Control, known as the Paris Memorandum. The original document was signed in 1982 based on the provisions contained in article VII of SOLAS'74. The agreement was ratified by the European Economic Community (EEC) members together with Finland, Norway and Sweden. It covers both IMO and International Labour Organization (ILO) provisions according to IMO's "Guidelines on control" and ILO's Convention 147. The Paris Memorandum has a special relevance from a practical point of view in that it seeks to prevent the operation of substandard vessels and to suppress operational violations of the pollution conventions in one of the most crowded regions of the world.

The example of Western Europe is carefully watched within IMO and by some other important regions of the world.

By the Resolution A.682, adopted in November 1991 by the IMO's Assembly, Governments were invited to conclude regional agreements on the application of Port State control measures, recognizing the need for effective action to prevent the operation of defective ships. A first response came from Latin American signatories of the Latin American Agreement on Port State Control (Viña del Mar Agreement) adopted in November 1992, in Chile.

In an advanced stage of development is a similar arrangement for the Asia-Pacific region countries which held their second preparatory meeting in Sidney in November 1992.

The working group established by the first session of the FSI sub-committee in April this year welcomed these two initiatives and observed that no significant development has taken place in other regions such as Africa, the Persian Gulf and the Indian Ocean.

Following a request from the Secretary-General of IMO, several countries responded positively by indicating their willingness to provide funds as well as contribute human resources for regional seminars to be held on matters related to Port State Control. Also as a follow-up action to resolution A 682 (17), a global strategy for Port State Control (PSC) surveyor training is being established by the FSI sub-committee. As part of this strategy an action programme should cover the following elements:

1. Needs for the region should be clearly recognized;
2. Each regional cooperative body (MOU) should take responsibility for its regional training programme;
3. IMO should provide assistance and coordinate training programmes;
4. Practicable funding and implementation methods should be developed;
5. Available training facilities and opportunities should be identified and promoted.²⁰

As can be seen, the concept of Port State Control is being actively developed and seems to have achieved a large audience. However, the other side of the coin exists as well and some practical problems have been identified.

Flag States are feeling increasingly under pressure

²⁰Draft Report to the Maritime Safety Committee and the Marine Environment Protection Committee. IMO document no. FSI 1/WP4, 21 April 1993: London.

as ships are detained by what they describe as eager and ambitious PSC inspectors. As stated before, detention should be reported to the Flag State as soon as possible but often they have to wait - in one notorious case as long as two years.²¹ Even when a report is filed promptly, the Flag State can still be on the losing end if the original detention is later proved to be unjustified or caused by an error. A Flag State has no chance of stopping a report once it goes in. An inspector, who may be looking for his first "kill", can act as judge and jury and although the Flag State has the right of reply, the PSC report puts the ship on the "blacklist". Maritime Authorities which detain ships under PSC are required under the SOLAS convention and Resolution A. 466(XII) to file reports with the IMO. The Organization tabulates the information and circulates the "blacklist" to the member Governments. Under the same provisions Flag States are expected to provide, in turn, information on the action taken if that is the case, or any other comments. It is true that in many cases Flag States fail to respond, but a closer look at the available answers²² reveals that 44 percent of the comments indicate errors regarding the ownership of the vessels. That illustrates a lack of coordination between the two responsible authorities: the Flag State and the Port State. In addition, it may cause a great deal of harm to the former.

To give a clearer example of how a simple error may nail down a Government on the "blacklist", the author uses the case of m/v "REA". The ship is described as a general

²¹Guest, Andrew. "Flag State System refuses to wave the banner of surrender". Lloyd's List. 28 April 1993: 5.

²²IMO document no. FSI 1/10, Annex 2, 9 Feb.1993.

dry cargo vessel of 8825.00 DWT, built in 1971, and classified by the Bureau Veritas Classification Society. According to Report No. 135 from the "Deficiency List" mentioned before²³, the vessel was detained by PSC inspectors in the port of Vissingen (Holland) for breaching the provisions of SOLAS '60, Chapter V, regulation 13, and said to be flying the Romanian flag. The reality is that she has never been registered in Romania and had no connection with Romanian shipping companies.

Likewise, the vessel "FALCIU" (Report No.138),²⁴ controlled on 17 March 1992 in Avonmouth (U.K.), is said to have been detained for safety reasons from 30.01.92 to 06.02.92, which is one and half month before being controlled. Even if such errors may be rectified, it is in many cases too late - the damage has been done. As a matter of fact, the Flag State has no chance to contest the PSC inspectors' judgement and there are complaints about the threat of rampant Port State Control.

This sort of potential conflict of interest may well develop into retaliation and serious distortions of the industry as a whole when we consider that the majority of the players are representing the Flag State. The old system based on national sovereignty may be criticized, but is still very present and is not likely to change substantially in the near future. When the control targets a flag of convenience (FOC), the reaction may not be very strong because of the missing "genuine link". But problems arise when the newcomers on shipping scene (i.e. developing countries) are targeted and the reactions may

²³IMO document no. FSI 1/10, Annex 1, 9 Feb. 1993:36.

²⁴ibid 22.

come in very unusual forms.

The two different points of view described above emphasize the necessity of cooperation between Flag and Port States which in fact, excepting FOCs, are in many cases the same entities. Only good communication and coordination between the two authorities may ensure the globalization of the concept and smooth implementation. Internationally agreed standards for PSC inspections are of paramount importance. That would allow shipowners to be fully aware of the risks they take when operating substandard vessels and would give Flag States the chance to improve their inspection standards and tune them to those of Port States. Obviously the consensus is not immediate but the issue is on the table and debates were taking place during the first session of FSI sub-committee. An observer regarded FSI as most important and relevant sub-committee and considered that the Secretary-General should be praised for pushing it.²⁵

Apart from the debates, future developments in this area are likely to follow to follow the current trend, i.e. increased authority for Port States. Developing countries and Flag States in general should be aware that once implemented in the major trading areas PSC will not leave room for "favorable treatment." The message in the medium term is clear: step in by implementing international instruments or leave the industry.

²⁵Guest, Andrew. "Flag State system refuses to wave the banner of surrender". Lloyd's List. 25 Apr. 1993: 5.

1.5 IMO, INCREASED MONITORING POWER FOR A MORE PRO-ACTIVE INSTITUTION

Looking at the multitude of interests involved in the implementation process, one may be concerned that they are too divergent to be matched together. The reality is that in their diversity everyone involved has one common goal, namely to eliminate substandard vessels. It is imperative to do so for the environment, for human life, for vessel and cargo safety and for a sound shipping industry in general.

Money and capital have perhaps the highest mobility across frontiers. In practice there are no boundaries when moving capital from one country to another, and therefore it is extremely difficult to keep track of a shipping company with bad records, if there is no cooperation among Governments.

The last half century has demonstrated that the most adequate forum to tackle shipping problems in a global manner is IMO. Recognizing the importance of the implementation process, Member States have appreciated the contribution of the Secretary-General to the creation of the new sub-committee on Flag State Implementation. Great expectations were attached to this new body and many hot issues are on its agenda. But the success of its attempts is highly dependent on IMO's capability to monitor and audit performance, and on its capacity to anticipate and prevent the problems of the future.²⁶ One may discuss the weaknesses of the classification societies and how the delegation of power should be done, but there are grounds to believe that until the IMO assumes an oversight role,

²⁶Bloom, Kent. Personal interview. 15 March 1993.

the process will stagnate or make only little progress. It is not an easy task and it will require time, funds and additional efforts, but it seems to be the only way ahead.

The International Maritime Organization is, of course an United Nations body, bound by the UN Charter which endorses the rights of national sovereign states but so is the International Labour Organization (ILO). When compared, their capabilities of monitoring and control differ a lot, the latter being in a much better position.

Looking at ILO's goals, which are to improve working conditions, to increase labour productivity and to seek economic and social stability, one cannot miss the similarities existing within IMO. Labour productivity is obviously a common feature, working conditions translates in STCW provisions and if it is agreed that approx. 80 percent of the international trade is seaborne,²⁷ it is also obvious that economic stability needs an efficient and sound shipping industry.

A closer look at ILO's supervisory system established to ensure, as far as possible, that standard-related obligations are observed, may facilitate a better understanding of the current tendencies in the shipping world. This arrangement encompasses two components:

- (1) the Regular System of Supervision, and
- (2) the Special Procedures

The first component is based on periodical reports which fulfil the requirements of the Governing Body and are due normally every four years. For each convention there is a report form reproducing the relevant provisions of the ILO Constitution and the operative articles of the instrument. The introduction of this document states the

²⁷Horrocks, J. Christopher. Lectures, World Maritime University, June 1992.

period covered by the report and refers to the relevant parts of the convention; six parts describing the national legislation, the authorities responsible for implementation, and particular data related to the specific convention's effects; and an Appendix with relevant recommendations. The guidelines for a typical report form are given in Annex 2, as provided by the International Labour Office.

The reporting system is administered by the Office's International Labour Standards Department (ILSD), which is responsible for dissemination of the report forms and collection of the Governments' reports. Conclusions based on the analysis of these materials are submitted to a Committee of Experts on the Application of Conventions and Recommendations (CEACR). The annual report of this committee becomes a working document for the Conference Committee on the Application of Standards (CCAS), part of the International Labour Conference which is organization's highest body. Following this procedure the Conference's attention is drawn to particular problems such as the failure to fulfil constitutional obligations, to submit reports or to supply all due information. The committee may occasionally list cases, previously discussed, of continued failure over several years to eliminate serious deficiencies in the application of ratified Conventions.

In addition to the described scheme, Member States annually prepare a separate report on a convention or group of conventions, chosen by the Governing Body, regardless of their having been ratified or not. The information is analyzed by the Office, adopted by CEACR in the form of a separate volume - a general survey of the subject in question - which is brought on the Conference

Committee's agenda for a general discussion.

This procedure has the effect of disseminating global information in the manner in which given standards are applied or otherwise, and of encouraging states to give fresh considerations to problems of application and obstacles in the way of ratification. In 1990, the Committee of Experts' general survey dealt with labour standards on merchant ships.

The Special Procedures complementing the completing the supervisory role were developed in respect major sensitive areas as: freedom of association, representation made by an industrial association and complaints concerning the effective observance of a convention made by one Member State against another (both having ratified it).

The ILO supervisory procedures have without a doubt contributed considerably to the implementation of the Organization's standards. At least two particular aspects of the ILO's supervisory system may be identified as actively contributing to the effective implementation of instruments. One is the sanction of adverse publicity and the other is the constant informal advisory work carried on by the Office. The Committee of Experts, has counted nearly two thousand cases since 1964 where progress has been made following its comments²⁸. The system has over the years provided assistance to Governments by indicating the points on which action is needed to comply with the international standards, and by developing a consistent approach to how the standards are to be implemented. Finally the dynamism of the non-governmental element -

²⁸"The ILO's system for the supervision of international standards". IMO document no. FSI 1/INF. 10. 18 Feb. 1993:6

supplied by employers' and worker' organizations should be mentioned as a basic ingredient of the oldest specialized Agency in the United Nations.

The above presented facts with regard to ILO are not supposed to be applied to maritime organization as a panacea or universal recipe for success. There are series of specific features related to the historical development and peculiarities of the two organizations which have to be considered and which deserve particular analysis. Moreover, the present paper does not advocate an abrupt change in IMO's strategy and structure as recently proposed by U.S. shipowner Ole Skaarp at BIMCO's general meeting in Singapore. An international register to identify the "real" owners²⁹ implies a supradimensioned enforcement machinery and is perhaps not very realistic yet dealing with traditional sovereign maritime states.

At the same occasion the chief of IMO's Secretariat warned about supplementary funds required by broader operational audit responsibilities to verify that Conventions' provisions were being met.

It is believed that IMO instruments can be strengthened if the quantity and quality of the parties' efforts to implement are increased.

"Enforcement responsibilities rested with the Flag State and on their reaction rested the success of present IMO programmes". Particularly after accidents IMO receives the blame for regulations that are not strict enough or not properly enforced. Very often, in such situations, the complaint that "IMO has no teeth" is heard. The fact is of course that the IMO does have a lot

²⁹Mulrenan, Jim. "IMO refuses to be seen as international 'scapegoat'". Lloyd's List. 21 July 1993: 3.

of teeth. They are its 143 Member Governments³⁰.

According to its ability IMO has adopted a more pro-active attitude towards implementation during the last few years. Future options as a "whitelist" of ships complying with its standards placed in a data bank, a closer cooperations with the insurance industry aiming to isolate bad operators or with ports to refuse admittance for substandard vessels are currently considered by the Organization, but all the initiatives are hindered by insufficient funds.

Looking at these different positions it is the author's belief that for the years to come IMO will need a dynamic approach to respond to sustainable development necessities. For this purpose, undoubtedly, new responsibilities are emerging and consequently the Member States should vest more authority in the IMO. The Organization should be able to foresee events, identify the roots of likely developments and phenomena and solve the problem before the first disaster occurs. Humanity can not afford anymore to guess; everything must be predicted and planned. A pro-active attitude is perceived as the ability to process information, and to perform research work and consultancy, as was recently decided for the comprehensive review of STCW Convention of 1978. A mandate to coordinate views and ideas, to evaluate and monitor should be given to the Secretariat in order to provide final results for Governments. A more pro-active approach will enable the Secretariat to answer the questions legitimately raised by Member States. It seems that the time when IMO was just providing a forum for discussions related to shipping matters has gone and that

³⁰Ibid.

new challenges lie ahead for the Organization. Due to its structure, IMO may be the best source of data, statistics, prognoses and suggestions for maritime policies in developing countries. The expertise is within IMO, but financial support is needed and the international shipping industry has to pay the bill.

It has been agreed that ultimately the enforcement of standards rests with the Flag States, but the awareness of their Governments needs to be stimulated. The Organization should strive to identify the difficulties related to implementation and provide guidelines to solve the problems. The monitoring system proposed to be established by IMO to evaluate effectiveness in implementing standards should be perceived as a help and not as an aggressive form of surveillance.

Finally, it is believed that during the last half a century IMO has proved its usefulness and sound basic principles. A global approach towards shipping matters is essential and the world should continue to avoid the danger of regionalization. The Secretary-General of IMO stated recently that "to retreat from international treaties to national and regional legislation would not represent progress and would ultimately lead to chaos that would harm maritime safety and the environment" and the maritime world should give him the due credit and support.

This prospect is only possible if more active and conscious participation of all Member States occurs and extended support from the shipping industry is provided. It is in their power to sharpen "IMO's teeth" and "to make them bite" when necessary.

CHAPTER 2

IMPLEMENTATION OF IMO INSTRUMENTS REGARDING THE ENVIRONMENT IN THE SUSTAINABLE DEVELOPMENT CONTEXT

The famous motto of the IMO "Safer Shipping and Cleaner Oceans" translates into two categories of instruments: safety and environment related. Following the theoretical approach to the concept of implementation in the previous pages, this chapter will pursue the environmental instruments.

The environment, on which the future of the planet is so dependent, appears to be reaching a crucial turning point nowadays. Growing awareness of the threat of pollution is pushing mankind towards environment-sensitive or "green", habits and policies.

2.1 MARPOL 73/78 A MILESTONE IN THE INTERNATIONAL EFFORTS TOWARDS HEALTHIER SEAS

While, historically, human civilizations regarded the oceans as dumping sites, the situation began to change after the discovery of oil. The first concerns about marine pollution were identified early this century, but internationally coordinated action against marine pollution

was first taken by the IMO through its Marine Environment Protection Committee.

The "green family" of the environmental instruments for which IMO is responsible covers a wide range of issues from purely technical to legal and economic aspects. The 1972 London Dumping Convention (LDC), which now has 71 contracting parties, provides an international framework for the disposal of wastes and other matter at sea.³¹ The 1969 Civil Liability Convention and the 1971 Fund Convention provide a framework for liability and compensation in the event of a major oil spill at sea. The 1969 Intervention Convention and its 1973 Protocol provide the legal framework for intervention on high seas in case of a pollution incident. The recent International Convention on Oil Pollution Preparedness, Response and Cooperation, adopted in November 1990, provides for counter-measures to combat marine pollution to be initiated more quickly and more effectively than at present. It has three main features:

- Oil Pollution Emergency plans
- Response Systems
- International Cooperation.

The most important international instrument regarding marine environment protection is the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto, and therefore abbreviated as MARPOL 73/78. The Convention is designed to prevent pollution from operational discharges from ships and has five annexes: Annex I dealing with oil, Annex II with bulk chemicals, Annex III with chemicals in packaged form, Annex IV with sewage and Annex

³¹ Focus on IMO. "IMO Conventions status at 1 January 1993. J/4884/Rev.2

V with garbage. Annexes I, II, III and V are now in force, but the present lack of shore-based reception facilities is widely regarded as an impediment to the effective implementation of the Convention. MARPOL 73/78 is, in the author's view, the key environmental instrument, as it affects all aspects of the shipping industry. Therefore, the remainder of the present paper will examine the Convention in the present context of global concern about the environment and focus on its implementation.

In order to explore the practical mechanisms of properly implementing this major instrument and to investigate the details of the process, the author will try to provide a short description of the Convention from a historical perspective.

Since 1926, when an international conference was held in Washington D.C. in an attempt to control the discharge of oil into the sea, marine pollution has been an increasing concern for the international community.³²

In response to the growing public concern about oil pollution, the United Kingdom Government, in 1954 convened a conference which adopted the International Convention for the Prevention of Pollution of the Sea by Oil (OILPOL 54). Four years later the instrument entered into force, and it was subsequently amended in 1962, 1969 and 1971.³³ The Convention made a distinction between oil and oily mixtures from machinery spaces and cargo tanks. For the first time, zones were established in which it was prohibited to discharge cargo oil. However, oil from machinery spaces could still be discharged, provided this was done as far as

³²The Conference did not lead to the adoption of a convention. IMO Model Course 1.11 on MARPOL 73/78, Annex 1, 1988.

³³ Ibid 31.

possible from land.

In 1962 the prohibited zones were extended, the tonnage of ships to which Convention applied was reduced and a compulsory "oil record book" was introduced. In 1969 the quantity of oil that could be discharged into the sea was further limited. The basic and perhaps most valuable principle of OILPOL 54 was that residues and oily mixtures for which discharge is prohibited should be retained on board and transferred to shore based reception facilities for treatment and disposal. The provision of necessary reception facilities was not a prerequisite for becoming a party to OILPOL 54. Uncertainty over the required capacity of the reception facilities, and the fact that the whole matter was regarded as a non-profit-making undertaking were the reasons why provision of facilities did not progress satisfactorily and why the Convention did not function the way it was intended to.

By the late 1960's concern had extended to other substances transported by ships and in October 1969, after the Torrey Canyon disaster, the IMO Assembly, anticipating the UN Conference on the Human Environment (Stockholm 1972), adopted a resolution calling for the preparation of the 1973 Conference on Marine Pollution.³⁴ Four years later delegates met under IMO auspices to consider the proposed International Convention for the Prevention of Pollution from Ships, 1973 (MARPOL). As the most ambitious attempt ever made to combat shipborn pollution, it sought to eliminate marine pollution from operational activities and to reduce the threats to the environment from accidents. New measures for tanker safety and pollution prevention were introduced in 1978 through the adoption of

³⁴ IMO Resolution A. 176(VI), 21 Oct. 1969

a protocol to the MARPOL Convention taking into account technical advances. Pollution prevention measures concerning discharges at sea of solid cargoes carried in bulk, and gas emissions are currently being addressed for further action under the Convention.

The regulations contained in Annex I (oil) and II (bulk liquid chemicals) are mandatory and must be applied by all Parties to MARPOL 73/78, while those contained in Annexes III (packaged goods), IV (sewage) and V (garbage) are optional. As of 1 January 1993, the number of states accepting MARPOL 73/78 and its Annexes with the corresponding percentages of world tonnage covered were as follows:

Table 1. MARPOL 73/78 Status at 1 Jan. 1993

	Annexes I & II	Annex III	Annex IV	Annex V
No. of states	78	54	45	59
% of tonnage	90.96	56.86	39.42	66.85
Date of entry into force	2.10.1993*	1.07.1992	-	31.12.1988

* Annex II became effective on 6 April 1987

Source: Focus on IMO, "IMO Conventions Status at 1 January 1993. Doc. No. j/4884/Rev.2, 27 Jan. 1993.

MARPOL 73/78 superseded OILPOL 54, assuming its basic requirements and defining oil in a similar manner, while introducing more specific provisions regarding reception facilities. Firstly, each country accepts the obligation to ensure the provision and maintenance of adequate reception facilities for oil as well as chemicals;

secondly, such facilities for oil must be available no later than one year after the entry into force of the convention, or by 1 January 1977 for special areas, whichever occurs later.³⁵

The articles to the convention describe the relationship between states and foreign ships. Article 3 says that the Convention shall also apply to ships not entitled to fly the flag of a Party to the Convention but which operate under the authority of a Party. This provision restricts even more the possibility of substandard vessels changing flags in order to avoid responsibilities towards the marine environment. In order to enable detection of violations and enforcement of the Convention, ships must hold a certificate issued by their Flag States as per Article 5 of the instrument. If the conditions of the ship or its equipment do not correspond substantially with the particulars of the certificate, or if the ship does not carry a valid certificate, the port authorities of a Party must take steps to ensure that the ship will not sail until she can proceed to sea without presenting the threat of harm to the environment.³⁶

Very important to this dissertation is Article 11, which requires Parties to communicate to the IMO, inter alia, a list of reception facilities, including their location, capacity and other characteristics.

Also of significance for the purpose of this paper is Article 17, which deals with the promotion of technical cooperation:

"The Parties to the Convention shall promote, in

³⁵ All information on MARPOL 73/78 acquired from the text of the convention itself.

³⁶MARPOL, Article 5, Certificates and Special Rules on Inspection of Ships.

consultation with the Organization and other international bodies, with assistance and coordination of the Executive Director of the United Nations Environment Programme, support for these Parties which request technical assistance for:

- (a) the training of scientific and technical personnel;
- (b) the supply of the necessary equipment and facilities for monitoring;
- (c) the facilitation of other measures and arrangements to prevent or mitigate pollution of the marine environment by ships; and
- (d) the encouragement of research; preferably within the countries concerned, so furthering aims and purposes of the present Convention."³⁷

The technical Annexes to the Convention lay down the rules for the construction of ships and for ships operations that may entail the risk of marine pollution.

Annex I gives a broader definition of oil³⁸ and therefore it covers a wider area. The principles of Annex I, as stated by IMO³⁹, are to:

- minimize the generation of oil and water mixtures;
- set limits to the quantity of oil that may be discharged into the sea;
- set effluent standards so as to render any discharge harmless and to take extraprotective measures for

³⁷ MARPOL, Article 17, Promotion of Technical Cooperation

³⁸ Than the one given by the preceding OILPOL 54 Convention.

³⁹ IMO Model Course 1.11 on Annex 1 of MARPOL 73/78, 1988.

- special areas and coastal zones;
- carry oil in tankers which are protected from direct impact of collision or stranding;
 - limit the size of cargo tanks;
 - carry oil in ships which have greater survival capability in case of damage.

Compliance with the construction and equipment requirements for ships is enforced through the International Oil Pollution Prevention (IOPP)-Certificate and regular surveys. This form of enforcement is backed up by controls of the Port State, as analyzed previously. These controls include the inspection of the Oil Record Book to ensure that ships adhere to the required operational procedures.

The preparation of Annex II raised, at that time, considerable difficulties because of the large number of liquid chemicals carried in bulk by ships. The IMO requested GESAMP (United Nations Joint Group of Experts on the Scientific Aspects of Marine Pollution) to examine such chemicals with the view to evaluate the hazards which these substances might pose to the marine environment. Following the completion of MARPOL 73/78, GESAMP agreed to undertake the ongoing task of evaluating environmental hazards for additional substances proposed for carriage by ships. More than 2,500 substances have been evaluated by GESAMP's Working Group One and rules for the transportation of bulk chemicals have been published by IMO in a separate booklet "Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk." Regulation 7 of Annex II obliges governments to assure the provision of facilities according to the needs of ships for the reception of the residues and mixtures containing noxious liquid substances.

Annex III deals with pollution by harmful substances

carried in packaged forms. It contains detailed standards for packing, marking, labelling, documentation stowage as well as quantity limitations, exceptions and notifications for preventing pollution by harmful substances. It is perhaps useful to specify that in this respect "harmful substances" means any substance which, if introduced into the sea, is liable to create hazards to human health, to harm the living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea and includes any substance subject to control by MARPOL 73/78.⁴⁰

Annex IV was drafted to prevent marine pollution by sewage from ships. Although there are signs of increasing government support, the respective regulations are not yet in force.

Annex V covers the discharge of garbage from ships at sea. For the Convention's purpose, garbage is defined as follows:

"all kind of victual, domestic and operational wastes excluding fresh fish and parts thereof, generated during the normal operation of the ship and liable to be disposed of, continuously or periodically, except those substances which are defined or listed in other annexes to the MARPOL 73/78 Convention."⁴¹

Extending the prohibition already in place under LDC, the 1973 Conference decided to include persistent plastics

⁴⁰Stuberund, Gunnar. "Prevention of Marine Pollution from Ships" Lectures presented at the World Maritime University. June 1992.

⁴¹Okamura, Bin. "Overview of the Annex V of MARPOL 73/78". Lectures presented at the World Maritime University. April 1992.

and other persistent synthetic materials in this annex.

The resolutions of MARPOL 73/78 are recommendations on the most effective implementation of the Convention. They set target dates for entry into force and look at future developments aimed at eliminating pollution. They also stress a number of technical aspects regarding tankers and propose, when necessary, new and more adequate wording for some of the provisions of the Convention.

This study will mainly focus on MARPOL 73/78, Annex I, but some of the conclusions will be applicable to annexes II, IV and V since they also contain provisions regarding reception facilities.

Before going into more details a brief look at the global issue of environment protection versus industrial development may help the reader to better realize the challenges ahead for the shipping industry.

2.2 AGENDA 21, A REFLECTION OF THE WORLD'S ENVIRONMENTAL CONCERNS.

In 1972, the Stockholm Conference on Human Environment represented the first major attempt to internationally examine the future of the environment. The United Nations Conference on Environment and Development (UNCED) was held in Rio de Janeiro, Brazil, in June 1992 exactly twenty years after the previous one. The Summit generated expectations in the hearts of all concerned people on the planet. Pollution of the seas, the scarcity and contamination of drinking water, the quality of the air and the ozone layer problem, together with many other issues, were on the agenda of the conference. All of these are equally important for the future of the planet but the main

achievement may well have been to focus world attention on the need for policies which can help reconcile the often competing demands of environmental protection and development. This was one of the most valuable ideas taken from the 1987 Report of the World Commission on Environment and Development, also known as Brundtland Report.

The document promoted the concept of "sustainable development," which refers to meeting the needs of the present generation without compromising the needs of the future generations.⁴²

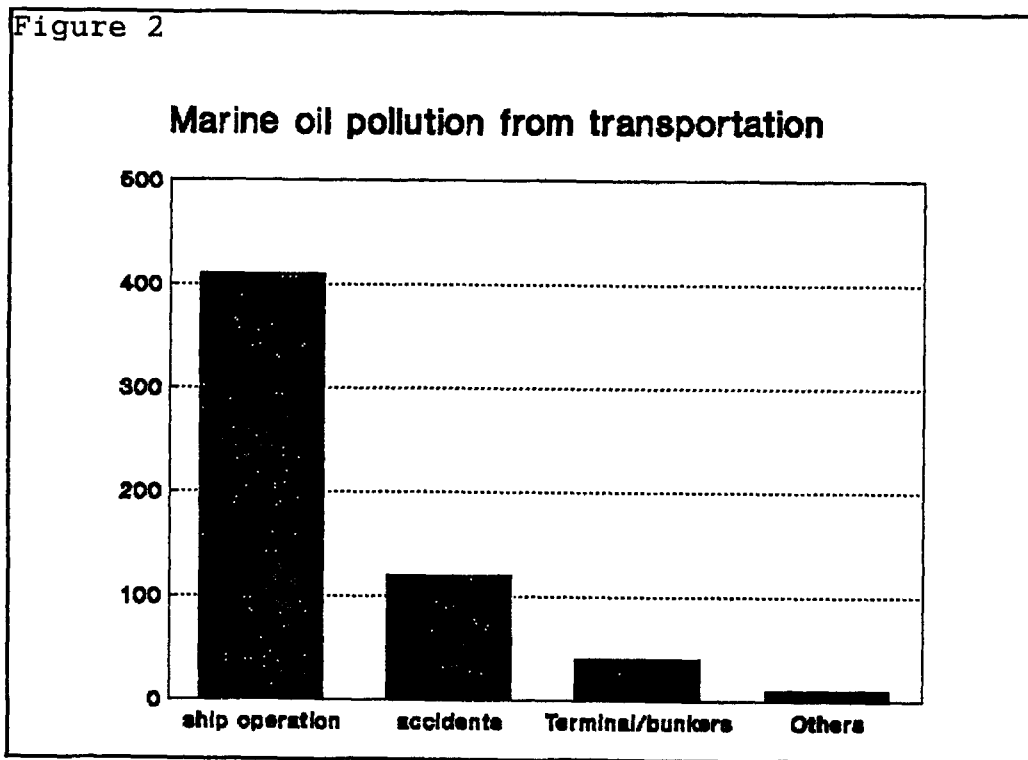
In many countries the protection of the environment has become a major concern that is reflected in Government policies. Industry is called upon to prove its environmental credentials and people are turning to "green" policies in their everyday lives. In some other countries, the protection of the environment is seen as a luxury which can hinder the development on which their future greatly depends. Balancing those two themes together in a creative way may be the most challenging goal in our time as well as the most difficult dilemma.

Although only two out of five agreements on the table in Rio de Janeiro were opened for signature and ratification during UNCED, the summit had the merit of addressing the major anxieties of humanity at the end of this century. Together with the Rio Declaration on Environment and Development and the Forest Principles, Agenda 21 was adopted by consensus at the close of UNCED.

The 800-page Agenda 21 is a huge programmatic document looking beyond the year 2000 at what has to be done to protect the environment and rescue the planet from destruction. Its 40 chapters cover a large spectrum of

⁴²World Commission on Environment and Development. Our Common Future. Oxford: Oxford Univ. Press. 1990.

problems and pursue four important headings: Basis for Action, Objectives, Activities and Means of Implementation. Each Chapter also includes projections of the costs of the proposed activities.



Source: US National Academy of Science, 1990.

The maritime related issues are addressed in Chapter 17, under the title "Protection of the Oceans, All Kinds of Seas, including Enclosed and Semi-enclosed Seas, and Coastal Areas and the Protection, Rational use and Development of their Living Resources." This chapter is divided in seven programme areas, of which the most relevant for the purpose of this paper is " Marine Environmental Protection." The document recognizes that the degradation of the marine environment largely results from land-based sources, which represent 70 percent of the

total marine pollution, the main contaminants being sewage and nutrients. Although maritime transport is responsible only for 12 percent of marine pollution, 568,800 tons of oil still enter the oceans each year as a result of normal shipping operations, accidents and illegal discharges.⁴³ For this reason, the document recommends a precautionary approach in the spirit promoted by the United Nations Convention on the Law of the Sea (UNCLOS). States should commit themselves to reducing the risk of long term or irreversible adverse effects, to ensuring prior environmental assessment of their marine related projects, and to developing economic incentives to apply clean technologies and other means consistent with the internationalization of environmental costs. It may seem nonsense to remove the frogs from the site for an extension of the container terminal in Bremerhaven (Germany)⁴⁴ and to allocate for that 10 percent of your project budget, but "the polluter pays" principle is the only reasonable approach to pollution.

In this respect Agenda 21 provides a comprehensive list of measures, of which the following are considered most relevant by the writer:

- (1) Supporting wider ratification and implementation of relevant shipping conventions and protocols;
- (2) Facilitating the process in (1), providing support to individuals states upon request to help them to overcome the obstacles identified by them;

⁴³ International Chamber of Shipping. "Shipping and the environment. A code of practice". London, 1993: 11.

⁴⁴Kybart, Werner. "Aspects and trends of container handling". Lectures presented at World Maritime University. Oct 1992.

- (3) Promoting cooperation in monitoring marine pollution from ships, especially from illegal discharges (e.g. aerial surveillance) and enforcing MARPOL discharge provisions more rigorously.
- (4) Assessing the state of pollution caused by ships in particularly sensitive areas identified by IMO and taking action to implement applicable measures, where necessary, within such areas to ensure compliance with generally accepted international regulations;
- (5) Facilitating the establishment of port reception facilities for the collection of oily and chemical residues and garbage from ships, especially in MARPOL special areas, and promoting the establishment of smaller scale facilities in marinas and fishing harbours.⁴⁵

The last point on the list is of particular interest for this study since it deals with reception facilities. From a total amount of 174 million US\$ estimated for sea based activities per year, 84 million are needed to build reception facilities in developing countries. As the figures show, large and complex activity is foreseen in this respect and special financial arrangements and mechanisms have to be put in place. Similar to existing international agencies traditionally dealing with loans and grants, such as the Global Environment Facility, IMO may receive new responsibilities in connection with a new "Reception Facility Fund."

According to the document at hand, the money for

⁴⁵ UNCED. Document No. A/Conf. 151/4 (Part II): 144+. The complete list, as provided by Agenda 21, Chapter 17, may be consulted in Annex No.3

operation and maintenance of those facilities, and perhaps even for the cost of their construction, should be raised by the shipping industry. The author does not entirely agree with this policy, which raises a series of problems when it comes to the practical aspects of enforcement. Further arguments against the policy are presented in Chapter 4.

Special attention is given in Agenda 21 to the Convention on Oil Pollution, Preparedness, Response and Cooperation. States are encouraged to develop contingency plans and to establish or strengthen regional oil/chemical-spill response centers.

Another field where cooperation among states is strongly recommended is data management: States are advised to perform systematic observations on the state of the marine environment and to establish clearing-houses on marine pollution control information.

A crucial subject when dealing with pollution is the manpower available for these purposes. Regarding human resources development, Agenda 21 calls upon governments to:

- (1) Provide training for critical personnel required for the adequate protection of the marine environment as identified by training needs surveys at national, regional or subregional levels;
- (2) Promote the introduction of marine environmental protection topics into the curriculum of the marine studies programmes;
- (3) Establish training courses for oil and chemical-spill response personnel, in cooperation with the oil and chemical industries;
- (4) Conduct workshops on environmental aspects of port operations and development;

- (5) Strengthen and provide secure financing for new and existing specialized international centers of professional maritime education.⁴⁶

Some of these provisions have already found their intended audience and the closest example is the new orientation and enhanced environmental component of the General Maritime Administration course at World Maritime University.

Common to all the programme areas is the particular concern for the problems of developing countries. This is clearly a more realistic approach to the concrete situation and, at least in theory, may well be another major achievement of the conference. International agencies, governments and the private sector are encouraged to take expeditious steps to provide cooperation, the effective transfer of technology and technical assistance.

Although it is widely recognized that financial support for the protection of the environment is perhaps the most important issue, this vital problem was not satisfactorily addressed during the conference and credible solutions are far from being reached. The necessary additional 70 billion USD annually needed to meet the UNCED challenge is far from being raised. The level of ten billion USD recommended for 1993 by the Brundtland Commission in April 1992, was with difficulties nearly achieved and that led to a great deal of disappointment among the developing countries, environmentalists and organizers.⁴⁷ This issue continues to be a main concern but many believe that a new approach should be found.

⁴⁶Ibid 44: 148.

⁴⁷ IMO Document No. LDC 15/3/1 "Review of the outcome of the United Nations Conference on Environment and Development" 18 Sept. 1992.

UNCED demonstrated that the international community may not rely too much on direct contributions by states for environmental purposes. Under these circumstances, the concept of international taxation could be an alternative way to finance the UNCED initiatives. Based on the experience gained under the Law of the Sea by the Sea Bed Authority, the international community should strive to find new ways to tackle this very serious problem. To a certain extent, some initial steps are predictable in the European Economic Community (EEC), where energy taxes for using fossil resources are to be established.⁴⁸ This is only a beginning and more decisive initiatives are required while the pressure on the environment constantly increases.

One of the most vocal critics of the Rio Conference was Greenpeace International. In their view the concept of sustainable development translates into three interlinked principles essential for a sound approach to the environment: ecological sustainability, social equity and popular participation. Ecological sustainability is defined as the long term viability of local, regional and global ecosystems, and the maintenance of the biological and genetic integrity of these ecosystems. Protecting the environment alone will not solve the world's problems. Without fair access to the planet's resources, the social problems, like poverty associated with unequal distribution, will grow and the resulting turmoil will prevent humanity from moving towards ecological sustainability. Countries which need to provide more food for an expanding population find it difficult to understand why they should not cut down their forests and turn them into farm-land. Lectures on the need to preserve fish

⁴⁸ Ibid 46.

stocks are not appreciated in coastal villages were people are already starving. This is how Greenpeace explains the principle of popular participation at all levels of society as a pre-requisite for achieving ecological sustainability and social equity.⁴⁹

Despite its limits and the large number of critics, especially among the environmentalists, UNCED did have a series of achievements and left room for future hope. It invited governments and international organizations to amend inappropriate practices and to promote proactive changes by endorsing a precautionary approach, clean production and a "no regrets strategy." It proved that a global "Earth Summit" may take place. It was an opportunity for interaction between the 182 states which participated, including 106 heads of Government, various UN and other international agencies and over 650 accredited NGO's.⁵⁰ There was hope when some delegations committed themselves to concrete environmental objectives, as was the case with the European Community on the "climate change." And there was also hope in providing a collective vision and a sense of solidarity in the ongoing efforts towards a safer and cleaner planet.

Agenda 21 has been described as the most far reaching action programme ever agreed upon in the international arena. At the end of the 12-day conference, the UN Secretary-General said:

"A great stride has been taken towards our goal,

⁴⁹IMO Document No. LDC 15/3/1. Review of the outcome of the United Nations Conference on Environment and Development. 18 Sept. 1992.

⁵⁰" Follow-up: UN Conference on Environment and Development". UN Chronicle. Volume XXIX, No. 3, September 1992: 59-67.

which is simply stated: saving our planet. This is not a time to rest, for almost everything remains to be done. Today man is still a formidable destroyer."⁵¹

These humanitarian principles are not new and during the last three decades they have been part of IMO's policy in a form or another. More than enunciate them, the Organization has found the means and ways to translate them into practice. The concept of sustainable development, followed by IMO in all its instruments, found its best expression in the "Global Programme for the Protection of Marine Environment." The issue of social equity, in terms of better distribution of resources, has been pursued since the early 1960s, when the IMO Technical Cooperation Committee was established. The maritime organization attended both the Stockholm and Rio Conferences and in between these major events its policy was consistent with the noble principles enunciated. In its half century of existence the IMO has proved to be the most suitable forum to deal with technical aspects of shipping. It has also demonstrated the necessary flexibility to keep pace with technological developments. The most recent proof of its ability is the "six point strategy" regarding the marine environment and the Global Programme to help its implementation. An in-depth look at this programme will better illustrate the consistency of IMO's policies towards the environment and give the reader a more detailed picture of the Organization's environmental concerns in the 1990's.

⁵¹Ibid 49.

2.3 THE IMO GLOBAL PROGRAMME: A MEANINGFUL APPROACH TO THE ENVIRONMENTAL PROBLEMS OF THE 1990'S

Having discussed the global concern about the environment after the 1992 summit in Rio, the anticipatory strategy of IMO when establishing its global programme, in 1990, is more evident. In elaborating this code of conduct IMO has always considered the developmental aspects. The main principle followed in its six points combines the required measures to protect the marine environment with the problems Member States may have in implementing such measures without harming their own economic development. The six tenets which provide the basic framework of the whole strategy are stated enumerated below:

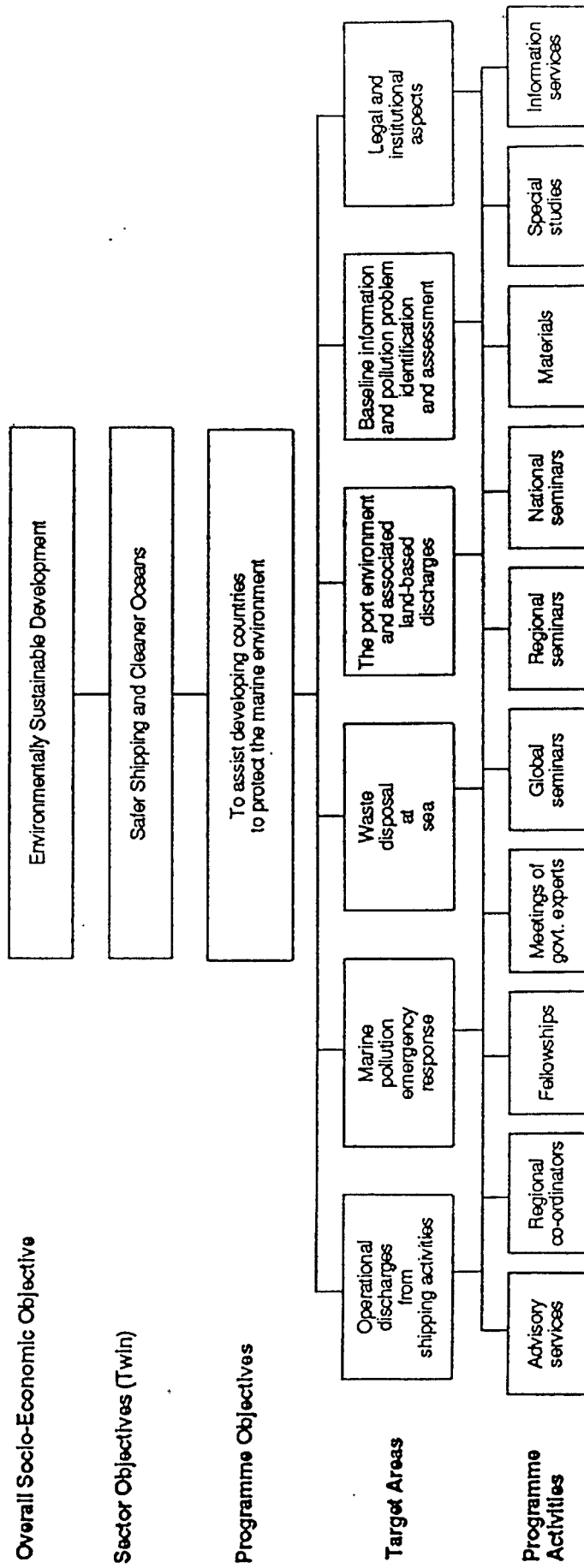
- (1) To provide an effective machinery for technical, legal and scientific cooperation among governments in the field of the protection of the marine environment from pollution from ships and related activities and the mitigation of environmental effects of such pollution and compensation;
- (2) To adopt the highest practicable international standards in matters concerning maritime safety and prevention and control of marine pollution from ships and related activities;
- (3) To encourage the widest possible acceptance and effective implementation of these standards at the global level;

- (4) To strengthen the capacity for national and regional action to prevent, control, combat and mitigate marine pollution and to promote technical cooperation to this end;
- (5) To cooperate fully with other organizations within the UN family and relevant international, regional and non-governmental organizations to ensure a coordinated approach to the problem and minimize wasteful duplication;
- (6) To help IMO Member States - and especially developing countries - to implement this strategy.⁵²

The importance given to implementation as a process is once again stressed by these goals. Accordingly, an action plan, known as "IMO's Global Programme for the Protection of the Marine Environment", has been established to put this strategy into effect. Based on the recommendations of the previously mentioned Brundtland Report, the guiding philosophy of the programme is the **proactive attitude**, in other words the "anticipate and prevent" approach. Training, education and information exchange are the main areas but activities such as helping the developing countries to identify problems, establishing strategies for overcoming the problems and the involvement of regional institutions to implement them on a participatory basis, are also of great significance. A description of the goals and targets of the Global Programme is given by the IMO flow chart in Figure 3.

⁵²IMO's Global Programme for the Protection of the Marine Environment. "Save Our Seas". IMO, London. 1992.

Goals and Targets for the Global Programme



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Figure 3. The IMD Global Programme (flow chart)

Source: "Save Our Seas" IMD, London, 1992.

Recognizing the paramount importance of upgrading the progress of developing countries towards environmental protection, the programme recommends the following means of assistance:

1. Assessment of the pollution of the coastline and the state's ability to meet its responsibilities according to international conventions.
2. Research and development of proper technologies to deal with marine pollution, using preferably indigenous materials and expertise.
3. National consultations seeking inputs from all concerned with or affected by the measures to combat ship generated pollution.
4. National initiatives and laws to give effect to international conventions and to establish national regulations.
5. Prevention and clean-up measures including disposal of pollution combating equipment, enforcement of regulations and training of clean-up teams.⁵³

With respect to this last point, the latest environmental instrument, the "International Convention on Oil Pollution Preparedness, Response and Cooperation" proved its effectiveness by combating the spill that occurred offshore Kuwait during the Gulf War in 1991.

In addition to these means designed to assist governments, the programme provides for a large range of

⁵³ Ibid 51.

support activities such as advisory services, regional coordinators, fellowships, meetings of governmental experts at the regional level, seminars, special studies and information services.

Looking at the way it works and at its achievements, it may be stated that the Global Programme has a lot of advantages in comparison with previous initiatives and attempts. First, as its name suggests, it addresses global concerns and stimulates global and regional cooperation. That allows identification of the common problems and leads to better coordination when dealing with these problems. In conditions of scarce and expensive expertise, the programme optimizes the use of existing resources and reduces duplication of effort. As the marine environment impacts so many sectors of society, the programme has a multi-disciplinary and at the same time interdisciplinary character with built-in flexibility allowing easier responses to emergencies regardless of their complexity.

The Global Programme seeks to promote the utilization of regional institutions in the implementation of activities and instruments, while at the same time acting as a catalyst and providing advice in these projects. These components of the Programme illustrate the principle of participatory approach, and the agreement known as ROCRAM (The Operative Network for Regional Cooperation among Maritime Authorities of South America, Mexico and Panama) may be the best example. The efforts of the above countries towards the implementation of environmental regulations take full advantage of IMO's expertise and experience under the umbrella of the Global Programme.

Most importantly, the Global Programme provides a forum where countries, international agencies, non-governmental organizations and other entities, can

cooperate and share costs. Beyond the immediate cost effective aspect of this last characteristic, the long-range effects are extremely promising and in line with the general purposes of the United Nations. Bringing parties together around the table, facilitating communication and encouraging common policies on a regional basis releases tension among countries, avoids conflicts and ensures the proper environment for a more optimistic common future.

The IMO Global Programme for the Protection of the Marine Environment is a major response to the threat of pollution, but there is still a great deal more to be done. IMO is the responsible agency for setting the rules and for helping to ensure that they are implemented but the costs of environment protection are far beyond organization's regular budget. Twenty-six years ago the famous Maltese Ambassador to UN, Arvid Pardo, described the oceans as being "the common heritage of mankind" and in this perspective they can only be regulated and managed on an international basis.⁵⁴

The seas can still be saved but every nation must be ready to accept the difficult adjustments that genuine marine environmental protection may require and pay the bill. There are many problems regarding the marine environment now, and there will be more in the future, but basically the message remains one of hope if IMO, and through it, the whole shipping community, continues to receive support from the experienced maritime nations. With their commitment and support, major progress is within reach. Without their participation, the advances already made could well be in jeopardy.

⁵⁴Jagota, S.P. " The United Nation Convention on the Law of the Sea in perspective and development". International Ocean Institute, Canada, July 1992.

CHAPTER 3

ROMANIA, A MARITIME NATION IN TRANSITION SEEKING HIGHER ENVIRONMENTAL STANDARDS




3.1 ROMANIA, GENERAL FEATURES.

According to the UNCTAD Global Report for 1992, Romania is one of the so-called "transition countries" located in Eastern and Central Europe. The common feature of these countries is a determination to replace a highly centralized economy with a decentralized one, based on free market forces and private property.

Romania is a relatively large European country located in the south-eastern part of the continent with a large variety of geographical features from swamps in the Danube delta to more than 2500 m high mountains in the Carpathian Chain. The Transilvanian Plateau in the middle, is separated from the Moldavian Hills by the Oriental Carpathic Arch. In the southern and western parts of the country there are large plains suitable for agriculture. Several rivers flowing from the mountains to the Danube River assure a good fresh water supply all over the country and at the same time a considerable hydroelectric potential. The Danube, the longest river in Europe, flows

WATERWAY BETWEEN CONSTANTINOPLE AND ROTTERDAM

LEGEND :

-  The Danube-Black Sea Canal (in operation)
-  Rhine-Main-Danube Canal
-  River Argeş Arrangement - Danube - Bucharest Waterway (completion 1992)

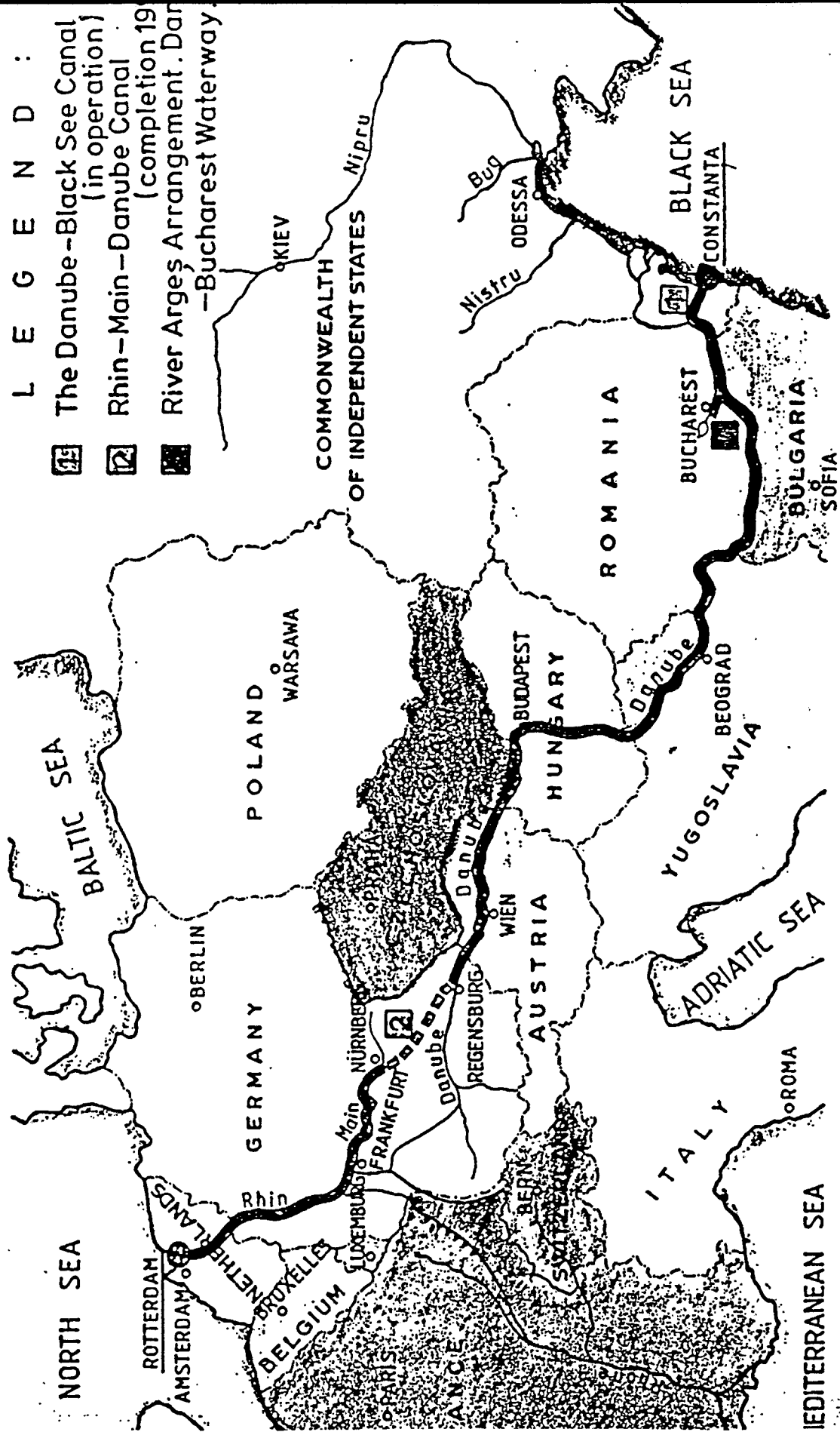


Figure 4. The Trans-European Waterway Rhine-Main-Danube
 Source: Romanian Merchant Marine Department, 1992.

easterly on a length of 1050 km on Romanian territory being the main inland waterway and a natural link with seven other European countries (see Figure 4).

Romania is divided into 41 administrative units and the main cities are: Bucharest (2.1 million inhabitants), Brasov (325,272), Constantza (332,676), Timisoara (325,272), and Iasi (313,000). The total population was estimated in 1990 at 23,190,000 inhabitants, the average density being 97.6 inhabitants/sq.km.

During the last ten years, industry accounted for more than 60% of the NNP (National Net Product) and the industrial sector (including manufacturing, mining and utilities) employed 37.5% of the labor force. The manufacturing industries mainly based on metallurgy and mechanical engineering, include steel industry, heavy machinery, agricultural machinery, drilling equipment. Chemical, petrochemical and timber processing industries are also developed. Brown and hard coal, salt, iron ore and some non-ferrous metals are mainly mined. Crude oil production, both on-shore and off-shore (seven rigs in the Black Sea) covers a certain percentage of the national needs. Methane gas is also extracted. Energy is mainly derived from petroleum, coal and gas but a number of hydroelectric power stations are also operating. The first nuclear power plant in Romania, built with Canadian assistance, is expected to begin generating in 1994.

At the end of 1989 Romania had 11,343 km of railway tracks - more than one third electrified - 72,816 km of roads and a 60 km urban underground railway network.

The GNP (Gross National Product) amounted to 793.7 billion lei (approx. USD 22.2 billion) and the country recorded a trade surplus of USD 2,034 million largely at the expense of severe reductions in the supplies of

foodstuffs and consumer goods to the Romanian population. The main trading partners are Egypt, Germany, Iran, Russia, Ukraine, China, Italy, the USA and France. In 1990 the principal imports were foodstuff and fuels. Machinery and vehicle parts were among the country's exports.⁵⁵ In October 1990 Romania and the EEC signed a five-year agreement on trade and economic cooperation and advanced negotiations with both the World Bank and the European Bank for Reconstruction and Development are expected to boost economic development. Unlike other former communist countries, Romania was not encumbered by any foreign debt but still it was estimated that large foreign investments - USD 2 billion annually - would be required in order to modernize the economy.⁵⁶

3.2 THE CURRENT STATE OF THE ROMANIAN SHIPPING INDUSTRY.

In the general economic context, the shipping industry continues to play a key role. Surprisingly, for a country whose coast line (on the Black Sea) is only 320 km, Romania with 5.775 million DWT of sea-transport capacity is, according to IMO statistics, the 25th maritime nation of the world preceding Spain, Poland, Sweden and other traditional maritime countries. The maritime fleet consists of tankers, bulk-carriers, Ro-Ro vessels, container vessels, ferry-boats and many types of general cargo vessels. Three main shipping companies share the transport capacity as shown in Table 2.

⁵⁵ "Romania Introductory Survey". The Europa World Yearbook 1992, Vol. II: +2230.

⁵⁶ Ibid 54.

Table 2. Romanian National Fleet (sea-going vessels)

Shipping Companies	Number of vessels	Capacity (DWT)
Petromin	89	4,141,862
Romline	81	659,453
Navrom	91	750,330

Source: Romanian Naval Transport. Statistic brochure 1992

Their trading activities are specialized as follows:

Petromin - for tankers and bulk-carriers

Romline - for container, Ro-Ro and multipurpose vessels, and

Navrom - for general cargo and small container vessels ranging from 2000 to 15000 DWT

The structure of the fleet in terms of types of vessels in 1992 is illustrated in Table 3.

Although they are organized as share holding companies, the only share holder for the time being, is the state since the private capital is still lacking. The activity of these companies is controlled by interim councils of government representatives - delegated by the Ministries of Transport, Finance and the National Bank. The management of the companies periodically reports to these councils on their economic results.

Two smaller shipping companies, Navlomar (owned by a shipbroking agency) and Roliship (a two-vessel joint venture) have also been on the Romanian shipping scene for the last ten years.

Table 3. Structure of the Romanian Merchant Fleet

Type of vessel	Number of ships	Capacity (DWT)
Oil tanker	12	995,000
Ore carrier	68	3,080,000
Cargo vessel	170	1,604,100
Ro-Ro vessel	11	55,300
Ferry-boat	2	25,000
Port container	2	16,000
Total	265	5,775,400

Source: Romanian Naval Transport. Statistic brochure 1992.

Since 1991 a growing number of private enterprises have been established based on special leasing arrangements with the three major companies. It is notable that newly created enterprises appear to be more flexible and therefore more successful than the mother companies, and their annual results are increasingly promising.

A strong shipbuilding industry has developed in Romania during the last 25 years. Twelve shipyards, located either on the Black Sea coast or on the Danube River, are already well-known in the international market. The most significant newbuildings are tankers and bulk-carriers of up to 165,000 DWT built in Constantza and Panamax ore carriers built in Galatzi.

Additionally, the Romanian shipbuilding industry has gained a fairly good reputation in the construction of marine drilling and extraction platforms, supply vessels, different types of maritime and river tugs, deep sea super-trawlers, reefers and various types of

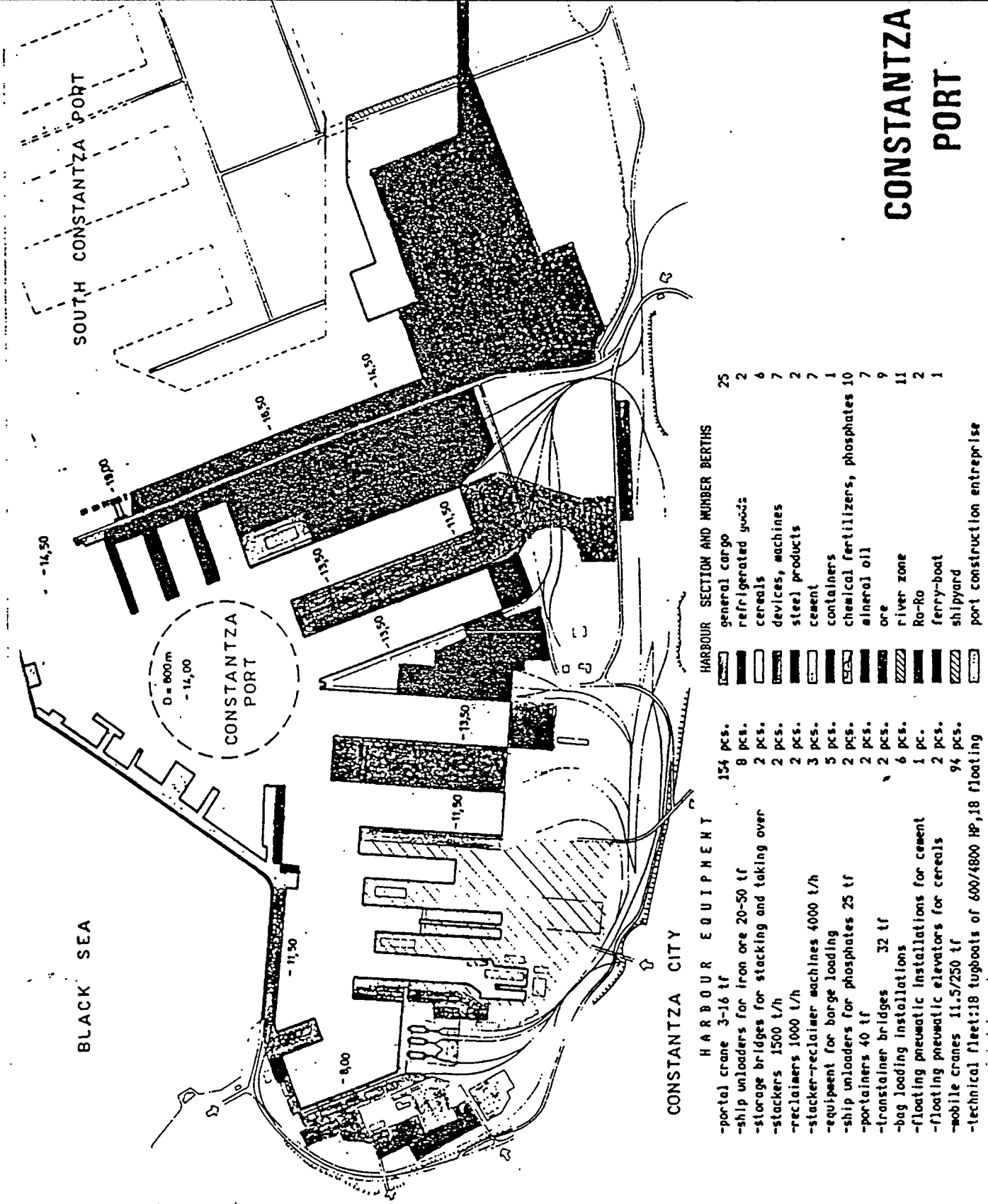
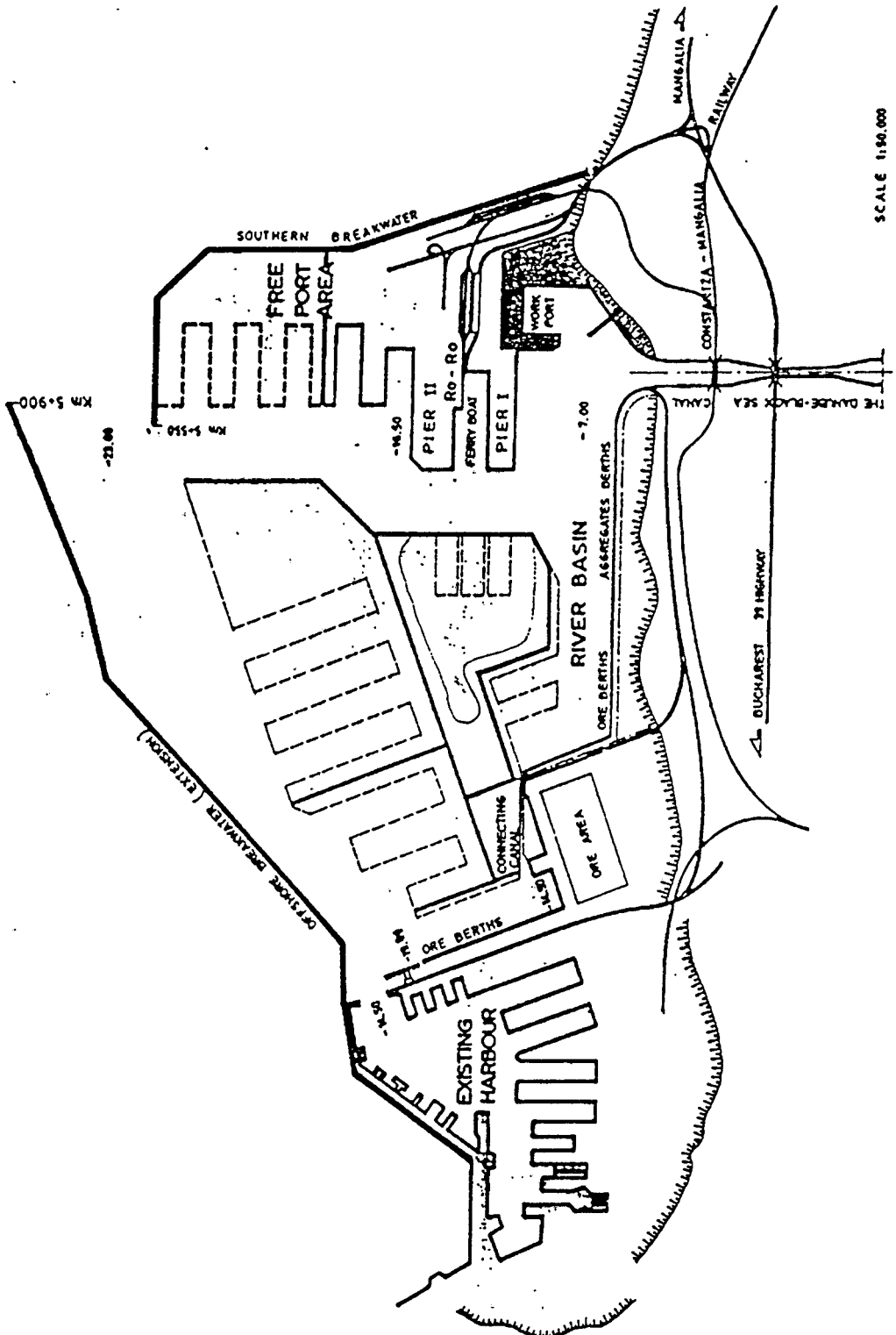


Figure 5. Constantza Port.
 Source: Romanian Merchant Marine Department, 1992.

technical vessels. The capacity launched in 1985 was 274,000 DWT and it increased substantially to 405,000 DWT in 1987.

The maritime traffic bound for Romania is served by three sea-ports, four sea/river ports and as many as 25 river harbours. The handling capacity of these ports has been progressively increased and nowadays it amounts to about 135 million tons per year. The largest port in the Black Sea area is Constantza which is located on the Romanian coastline 186 miles from the Bosphorus Strait. All ships transitting the Suez Canal can be received in Constantza. Theoretically speaking, the Far East traffic to Central Europe would be more effective if rerouted through Constantza than through Western Europe. The port includes two areas, namely Constantza itself and Constantza-South still under construction. The first area, commonly known as "the old port", has a surface of about 1,700 acres, 60 berths in operation, and specialized sectors for oil, ore, fertilizers, containers Ro-Ro goods and general cargo. Tankers of up to 80,000 DWT and bulk-carriers up to 65,000 DWT are currently operated. The daily handling capacity is about 100,000 tons (see Figure 5).

Constantza-South has a surface of 6,000 acres and is located to the south in the proximity of the Danube-Black Sea Canal (see Figure 6). In the near future the port will be able to receive up to 250,000 DWT vessels, and to provide transit facilities for river traffic through the inland waterway system. Good connections with roads, railways and air transportation are also available in Constantza. Within Constantza-South port a large free zone for both storage and industrial activities was established last year. The investment in



SCALE 1:150,000

SOUTH CONSTANTZA PORT

TECHNICAL CHARACTERISTICS

Measure	South Constantza		Total	
	existing	final	existing	final
Total area	722	2500	3222	
-land	404	1300	1014	1704
-water	318	1200	2208	1518
Dike length	6.74	11.46	18.2	
Quay length	13.4	50.0	23.4	63.4
Number of berth	78	200	131	278
Depths in the basins	7.2/14.5	7/19	7/22.5	7/19
Traffic capacity mil t/year	73	9	170	82
Ship max.capacity thou-				273

Figure 6. Constantza-South Port.
 Source: Romanian Merchant Marine Department, 1992.

the free zone is actively encouraged by the government and recent legislation (Law number 84 of 1992) provides governmental guarantees on a long term basis (up to fifty years). According to the National Free Zones Agency, more than 50 foreign investors have already expressed their interest in renting large areas.

Constantza's ambitious project to become the second largest port in Europe after Rotterdam now appears more realistic. The Rhine-Main-Danube system inaugurated last year means that the Black Sea is now linked to the North Sea by a waterway across the continent, and Constantza is only three days from the Suez Canal while Rotterdam is ten (see Figure 4)

The port of Midia, located north of Constantza, is designed for vessels of up to 12,500 DWT with facilities for fertilizers and livestock handling. The port is also linked to the inland waterway system by another canal.

Mangalia, the third sea port, is located about 30 miles south of Constantza.

Along the Danube's lower course, also called the maritime Danube, four ports are of main interest for their commercial activity as well as for their storage "free zones" and repair facilities. Up the river 25 other ports serve the river traffic. Among these Giurgiu, Orsova and Drobeta Turnu-Severin are of particular interest for the international traffic across Europe. With regard to the river fleet, it should be mentioned that Romania is the leading country in terms of transport capacity on the River Danube as illustrated by Table 4.

Table 4. National river-fleets of the Danube riverine countries

Country	Number of units	Capacity (tons)
CIS	1701	1,287,572
Romania	2116	1,680,801
Bulgaria	218	290,354
Yugoslavia	1148	749,290
Hungary	443	330,321
Czechoslovakia	328	388,038
Austria	235	257,181
Germany	69	47,740

Source: The statistic annuary of the Danube Commission, 1991.

The maritime administration in Romania is the Merchant Marine Department operating within the Ministry of Transport. As the only governmental Authority responsible for civil navigation, it issues rules and regulations for the implementation of national laws and international conventions to which Romania is a party. The Merchant Marine Department elaborates the development policy for the shipping sector and implements this policy at the national level.

The Merchant Marine Department is the only representative of the Romanian Government in international organizations related to shipping. As a part of this Department, the State Inspectorate for Civil Navigation is the maritime safety administration in Romania in charge of

the enforcement of provisions of national laws and international conventions.

As a consequence of the unrealistic approach to industrialization over the last three decades, deep scars were left upon the environment in Romania. Aware of the seriousness of these problems the Government is now developing, together with the World Bank and the European Bank for Reconstruction and Development, a new strategy for achieving acceptable environmental protection by the year 2005. The estimated cost of the program is expected to be 200 - 250 million USD annually, with industry providing 80 - 100 million USD of that amount.

As demonstrated earlier in this chapter, Romania is a maritime nation and particular concern is devoted to marine pollution. A highly sensitive marine environment has been dramatically affected and an urgent need exists for practical effective measures to reverse the effects of past practices.

For many years, the sea has been regarded as a dumping site and little thought has been given to the consequences of this activity. Wastes have been disposed of at sea and harmful substances introduced into the marine environment with little care for the damage they may cause. The Black Sea is the world's largest inland sea and it has served as such a disposal site. Of course, land based sources and industrial discharges that are fed into the rivers emptying into the Black Sea are the largest contributors of polluting substances. However, the direct pollution from shipping activities is still of major significance and therefore a serious concern for the Romanian maritime administration.

This has been an overview of the Romanian shipping industry, its place in the national economy, and some of

its impacts on the environment. In the next subchapter the author will look at the marine environment from a regional perspective.

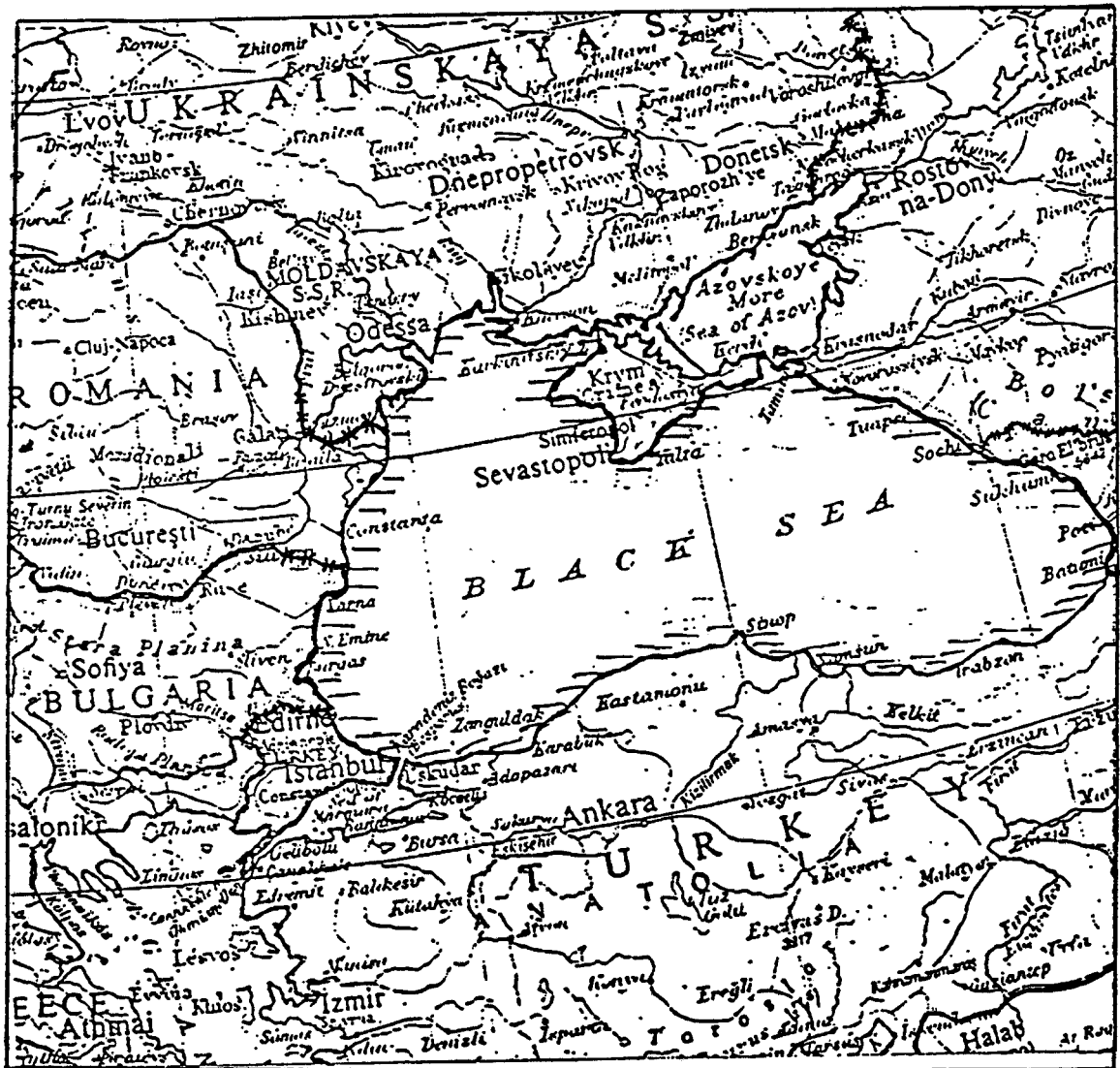
3.3 THE MARINE ENVIRONMENT IN THE BLACK SEA AREA AND THE CURRENT REGIONAL AGREEMENTS.

During the last four years, Romania has constantly increased its participation in the international maritime fora, especially those under IMO's auspices. Meanwhile, it has continued to be a very active member in the Danube Commission with regard to the safety of navigation and the preservation of the river ecosystem. Special attention has been assigned to the Danube delta, the most sensitive zone of the system.

As a consequence of the growing awareness of the economic, social and health importance of the Black Sea, and based on IMO conventions on environment protection, a series of regional contacts have taken place recently. The most significant moment in this development was in 1992 when the representatives of the Black Sea adjacent countries signed the Convention on the Protection of the Black Sea Against Pollution at a conference held in Bucharest. Convinced that the natural resources and amenities of the Black Sea can be preserved primarily through joint efforts, the signatories - namely Bulgaria, Georgia, Romania, the Russian Federation, Turkey and Ukraine - also agreed upon a number of Protocols and Resolutions to implement the provisions of the Convention. A closer look at this particularly sensitive area would hopefully emphasize the importance of this regional agreement and stress the urgent need to meet the

environmental challenges before it is too late.

Figure 7. The Black Sea



Source: The Time Atlas and Encyclopedia of the Sea. Ed. Alastair Cooper, London, 1992.

The Black Sea (Figure 7) is located in a semi-arid climatic zone and as a result evaporation exceeds rain fall. At the same time the run-off from watersheds that

originate primarily in the north leads to an excess of net freshwater inflow and the subsequent dilution of the surface sea waters. The Black Sea is connected to the Mediterranean through the Bosphorus, a narrow strait with an average width of only 1.6 kilometers. In the Mediterranean, the evaporative losses exceed net freshwater input and as a result the relatively less saline and lighter waters of the Black Sea flow out to the Mediterranean as a surface flow through the Bosphorus.

The reversed circulation of saltier and denser Mediterranean waters takes place as an underflow which leads to a static stratification of layers of different salinity. In the Black Sea, the vertical exchange of dissolved material is hindered by the permanent halocline (vertical salinity gradient). Because of the suppressed vertical exchange and the insufficient supply of oxygen through the Bosphorus underflow, for the past 7,000 years the decomposition, oxidation, sinking and accumulation of organic matter have resulted in an abnormally low amount of oxygen in the deeper waters of the Black Sea. Today, nearly 90% of the volume of this basin is anoxic. The depth of the oxygen zone varies, being greater (ca 200m) near coastal areas and generally less over deeper parts of the basin.⁵⁷ In spite of these natural deficiencies, the Black Sea has served mankind well in the past through its production of seafood and as a natural setting for recreation and transportation. In return it has been exploited and degraded in many ways with considerable negative effects on its health.

The Black Sea receives large quantities of domestic and industrial waste water which is largely untreated. The

⁵⁷Balkas, T., et al. "State of Marine of Marine Environment in the Black Sea Region. 1992.

exact amount of the waste water discharged is presently unknown.

Along the Turkish coast, the annual urban liquid waste discharged is estimated at 500 million tons.⁵⁸ A series of marine outfalls have been planned for a number of towns and some of them are under construction now. Reliable estimates for industrial discharges for the Turkish Black Sea coast are not available.

In Romania waste waters are discharged only in the southern part of the coast. Before reaching the sea, they are treated in one of the five zonal units with a mechanical stage available in each treatment plant. Biological and chemical treatment is available only at some of them. The quality of waste is controlled by national regulations enforced by special authorities for water management. Activated sludge from the biological treatment is used for biogas production or dried on special beds. Faecal coliform do not reach the southern part of the Romanian coast alive and do not pose a threat to recreational activities. The real problem is represented by the detergents, heavy metals, pesticides and nutrients brought by the river but this cannot be solved on a national basis. A joint effort by all the countries along the Danube is needed.

On the north eastern coast the main threat to the marine environment appears to come from the waste water outfalls and discharges from coal and ore mines along Russian rivers. Even heavy metals, cyanides, ammonia and phenols are discharged without treatment. Disastrous effects, including the complete destruction of habitats

⁵⁸Ibid 55.

along some rivers, have been observed in the past.⁵⁹ It is not known, however, how much of the pollutants discharged into these rivers eventually reaches the sea. Similarly the input levels of pollutants introduced through the Bosphorus underflow need more detailed investigation. It is known, however, that the terrestrial influxes of pollutants, as well as those introduced via outfalls located along segments of the coast that have highly developed industry, are significantly affecting the coastal areas. During a conference organized by CIS (Commonwealth of Independent States) on land based sources of marine pollution held in April 1992, Ukraine defined the status of the Black Sea and the Sea of Azov as an "ecological disaster." According to UNEP, the Sea of Azov is one of the worst environmental catastrophes that have been considered by its Regional Seas Programme.⁶⁰

In terms of marine pollution generated by shipping, a sizable amount of oil is transported across the Black Sea by Russia, Ukraine and Romania. A large number of tankers carrying crude oil, as well as refined products, pass through the Bosphorus and there is no doubt that this traffic leaves a mark on the Black Sea. It has been recently demonstrated that the degree of marine pollution by n-alkanes decreases from a value of ca 0.1 mg/l with increasing distance from the coast and then increases to 0.3 mg/l on the navigation route between the Bosphorus and

⁵⁹From Tolmazin, 1985, as referred to by Balkas, T. et al. "State of Marine Environment in the Black Sea Region"

⁶⁰Recommendations of ACOPS (Advisory Committee on Protection of the Sea) Conference on land Based Sources of Marine Pollution in the seas Adjacent to the CIS, Sevastopol 6-10 April 1992. IMO doc. LDC/INF.3

the mouth of the Danube.⁶¹

Last year's inauguration of the Rhine-Maine-Danube waterway portends a steady and significant increase in marine traffic and a corresponding increase in the threat of pollution. Projected levels of future development, when considered in the context of the negligent development policies of the past, emphasize the pressing need for the Black Sea countries to carefully examine this issue and take appropriate action.

In 1992 the Bucharest Convention was a promising beginning and a regional approach to the existing problems is perhaps the only valid strategy. Despite the fact that pollution of the Black Sea also emanates from inland based sources in other countries of Europe, mainly through rivers, the Convention strongly affirmed the commitment of the Black Sea countries to cooperate and share their scientific, technological and technical experience in accordance with the existing international agreements. The Bucharest Convention relies on the relevant provisions of the London Dumping Convention (1972), MARPOL 73/78, the Transboundary Movement of Hazardous Waste (1989) and OPRC (1990), and recognizes the principles adopted by the Conference on Security and Cooperation in Europe.

At its inception, the Convention established a Commission on the Protection of the Black Sea Against Pollution (the Commission) as an executive body and has elaborated three Protocols regarding pollution from land based sources, cooperation in combating pollution and pollution by dumping respectively. According to Article V, the contracting parties will cooperate in the further

⁶¹From Demianov et al. 1985, as referred to by Balkas, T. et al. "State of Marine Environment in the Black Sea Region"

elaboration of additional protocols and annexes other than those attached to this Convention as necessary for its implementation.⁶²

With regard to pollution from ships, the Convention states as follows "The contracting Parties shall take individually or, when necessary, jointly all appropriate measures to prevent, reduce and control pollution of the marine environment of the Black Sea from vessels in accordance with generally accepted international rules and standards."⁶³ Although Article VIII regarding shipping is very brief and a bit vague, which reflects the weak representation of the shipping industry among the Convention drafting groups, there is room for cooperation and improvement in the present situation. As there is no other access to the Black Sea, all vessels have to pass through the Bosphorus and the illegal discharges in the open sea can be monitored and controlled through close cooperation between oil terminals and the Secretariat of the Convention located in Istanbul, Turkey.

It may be observed that the Bucharest 1992 Convention is based extensively on the Barcelona 1975 Convention for the Protection of the Mediterranean Sea Against Pollution. Beyond the political reasons which artificially separated the Black Sea from the Mediterranean Sea⁶⁴, it has been agreed that the Black Sea countries should take advantage of the valuable experience achieved under the Mediterranean

⁶²Convention on the Protection of the Black Sea Against Pollution, Bucharest 21 April 1992.

⁶³Ibid 60.

⁶⁴Participation of the Black Sea countries in the Mediterranean Action Plan was refused two times, in 1975 and 1990 for political reasons. Gabrielidis, G. Personal interview. 23 March 1993.

Action Plan (MAP), which is the tool for implementing the Barcelona Convention. In doing so, the Black Sea countries should lobby UNEP and support the extension of its Regional Seas Programme to the Black Sea. At the same time, a commitment to pragmatic priorities within a well-defined timeframe should be demonstrated in order to encourage the development of legal regulations and financial investment.

Drawing on the trends identified under the Mediterranean environmental programme, issues such as growing energy consumption, soil degradation, the scarcity of water resources, eutrophication, demographic pressure and litoralization⁶⁵ might be considered by the Black Sea countries when establishing their future strategies.

At a time when the international community is becoming aware that the environment is everywhere subject to stronger and stronger pressures, new ways must be thought up for countering these pressures and reversing the most adverse trends. At the regional level these ways might be:

- the systematic consideration of the environment in all projects and development plans, particularly at the level of the coastal regions;
- the search for new types of development, environmentally friendly and founded on stronger regional cooperation;
- the promotion, by means of education and information, of a clearer awareness of interaction between the environment and development in order to encourage new kinds of behavior as much among decision-makers as among the populations concerned.

With regards to the last issue, the author will briefly examine in the next sub-chapter the role of the

⁶⁵A blue plan for the Mediterranean people. RAC/MAP 1992, Sophia Antipolis, France.

media and the environmental groups.

3.4 PUBLIC AWARENESS AND THE ENVIRONMENTAL NON-GOVERNMENTAL ORGANIZATIONS

Until 1989 Romanian society lacked reliable information about the state of the environment. Although government authorities in charge of environment monitoring and water quality had identified serious threats during the last 15 years, the political regime imposed a certain policy of secrecy on these issues. Very few environmental problems were brought to public attention by the state-controlled and totally politicized media of the time and that only happened when the disastrous effects were obvious. This policy led to a very poor level of environmental awareness. Environmental protection was seen as an auxiliary matter and little concern about pollution and its consequences was evident. Such state of affairs made possible in June 1988 the illegal depositing of toxic chemical waste at the port of Sulina by a Liechtenstein company, resulting in serious pollution of the Danube delta.⁶⁶ Under these circumstances and following a steady increase in the maritime activities, a continuous change in coastal water quality has been observed and, in some situations uncontrolled proliferation of algae has been noticed.

During the last three years the role of the media has been reversed and the investigative and aggressive newspapers now keep a permanent eye on environmental issues. In many cases the media's aggressiveness may

⁶⁶"Romania Introductory Survey" The Europe World Yearbook 1992, vol.II:+2230

disturb the "on scene" activities of governmental agencies in charge of pollution prevention and response. Distorted images may be circulated with detrimental effects and unforeseeable political consequences. On the other hand, correctly approached and candidly informed about the real situation, the media may become a strong ally. The experience of the US pollution responders has shown that the media, if properly informed and not given the opportunity to discover facts by itself, can be made to work effectively for the responders.⁶⁷

The public interest in environment related matters has increased but, in the author's opinion, more should be done in the educational field. Protection of the environment should be studied in schools and universities and the young generation should be encouraged to adopt "green" behavior. It is undoubtedly the government's task to provide incentives in this sense and to implement a new environmentally-sound policy based on the international conventions.

Besides the media and education, the non-governmental organizations (NGOs) also make an important contribution to the formulation of environmental policy. They are now generally recognized as important players, particularly in international environmental affairs. Since the 1972 Stockholm Conference they have played a major role in providing information on compliance with international environmental agreements. Representatives of "green" NGOs are active in attending and submitting documents to meetings under the Montreal Protocol, International Tropical Timber Organization, CITES and IMO. For example, the International Chamber of Shipping, a group representing

⁶⁷ Kichner, J. Discussions during visit at USCG GST. 20 Sept. 1993.

major shipowners, has conducted surveys disclosing the lack of port reception facilities, and problems related to this aspect worldwide.⁶⁸ A similar project on a larger scale is currently developed by BIMCO (The Baltic and International Maritime Council).⁶⁹ A substantial contribution was made by NGOs in the preparation of the UNCED '92 in Rio.

There are several types of NGOs dealing with the environment but a very elastic classification may group them into three categories. The first consists of independent research institutes such as the Netherlands Institute for the Law of the Sea, the Law of the Sea Institute and the International Oceans Institute. Interest organizations constitute the second group and among these are industry-related associations such as the International Association of Ports and Harbors, various trade unions etc. The last group encompasses purely environmental organizations such as Friends of the Earth International (FOEI) and Greenpeace International. The activities of the last category range from public awareness and education via publications conferences and seminars to legal action and scientific research.⁷⁰

The level of participation of NGOs in international organizations varies. While in the International Whaling Commission they are only allowed to watch and listen to the proceedings in a strict sense, the International Maritime Organization has been more generous. In IMO they can

⁶⁸US General Accounting Office (GAO)/RCED-92-43. International Agreements Are Not Well Monitored: 42.

⁶⁹Petersen, Sten Stender, Deputy Secretary General, BIMCO. Telefax interview. 27 May 1993.

⁷⁰ Williamson, H. NGOs lectures at WMU, June 1993.

submit documents, participate in discussions, lobby delegates during the breaks and participate in committees, working groups and drafting groups. Obviously, submitting proposals which require decisions and voting remain prerogatives of the member governments only.

The effectiveness of NGO activities has been interpreted as a combination of two different components: influence and success. Influence occurs when decisions taken by international organizations partially reflect the interest of NGOs as a result of their activities. Success occurs when a proposal by NGOs is entirely adopted by international organizations.⁷¹ A study based on questionnaires conducted by the Department of Planning, Design and Management at the Delft University of Technology, Holland, in 1991 showed that the influence of NGOs in IMO's Marine Environment Protection Committee is between "some influence" and "substantial influence". The industry related NGOs seemed to have a greater effectiveness than environmental NGOs, perhaps due to the highly technical issues characteristic to the MEPC, and their participation is much more substantial (94%).⁷²

These conclusions emphasize the role of NGOs and support the idea that, properly approached, both NGOs and the media may become remarkable allies in developing environmental policies. Some NGOs like Friends of the Earth International and Greenpeace International have achieved a high level of expertise and have large financial and research resources. In addition to their positive scientific inputs welcoming NGOs lends an image of openness

⁷¹Peet, Gerard. "The role of (environmental) NGOs at the MEPC of the IMO, and LDC". Delft, Holland 1992.

⁷²Ibid 69.

and confidence to a country and helps to build international credibility and trustworthiness. Their activities may have tremendous economic effects. For example, a port classified by FOEI as environmentally friendly may spectacularly increase its activity. On the other hand an adverse attitude may hinder the development of a port project or even ruin the port.

In Romania the activity of NGOs is still very weak. Only a few NGOs are represented and the public is not currently informed about their activities. Learning from IMO's example, the Romanian Maritime Administration should strengthen its relations with relevant NGOs and where necessary establish new bridges. Incentives should be created for the more active presence of these organizations in Romania especially, with regard to the marine environment. This policy is already in place in some neighboring countries⁷³ and Romania should avoid being left behind.

Having provided an overview of the shipping and marine environment in Romania and in the Black Sea region, the author's intention now is to focus more specifically on some technical problems raised by implementation of IMO instruments and MARPOL 73/78 will be used as an example.

⁷³Conference on land based sources of marine pollution in the seas adjacent to the Commonwealth of Independent States. Sevastopol, 6-10 April 1992.

3.5 TECHNICAL ASPECTS REGARDING THE IMPLEMENTATION OF MARPOL 73/78 IN ROMANIA.

In a very simple manner, the provisions of MARPOL 73/78 may be summarized as follows:

- All vessels above 400 GRT need an approved bilge water separator or separator/filtering equipment, capable of producing either 100 or 15 ppm oil in water effluent.
- Vessels above 10,000 GRT or ships which carry ballast water in empty bunker fuel tanks need additionally an oil content meter to monitor the effluent from a 100 ppm separator or a high oil content alarm equipment to monitor a 15 ppm separator filtering equipment.
- Ships below 400 GRT may operate with the retention of all oily water onboard and discharge of all such water to reception facilities.
- All vessels need adequate holding capacity for sludge and oily residues generated onboard. For vessels below 400 GRT this capacity must include also the bilge water unless the vessel is equipped with equipment to the satisfaction of the Administration to purify the water and discharge it under the Convention Rules.
- All vessels need an international standardized shore connection on deck for pumping ashore bilge water and oily residues and the related pumping and piping arrangements.⁷⁴

Because they operate internationally, Romanian vessels of over 400 GRT generally comply with MARPOL provisions regarding the bilge water. In some isolated cases difficulties are noted with poorly designed and maintained

⁷⁴MARPOL 73/78, Annex 1.

15 ppm separator/filters. A large number of producers and models of such equipment, approved to the IMO performance and test specifications, are on the market ranging in price from USD 3,000 to 6,000. The Convention includes provisions for a waiver for the bilge water separator/filter provided that the vessel operates at all times within 12 nautical miles of the nearest land and delivers all bilge water ashore to reception facilities, the adequateness of which has been recognized by the Administration. In Romania this may be a solution for ships trading between Constantza and the Danube ports and for some technical vessels provided adequate reception facilities are assured. A large part of the Romanian sea-going fleet, generally ships above 3,000 GRT, burn marine oil in their main engines, generating heavy sludge in the fuel oil purification process. This complicates considerably the handling of oily residues onboard and requires proper reception facilities. As far as declared, the vessels do not take ballast water into empty bunker tanks.

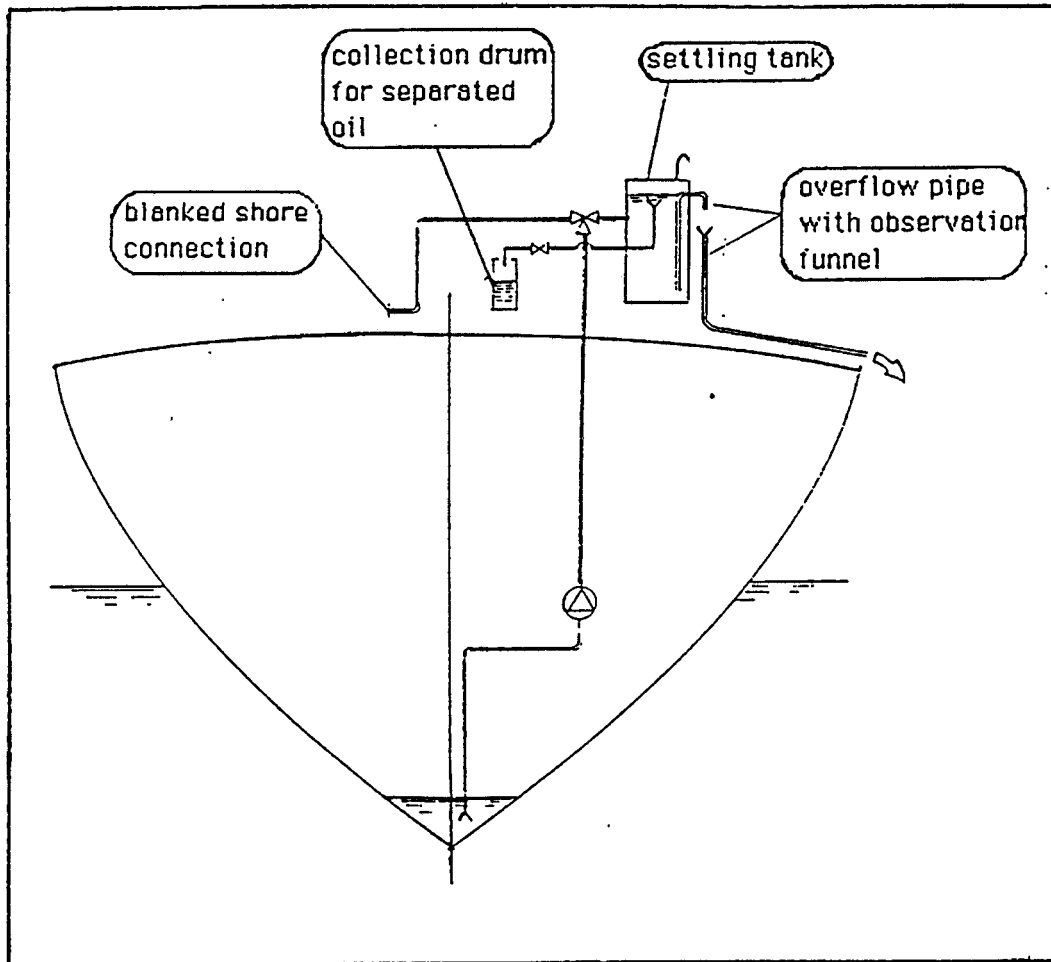
If no major problems were identified for the large sea-going vessels in complying with MARPOL requirements, the situation is different for vessels below 400 GRT. They should retain all bilge water onboard and deliver it to reception facilities or alternatively be equipped to the satisfaction of the Administration with equipment for purification of the bilge water and discharging of the water under Convention restrictions. As most ships of this size do not have any bilge water collecting tanks and it is not realistic to arrange bilge water reception facilities in all small ports, it would seem more practical to equip these small vessels with some simple means whereby the oil can be kept onboard and the purified water discharged into

the sea. It is generally accepted that oily water will be sufficiently clean for discharge to the sea if it has been given sufficient settling time, in the order of 24 hours, and only the clean water from the bottom part is discharged. A very simple and efficient arrangement is illustrated in Figure 8. The water pumped from the bilge will be given the additional settling time in a small tank from which purified water is taken out at the bottom via piping so that the tank is always kept full. The tank must have enough capacity to correspond to at least one day of bilge water generation. In fishing vessels and similar small boats, this separator arrangement could simply be made through the use of an empty oil drum with suitable pipe connections arranged by the crew. The oil collecting on top of the water in the tank must occasionally be withdrawn via a scupper and be collected in an empty drum for later disposal ashore. The outlet from the separator tank should be "free fall" into a funnel so that it can be observed during pumping. It is obvious that the bilges should not be discharged during heavy weather when the oily water may be agitated or emulsified.

This type of arrangement may solve the problem of a considerable number of auxiliary vessels like harbor tugs, dredgers, barges, scows, etc. serving the port of Constantza .

For motor-boats and other small ships which collect some oily water in the engine bilge, it may be enough to require these vessels to have oil absorbing cushions which float on the bilge water surface and absorb any existing oil. Such cushions are available on the market. When soaked, the oil can be squeezed out of the cushions and collected in a container for later delivery ashore. The cushions can be reused.

Figure 8. Bilge Water Handling System for Vessels Below 400 GRT.



Source: IMO/MEPC documents as referred to by Transportation Research Institute of Bucharest, Romania.

As far as the Romanian tankers, from 40,000 DWT to 160,000 DWT are concerned, it may be said that all of them comply with MARPOL requirements. It should perhaps be stressed again that all contaminated ballast and tank

washings must be discharged to reception facilities to the satisfaction of the Administration.

In addition to the above mentioned equipment MARPOL requires special surveys. All vessels above 400 GRT and tankers above 150 GRT which operate on international voyages must have an International Oil Pollution Prevention (IOPP) Certificate issued by the Romanian classification society (Romanian Register of Shipping). Even if surveys for issuing such certificates are carried out by the classification society, the Romanian maritime administration should have its own qualified surveyors. They will be required for:

- verification of surveys performed by the classification societies
- taking decisions in various matters regarding the survey activity;
- issuing special certificates;
- evaluating requests for waivers;
- maintaining qualified records of vessels and certificates; and
- carrying out Port State Control.

Port inspection is compulsory in ports where crude oil tankers are unloaded and where crude oil washing (COW) is carried out. (Constantza is one of these ports.)

Another technical aspect addressed by MARPOL is training. Training programs based on MARPOL requirements for ship officers, administrators, and inspection personnel are organized by the Marine Training Center of Constantza in the Romanian language. It is, however, felt that in some cases training in the English language and training of the trainers is necessary. A recent example of such a case is the seminar on Port State Control organized in cooperation with the World Maritime University. This type

of training should be actively encouraged by the Romanian maritime administration and extended to a larger range of shipping related activities. It is believed that the lack of updated training programs may be one of the main causes of last year's poor record of the Romanian merchant fleet⁷⁵ and the situation requires immediate corrective measures. IMO's assistance appears to be vital in this respect and the Administration should take appropriate measures to strengthen its participation in the current work of IMO. The author has deliberately left for the end what is probably the most important issue of MARPOL's implementation, namely reception facilities. This problem, which is the corner-stone of the whole Convention, appears to be the main grounds for non-ratification of MARPOL by the Romanian Government. Due to its particular importance, this aspect will be examined more extensively in the next chapter.

⁷⁵According to MOU report for 1992 Romania heads the list of the most detained vessels in West-European ports. "Detention cost owners about 15 million USD a year". The Sea. Sept./Oct. 1993:3.

CHAPTER 4

RECEPTION FACILITIES A MUST IN IMPLEMENTING MARPOL 73/78

4.1 GENERAL APPROACH TO RECEPTION FACILITIES

Any vessel has a wide variety of potential pollutants on board, such as cargo, bunkers, stores etc. Each of them may generate waste material in due course. The different ship-related sources of pollution may be summarized as follows:

- any ship when disposing of fuel oil residues and oily bilges
 - any ship when disposing garbage
 - tanker operations when harmful substances are discharged as a result of tank cleaning procedures and ballasting operations
 - ships, other than tankers, during ballasting and cleaning fuel tanks and the discharge of this ballast and washing
 - chemical tankers where residues and mixtures of noxious liquid substances, which have been handled are required to be discharged to reception facilities
 - marine casualties such as stranding, foundering and collisions
- terminal operations where harmful substances can be

spilled during loading and unloading

- bunkering of oil from all types of ships and barges
- operations of transferring oil and noxious liquid substances from one ship to another, such as in case of lightering operations or bunker from barges.

Obviously the reception facilities regard basically the first five potential sources, and due to the fact that chemical residues are disposed of in limited quantities, the study will focus on MARPOL 73/78, Annex I.

To give an idea of the extent to which Annex II cargoes are transferred to reception facilities it may be worth to mention that in Germany between 1988 and 1991 only 21 cases occurred. All of them were in Hamburg and together amounted to 600 cubic meters, which represent only 0.1% of the total waste delivered by ships in all German ports in the same period.⁷⁶ Nevertheless, a growing concern was observed in the last period with regard to the disposal of noxious liquids. The control of vessels carrying noxious liquids have been enhanced and ports handling such cargoes, or performing repairs for chemical tankers have been strongly requested to provide adequate reception facilities. Problems like the accumulation of noxious wastes in ports with no further means of disposal were raised and for the first time in 1990 a Conference of the North Sea adjacent countries agreed upon two priority proposals specifically related to Annex II. These were:

- i) To improve requirements for piping, pumping and cargo unloading arrangements for chemicals regulated by Annex II by using the best

⁷⁶Noelke, Eberhard. "The Federal Republic of Germany's Three Year Reception Facilities Pilot Project." European Harbour Masters Association, Fourth Congress, 10-15 May, 1992.

available technology to ensure that chemical tankers unload all their cargoes to specific minimal residual quantities, and

- ii) To make the present discharge requirements, with respect to the discharge standards for chemical wastes and residues, more stringent for all sea areas by insuring that no discharge exceeds specific minimal quantities.⁷⁷

At this moment, the consequences of a major chemical spill are unknown, but it is broadly agreed that in large quantities these substances may have catastrophic effects. Early this year a working group at a ministerial level has started considering additional measures for the North Sea including declaring it a "special area" with respect to Annex II. Under these circumstances reception facilities are required by four of the five annexes to MARPOL 73/78 - for oil, bulk carriers of chemicals, sewage and garbage.

Returning to Annex I, regulation 12 states that Governments undertake to ensure the provision "at oil loading terminals, repair ports and in other ports in which ships have oily residues to discharge, of facilities for the reception of such residues and oily mixtures as remain from oil tankers and other ships adequate to meet the need of the ship using them without causing undue delay to ships."⁷⁸

In practice, however, reception facilities are inadequate in many ports of the world. INTERTANKO (The International Association of Independent Tanker Owners) is of the view that "even ten years after the enforcement of

⁷⁷"Are Port Reception Facilities Adequate?" BIMCO Bulletin 4/92, July/August.

⁷⁸MARPOL 73/78, Annex I, Regulation 12.

MARPOL, tanker owners continue to suffer from the absence of reception facilities in major oil export and import ports, even in countries which are parties to the Convention. In some countries the costs for reception facilities are exorbitant, although in others they are free."⁷⁹

Within IMO the concern for reception facilities lasts from the inception of MARPOL. The Marine Environment Protection Committee (MEPC) recognized in 1974 that one of the most important obligations of the contracting states in implementing the Convention would be the provision of adequate shore reception facilities.⁸⁰ Consistent with this strategy MEPC has considered a large variety of means to facilitate the implementation of MARPOL 73/78. Drafting guidelines for the provision and maintenance of adequate reception facilities, publications, seminars and symposiums debating the issue, as well as technical missions to assess the existing facilities were periodically organized under MEPC auspices.

In 1976 the first edition of the "Guidelines on the Provision of Adequate Reception Facilities in Ports" was issued.

In 1980 a study on reception facilities for oily wastes was published as a result of an enquiry conducted between 1976 - 1978.⁸¹

⁷⁹Ringbakke, Svein. INTERTANKO Legal Consultant. Personal interview. 5 October 1993.

⁸⁰IMO Document no.MEPC 3/WP1

⁸¹IMO Document No. MEPC/Circ. 234.

In 1984, a seminar on the same subject was held at IMO headquarters⁸² and three years later a symposium took place at the same premises focussing on noxious liquids.⁸³

A report on recycling of the oily waste in the marine industry was published in 1988 and one year later a comprehensive study on mechanisms for the financing of reception facilities was jointly supported by INTERTANKO, the International Chamber of Shipping (ICS) and the Commission of the European Communities. A long series of regional and national seminars on the topic were held in India, Yemen, Thailand and Ghana in 1987, Uruguay, Chile and Peru in 1988, Jamaica and China in 1989, and Malaysia and Kenya in 1990. Besides the seriousness of the approach, this illustrates the special consideration given by IMO to ways and means for assisting developing countries in meeting the Convention requirements.

The political will to adopt MARPOL 73/78 is of great importance but it is the availability of financial resources that makes it possible to implement the Convention. A survey carried out in August 1990 by Friends of the Earth International (FOEI) indicates that a lack of financial means may be the main reason for many countries not to ratify MARPOL.⁸⁴ The figures regarding Annexes I and II are presented in Table 5.

⁸²IMO/UNDP International Seminar on Reception Facilities for Wastes, London, 30-31 August 1984.

⁸³International Symposium on Reception Facilities for Noxious Liquid Substances, London, 13-15 May 1987.

⁸⁴Status of International Conventions Relating to Marine Pollution, FOEI, 1990.

Table 5. Percentages of MARPOL 73/78 signatories.

Groups of countries (based on GDP per capita)	MARPOL Party States (%)
26 developed market economy states	81
12 former socialist states	67
33 developing states (above USD 1500)	42
38 less dev. states (between USD 500-1500)	21
57 less dev. states (below USD 500 or no information)	16

Source: IMO Document MEPC 30/2/1

The establishment of an administration to coordinate and control the implementation, the investments that have to be made to provide the reception facilities and the treatment of the received wastes are too costly for many countries. Charging high fees for the use of the facilities to cover their capital costs may hinder the national economic development and affect the position of a country in competition among ports of different states.

On the other hand, the migration of sub-standard vessels to countries which have not ratified MARPOL pose an increased threat to their environment while such countries usually lack the resources to prevent the damages or to take appropriate action to minimize them.

Several schemes and arrangements for viable reception facilities have been thought of, some of which the author will concentrate on in the coming pages. Nevertheless, it is still unlikely that IMO's goal to eliminate wilful and

intentional pollution from ships will be soon achieved.⁸⁵ Perhaps new and innovative initiatives have to be stimulated and bold ideas as "paying the polluter" should be considered in the future.

This particular view was first suggested at the NOR-SHIPPING CONFERENCE 1993, in Oslo, by professor Theodore Sampson of the World Maritime University and most probably has shocked many by its novelty. However, this approach is pre-eminently pragmatic and realistic. If shipping is seen as an on-going competition, there will always exist an "evil" shipowner willing to save some time and money even it is assumed that the reception facilities are available free of charge. While it is known that penalty mechanisms were to a very small extent successful in shipping, they have raised complicated judicial procedures. Why not try to develop a new mechanism based on prepaid reception facilities fees? A certain amount of money paid by the ship operator at the beginning could be subsequently redeemed by timely and appropriate uses of reception facilities.⁸⁶ Such ideas should be viewed by the international maritime community as part of a new and proactive perception of the shipping industry opposed to an old rigid and conservative one.

A brief look at the reception facilities from the perspective of the ship and port operators will be given in the following two subchapters.

⁸⁵IMO Resolution A 237(VII), 1971.

⁸⁶Sampson, Theodore. "Waste Reception Facilities: a Global Perspective". Oslo, 14 May 1993.

4.2 SHORE RECEPTION FACILITIES VIEWED FROM AT SEA

Ships are obliged to comply with all international and many local rules and regulations covering the discharge of oil and other harmful substances into the sea, but are often faced with difficulties in ports when wishing to dispose of wastes. Although the responsibilities of different parties are clearly set out in MARPOL 73/78, shipowners continue to express their concern about the shortage and adequacy of the facilities available to them.

During the first half of 1990, ICS carried out surveys into the availability of reception facilities in ports and terminals throughout the world, based on the experience of ships' masters who had required the use of reception facilities. The information provided by ships, especially those having oil residues for disposal and those using oil cargo terminals, continues to show that inadequacies exist or, at least, that difficulties and delay will be encountered. For example in Germany the discharge to the existing facilities is often restricted, in UK delays and extra charges for customs duty were experienced, and in French ports the reports show that reception facilities were not available at all.⁸⁷

Despite Convention obligations, it is claimed that many signatory states are still deficient in providing such facilities. There are also complaints about the high price of using facilities provided in some ports and often confusion about what can be landed. According to INTERTANKO, the high prices might be accepted by the shipowners if practiced in an uniform manner. The large

⁸⁷Squires, M. D. European Harbour Masters' Association Forth Congress. Bristol 10-15 May 1992.

variations among the ports create artificial advantages and distort the free competition.⁸⁸

In some cases the proper use of the facilities is hindered by communication problems or by the fact that services are subsidized.

MARPOL 73/78 requires reception facilities to be capable of disposing of all grades of oil. However, one of the obstacles to the widespread provision of adequate facilities is the high cost of dealing with heavy fuels. It has been suggested that as equipment for handling lighter grades of fuel is considerably cheaper, more widespread construction of cheaper facilities for lighter wastes may be accelerated if the obligation for providing facilities for heavy fuels was limited to ports handling these grades.

Since BIMCO (The Baltic International Maritime Council) launched its campaign for better port reception facilities worldwide in 1992, members have responded by supplying detailed information about the extent of present facilities, their adequacy, and any difficulties encountered, both in their own country and in foreign ports to which they trade. In May this year information on reception facilities in more than 250 ports worldwide has been supplied, and the Organization is trying to build up a comprehensive picture in order to campaign more effectively for better facilities and to put pressure on national bodies into complying with MARPOL 73/78.⁸⁹

Norwegian shipping companies are in the course of a four-year research programme aimed at developing so-called

⁸⁸Ringbakke, S. INTERTANKO legal consultant. Personal interview. 5 Oct. 1993.

⁸⁹Petersen, Steen Stender. BIMCO Deputy Secretary General. Telefax interview. 27 May 1993.

"green ships"⁹⁰ Being "green" incurs additional costs which are normally accepted by society, either individually (by purchasing catalytic converters for example), or nationally by providing and encouraging the purchase of lead-free fuel. Nevertheless in shipping, there is an ongoing dispute about who should pay the environmental bill. For the past 20 years government signatories of MARPOL have effectively bound their countries to provide adequate reception facilities for tank washings and slops, and for most of this time, shipowners have been complaining that such facilities have just not been made available. This anachronism has often been excused by the lack of financial resources. Most banking institutions, like the World Bank and regional development banks, invest their funds in economically profitable projects and programmes. Reception facilities are in many cases not very profitable and it will take some time before the banks have reoriented their policies so that reception facilities will have the same priority as agricultural and industrial projects.

INTERTANKO, which has been campaigning about this problem virtually for all its existence, is of a different opinion. Surely, they say, financial uncertainties and risks also exist about a proposed construction of a new container berth, or a channel dredging scheme. There is no guarantee that ships will come to use it and pay for investment. Yet berths, cranes and channels are built, while the financial constraint remains the main excuse for administrators with regard to reception facilities.

The truth is that in the last period of time the World Bank has taken a significant lead in reorienting its lending programmes towards environmental projects.

⁹⁰"The Greening of Norway" *Lloyd's Ship Manager*. Dec. 1992:51.

However, a fundamental commitment to sustainable development and the corresponding transformation of its internal structures and processes is still needed for the years to come.⁹¹

Another aspect stressed by INTERTANKO is that although the tanker owners made a great step towards meeting their environmental responsibilities by operating segregated ballast tankers, they continue to be charged port dues as if the tanks were filled with freight paying oil. Despite the explanation of the port authorities about their inability to determine whether a ship is full of oil or has its slop tanks empty of cargo, the Organization believes that the reluctance of bureaucratic port administrations to accept that one ship, better equipped should pay smaller charges than another of similar dimensions, is to blame. In spite of all these problems some successes in the campaign for "greener" vessels have been reported in Norway, Greece, Sweden and Denmark.⁹² In Norway only, a budget of USD 22 million has been created for "green" purposes and the results are promising.⁹³

From 6 July 1993 a supplementary burden has been imposed on shipping companies. The amount of oil which can be discharged into the sea by certain ships has been drastically cut by amendments incorporated in Annex I of MARPOL 73/78. Bilge water discharges and tank cleaning operations have both been affected and consequently a serious impact on the need for reception facilities should

⁹¹"Our Common Future". The World Commission on Environment and Development. 1987: 337.

⁹²Blydt-Hansen, Ove. INTERTANKO, Manager Ports and Terminal Section. Personal interview. 5 Oct. 1993.

⁹³"The Greening of Norway". Lloyd's Ship Manager, Dec. 1992:51.

be expected. Currently non-tankers of 400 GRT and above, if within 12 miles off the shore or outside specially designated areas, are forbidden to discharge any machinery-space bilge water into the sea if it contains more than 100 ppm of oil content. The amendment reduces this figure considerably to 15 ppm. When outside the special area, tankers are at present allowed to discharge oily wastes at a rate of 60 liters per nautical mile. This amount has been halved to 30 liters. For non-tankers the amendments apply to all new ships built after 6 July 1993, but there will be a five year period for vessels in current use to meet the requirements. Tankers have to comply by 6 July 1993.

Nevertheless the ship operators are of the view that a general understanding of the practical situation confronting ships which require reception facilities should be reached. Given such an understanding national administrations, port authorities, the shipping industry and all other relevant interests can continue to cooperate in mutual knowledge of each others' needs and with due care for the marine environment.

4.3 THE PORT AUTHORITIES PERSPECTIVE ON RECEPTION FACILITIES

According to MARPOL 73/78 ports are required to provide adequate reception facilities for wastes to such an extent that ships are not caused undue delay when using the facility. In principle there is no legal obligation for ports to receive oily or chemical residues free of charge. The term "adequate" has been defined by the Dutch Port Authority as follows:

- a. the capacity of the reception facilities at cargo unloading, loading and repair ports shall be capable of receiving those residues and mixtures which are handled within the port and are required to be discharged to reception facilities;
- b. the receiving capability of reception facilities shall meet the needs of ship using the port, and
- c. arrangements, needed to permit the discharge of residues and mixtures without causing undue delay to ships, are made between the ship and the reception facility, such as prior notification of substances and quantities expected for discharge and equipment required.⁹⁴

There is a worldwide consensus that the practice of disposing or dumping wastes in the marine environment must be stopped and as a complement most port authorities agree that adequate reception facilities should be provided.

When planning or assessing a reception facility a port administrator should primarily find answers to a number questions:

1. Are the present regulations clear/understandable for the users?
2. Are the present regulations observable, i.e. compatible with other regulations?
3. Are the report regulations and/or report forms sufficiently appropriate?
4. Do the vessels use the reception facilities as may be expected? If not, why not ?

⁹⁴Lems, Jaap. "Matters Regarding Port Reception Facilities and the Procedures Related Thereto." European Harbour Masters' Association Fourth Congress, Bristol, 10-15 May 1992.

5. Are the charged costs as might be expected and in accordance with the published tariffs?
6. Are problems met regarding the disposal of shipwastes related to custom regulations?
7. Which are the problems recognized?
8. Does the port authority meet its duty to provide adequate reception facilities?
9. Are there efficient and sufficient means to prove the contraventions?

Candid answers to these questions might be the first step to effective reception facilities.

According to MARPOL, port authorities are entitled to set up regulations regarding the use of the facilities and for at least two reasons, they seem to be justified in doing so.

First, if not properly prepared to receive, store and process the wastes, the reception facility itself becomes a threat to the environment. Therefore, many port administrations established minimum technical requirements to license reception facilities. In Holland, in addition to these requirements a reception facility has to be licensed under the national environmental law. Under certain circumstances five categories of facilities may be eligible for such designation:

- A. Terminals with loading and unloading facilities for liquid bulk cargoes and ship repair yards. These companies may only receive those substances that are included in their chemical waste permit and have been handled during cargo and repair operations by that particular company.
- B. Companies that are exclusively or primarily involved in the collection, storage, treatment, processing and disposal of all harmful substances from ships. These

companies must have permanent premises ashore and include the ship cleaning stations.

- C. Companies with mobile collecting facilities for liquid waste, such as barges and trucks. Those which do not possess any permanent premises ashore, with a permit for collection and delivery under the Chemical Wastes Act are obliged to deliver their wastes to companies designated under B.
- D. Companies with permanent premises for the reception, processing and disposal of garbage and residues of dry cargo.
- E. Companies with mobile collecting facilities for garbage and residues of dry cargo. These are obliged to deliver their wastes to the companies designated under D.⁹⁵

It is worthwhile to add that under national law ships should be prohibited from discharging harmful substances to non-designated reception facilities, likewise reception by unauthorized companies should be forbidden. It is also obvious that the designation of a port reception facility should be made with due observance of the proportion between the anticipated offer of harmful substances from ships and the reception capacity, and additionally all licensees should be obliged to accept all harmful substances which have been offered to them.

A second reason for regulating the use of a reception facility is the technological solutions needed for treating wastes. Residue mixtures, which are incompatible with each other or in combination, enlarge the difficulties of treating. To alleviate the burden of ultimate disposal it is advisable, and often cheaper, to discharge different

⁹⁵Ibid 93.

residues separately. The physical and chemical properties of harmful substances are of vital importance in determining the right treating chain. Three methods of dealing with wastes may be considered.

1. A gravity purification unit, followed by a flotation unit is very efficient for oil-like substances.
2. A biological treatment unit is often necessary after treatment by the first method; and
3. Incineration is the third way of processing wastes in some cases. Because this method is both expensive and environmentally disputable, it should only be applied if other treating methods are not available or feasible.

The basic requirements usually practiced by port authorities with regard to reception facilities may be summarized as follows:

- equipment and operation of the vessel must be in line with the rules and regulations of MARPOL 73/78;
- the discharge should be performed only with authorized companies, and
- the residues to be delivered should come from normal ship's operation and in pumping condition.

Ports generally deny any responsibility for wrongly declared or improperly mixed quantities, idle time in connection with berth allocation, discharge of wastes required by repair and dry-docking and for removal of lubricants.

As it has already been shown, the handling of heavy fuel residues creates difficulties, and in addition the only method of treatment is in many cases incineration. This explains why port authorities have criticized the use of such fuels. The sale of low quality mineral oil of high viscosity, containing a high degree of sulphur to shipping

companies was perceived as an inexpensive possibility for the oil industry to dispose of these products to the disadvantage of the environment. Shipowners have accepted considerable operational difficulties to gain an economic advantage by using the cheaper, low quality fuel but little concern was shown for the harm produced to the marine environment. In conflict with other modern techniques on board ships there is a considerable lack of environmental related equipment and procedures. The use of technical means by which the amount of oily residues could be minimized, is often very poor, shipowners interest being focused on market demand rather than on environment.

Statistical data regarding the oil pollution in the North Sea were recently provided by Germany. Based on air surveillance and the counting of the oiled seabirds, it has been proved that increased oil pollution took place since the end of seventies, peaking from 1983 to 1986. The North Sea is burdened to an unacceptable extent with oil pollution resulting from shipping, and it was proved (by chemical analysis) that most of the pollution originates in illegal discharge of fuel residues.⁹⁶

Looking at the two almost diametrically opposed points of view of ship and port operators, it is very difficult to decide who is to blame. A common sense conclusion may be that the environment is part of "our common future" and all together, mankind should cooperate to solve its problems.

⁹⁶Noelke, Eberhard. "Three Year Reception Facilities Pilot Project" European Harbour Masters Association. Fourth Congress, Bristol, 10-15 May 1992.

4.4 THE NEED FOR RECEPTION FACILITIES IN THE ROMANIAN PORTS

In the MARPOL Convention, a "special area" is described as a sea area where, for recognized technical reasons in relation to its oceanographical and ecological condition, and in relation to the particular character of its traffic, the adoption of special mandatory methods for the prevention of sea pollution by oil are required. The Black Sea is defined as such a special area within this Convention, thereby requiring greater than normal use of reception facilities by vessels retaining on board all oil drainage, sludge, dirty ballast and tank washing waters.

As it was underlined, Constantza is the largest port in the area and encompasses oil terminals that receive crude oil and load refined products. Tankers continually call in Constantza both in the loaded and ballast conditions. Oil, is loaded at an average rate much greater than 1,000 metric tons per day (900 tph) and the port has both repair yards and tank cleaning facilities available.⁹⁷ Numerous ships, other than tankers routinely call at Constantza with a need for processing of sludge, bilge and other oily waters. Combination carriers also frequent the port of Constantza.

This type of port activity places Constantza in the position of needing to provide reception facilities for all of the various reasons enumerated in MARPOL 73/78. That Constantza is a port in a coastal state bordering a special area emphasizes the need to pay even closer attention to the effects of maritime activities upon the environment.

⁹⁷Pielow, Colin. "Guide to Tanker ports", London, 1992.

Since Romania was not bound by MARPOL 73/78 provisions, reception facilities were not mandatory and, although some services have been provided, they are not regarded as adequate or sufficient under the terms of the Convention.

A government commissioned survey conducted in June of 1980 revealed that the port of Constantza was in an advanced stage of pollution. Water pollution was attributed to:

- accidental spills of hydrocarbons as a direct result of loading and discharging operations at the oil terminal docks
- accidental spills of hydrocarbons during bunkering operations within the entire port area
- illegal discharging of bilge water into the harbour area
- illegal discharging of oily mixtures into the sea by vessels anchored in Constantza Road, and
- illegal dumping of garbage and other solid wastes.

Pollution of the shore within the port area was attributed to:

- improper pumping of sewage and other used water by vessels alongside berths and,
- disposal of garbage and other solid wastes on the berths.

As a result of these observations an action plan was established by the Port Administration in cooperation with the Harbour Master, the Oil Terminal Company and Constantza Shipyard. This plan called for a number of well-intended and appropriate actions but its implementation was never carried out, in part due to inadequate prioritization, but primarily because of a lack of financial resources. Thirteen years have passed since this study documented the

urgent need for corrective actions, where reception facilities play the central role. There has been little improvement in the ability to respond to the conditions, while the need for action steadily increases.

A rough evaluation of the magnitude of this problem in Constantza will be attempted by focusing on the need for reception facilities as required by Annex I to MARPOL Convention. An estimate of the potential for pollution can be made by considering the sea-going vessels that call at the port as well as the vessels that provide various services or participate in local activities.

In an average year, approximately 3600 commercial sea-going vessels call at the port of Constantza, or approximately 10 vessels per day. Based upon data gathered from daily observations of Constantza Port Administration, the following breakdown of types of vessels per day is assumed:

2 vessels of 55-65,000 dwt, driven by 15-17,000 HP engines

1 vessel of 21-18,000 dwt, driven by a 12,000 HP engines

4 vessels of 4,800 dwt, driven by 3,000 HP engines

3 vessels of 2,000 dwt, driven by 2,000 HP engines

Based upon the typical vessels calling at Constantza and assuming that all of these had completed a 30 day voyage, the quantities of fuel residues which are projected to be aboard upon the vessels' arrival are given in Table 6.

Then the theoretical quantity from this source to be collected from ships calling in Constantza yearly would be 27,360 t.

Table 6. Estimated fuel residues aboard vessels arriving in Constantza in typical day.

Type of engine (HP)	Quantity (t)
17,000	2 x 20t = 40.0
12,000	1 x 14t = 14.0
3,000	4 x 3.6t = 14.4
2,000	3 x 2.4t = 7.2
TOTAL	75.6

Note: estimations made based on daily observations

Looking next at the fleet of local service vessels, the following figures were considered:

35 vessels for harbour maintenance

30 vessels for pilotage activities, and

12 vessels for salvage, SAR or emergency intervention

Quantities of fuel and lubrication oil residues produced, based on the number of vessels in daily service, were estimated as shown in Table 7.

The theoretical quantity of fuel residues to be collected from these vessels in Constantza on a yearly basis would be 166 t.

Considering now the geographical position of Constantza and a typical stay of vessels in the port of 9 to 10 days, the commercial vessels calling at the port would be expected to exceed their bilge and storage capacity during their stay.

Table 7. Estimated fuel residues produced by service vessels in Constantza on a daily basis.

Type of vessel/engine (HP)	Quantity (t)
tugboats/2,400	4 x 0.050 = 0.200
tugboats/1,200	3 x 0.025 = 0.075
dredgers/1,200	2 x 0.030 = 0.060
tugboats/600	2 x 0.012 = 0.024
self-propelled barges/600	2 x 0.010 = 0.020
self-propelled barges/350	6 x 0.007 = 0.042
motor launches/150	11 x 0.003 = 0.033
TOTAL	0.454

Note: estimations made based on daily observations.

Assuming this was true for 75% of the vessels and with an average of 100 vessels daily within the confines of the port, approximately 150 tons per day in bilge water would be expected. This extrapolates to 54,750 tons per year. For service vessels, even though most would be less than the 400 GRT, they are not provided with processing installations or oil content monitoring systems. Consequently they would be expected to deliver their oily bilge water to a reception facility. Following a calculation similar to that for commercial vessels, the service vessels would be expected to have a need to discharge to reception facilities 7,500 tons of bilge water per year.

When considering tank washing water, it is known that oil tankers of 20,000 dwt and above are supposed to be provided with segregated ballast tanks (SBT) and crude oil

washing systems (COW). Thus equipped, water washing operation becomes necessary only when the type of cargo is changed, the vessel is required to be "gas free", or it must prepare for drydocking. For a total import of 16.3 million tons of crude⁹⁸, based on experience, an estimated 20,000 tons of tank washing water might be expected per year.

Table 8 summarizes the projected quantities of fuel residues, bilge water and tank washing water that would be anticipated for discharge to reception facilities due to the presence of both commercial and service vessels in the port of Constantza per year and per day.

Table 8. Amounts of oily wastes in Constantza per year and per day.

Type of residue	Commerc. vessels	Techn. vessels	Total/ year	Total/ day
Fuel	27,360	165	27,525	76
Bilge water	54,750	7,500	62,250	173
Tank washings	20,000	-	20,000	55
TOTALS	102,110	7,665	109,775	304

To conclude it must be admitted that the figures in Table 8 are a rough approximation and illustrate a situation with maximized quantities of residues. However, they give a picture of the potential sources of pollution with hydrocarbons and provide a valid argument for immediate appropriate action.

⁹⁸IMO document no. A17/33. London: IMO, 1991

For the time being, the status of reception facilities for Annex I products in Romania is limited to facilities being provided in Constantza at oil terminals. Vessels using these facilities experience no delays with all discharging and loading carried out at one time. A charge of only USD 3 per ton of oily water waste, bilge or tank cleaning liquids is made.⁹⁹ But only tankers use this due to the convenience of the location at the loading terminal.

It is said that if a boom is placed around the reception facility an onshore wind would show oil accumulating outside of the reception facility area as overboard discharges from the commercial harbour are held back. Physical evidence of the inadequacy of reception facilities in Romania is available from the oil that is visible in the water in the port of Constantza, as well as the visible presence of garbage.

If cargo ships should request to discharge oily wastes, which rarely happens, that could be arranged by tank trucks or a bunkering tanker but, in the past, there has been no enforcement to require that this be done.

There are special problems in providing reception facilities for the small or low usage ports along Romania's Black Sea Coast. These ports do not have oil terminals and thereby any processing facilities. Traffic is so low that it doesn't pay to have an industry for this. It may be possible that such vessels could divert or stop by Constantza port on their way to the other ports. All three Romanian maritime ports are administered by the same organization; so coordination of reception facility services would not be difficult, but provision of small

⁹⁹Pielow, Colin. "Guide to Tanker Ports", 1992

reception facilities in both small ports would be under-utilized.

An assessment of the reasoning for the lack of the reception facilities required by MARPOL 73/78 is attributed to a limited awareness of the administrative staff in the previous regime to the validity of concerns for marine pollution and, to the fact that environmental matters simply had too low of a priority. Now that the regime has changed, the awareness has been elevated, and the desire to correct the situation exists. But, the feasibility of providing the necessary reception facility services is seen to be very much dependent upon the ability to find financing for this effort.

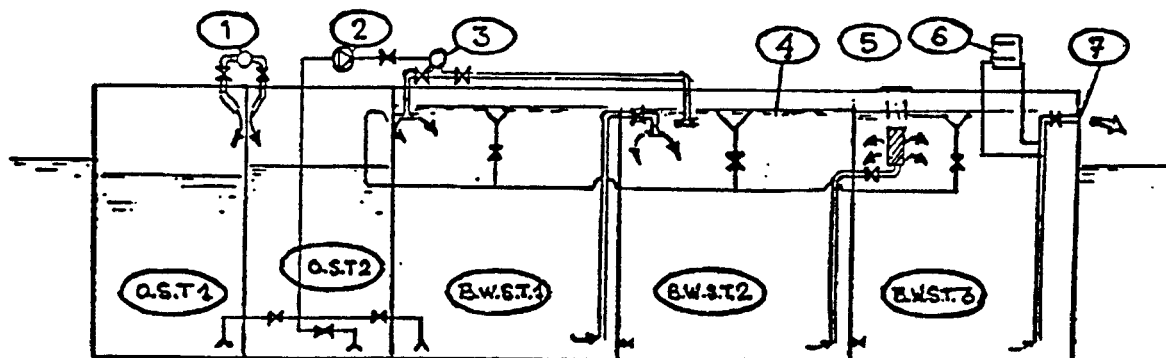
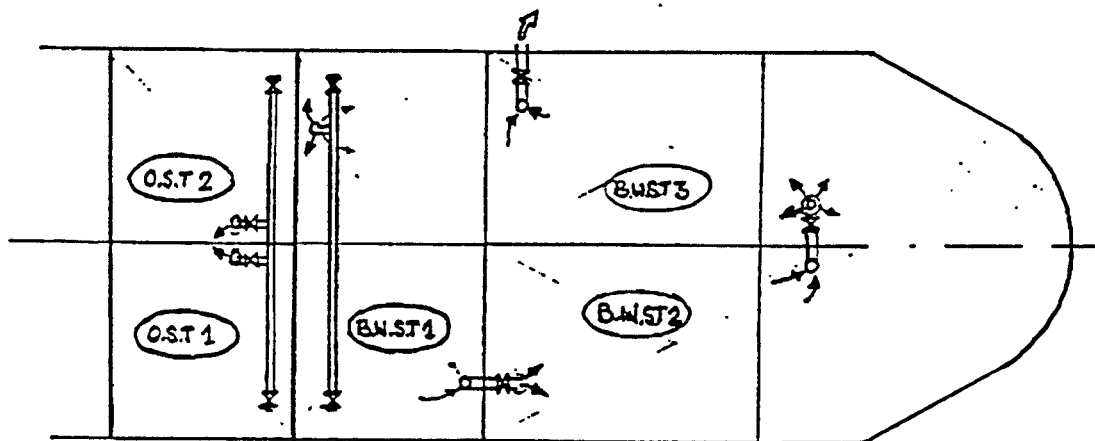
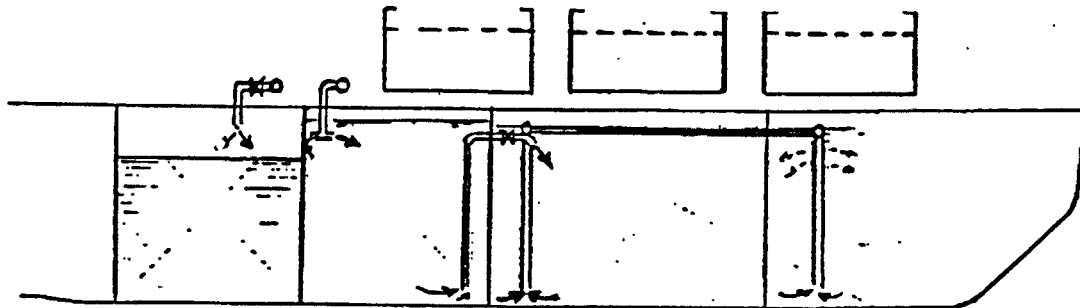
4.5 A SUGGESTED ANSWER TO THE DEMAND FOR RECEPTION FACILITIES IN CONSTANTZA

It may be said that there is a general consensus in Romania upon the stringent necessity of having proper reception facilities in place. To all the pros mentioned up to now a final one should be added- international pressure. In the present international context, no nation with a developed shipping industry can afford to ignore environmental issues. A compulsory step in the process of building in Constantza a gate to Central and Western Europe through the Danube-Maine-Rhine waterway system, is undoubtedly to provide adequate reception facilities.

Due to its topographical dimensions (see Figure 5), the port of Constantza could best be served by a reception facility in the form of a self-propelled barge similar to the one presented in Figure 9.

Figure 9. Barge for reception of oily wastes.

Source: IMO, possible arrangement for reception facilities in Bangkok, Thailand.



O.S.T = Oily Sludge Tank

B.W.S.T = Bilge Water Settling Tank

1. Reception of Oily Sludge

2. Pump for pumping ashore and internal transfer

3. Reception of Bilge Water

4. Oil skimming system

5. Third stage coalescence filter

6. Oil content meter

7. Overboard outlet for settled water

Such an option would require a series of arrangements and specific measures in order to meet all the conditions and to ensure an efficient operation.

With regard to tanker-vessels, they may well be served in the oil terminal, as before, which means that the tank washing would not be a supplementary burden for the mobile reception facility.

The reception barge will have to visit about ten vessels per day according to a programme based on port's main divisions and vessels' schedule.

Instead of touring the entire harbour daily, the barge would focus on a specific division each day, which reduces the sailing time between served ships and increases efficiency.

The pumping system should be dimensioned to ensure the collection of up to 20 tph. Thus, about one hour per vessel will be allowed for the reception of wastes in a current magnitude of 5 - 10 cm.

The barge should have arrangements to settle bilge water and bunker tank washing water, and to discharge properly monitored purified water over board. A capacity of 250 tons divided in three tanks connected in series for a three step settling process before being gravitated overboard, should be sufficient to cover all the necessities of Constantza. The oily wastes with little water content must be received in different tanks to ensure an easy and fast delivery at shore. For winter time, a proper heating system should be assured to obtain adequate pumpability.

The oily residues, as well as the heavy fuel sludge, need to be taken ashore for further use, blending or incineration. For this purpose, the barge must have the possibility to carry containers on deck. The containers

should be placed on rail systems so that they can be easily removed and replaced by empty ones. It is assumed that arrangements can be made between the port administration and the Oil Terminal Company (OTC) such that the latter will reuse or dispose the residues as appropriate. Depending on the quality of the wastes they may be used in asphalt production, mixed with clay and used for land fill, or simply incinerated. It is commonly assumed that the sludge has sufficient value so that no extra cost has to be calculated for the disposal or for the additional collection arrangements at the Oil Terminal Company.

A mooring place next to OTC installations should be provided in order to enable the barge to discharge during the night the residues collected by day time.

Finally, the barge must have a good manoeuvrability in order to avoid any accidents when shifting from one ship to another, and a minimum crew of six members, properly trained, to ensure permanent service on board.

The principle of such a floating reception facility, illustrated in Figure 9, is one of the possible arrangements suggested previously by IMO for the port of Bangkok, Thailand. Therefore, it should not be used for final design of such a barge without further studies and evaluation of the specific requirements and operating conditions.

It may appear necessary, in peak situations, to have a back-up capacity in the form a simple barge being towed to vessels needing service in case that the reception facility barge, for some reason, will not be available. Such a barge would not need any processing installation as it would just have a storage capacity.

It is encouraging then to observe that in the Constantza shipyard a hopper barge is currently undergoing

transformations in order to meet the requirements for a floating reception facility. It is a promising beginning for the new Administration of Constantza Port, and the next step is the ratification of MARPOL 73/78.

CHAPTER 5

INTERNATIONAL MECHANISMS TO FINANCIALLY ASSIST EFFORTS TOWARDS IMPLEMENTATION OF ENVIRONMENTAL CONVENTIONS

In the last 20 years, nations have signed an increasing number of agreements to address a series of environmental concerns. While the development of these agreements in itself is notable, their effectiveness depends on their implementation by the parties.

A fundamental obstacle to implementation, as earlier identified, is the lack of financial and technical resources in developing countries. Over the last 15 years, this has come to be recognized as a problem, and international efforts have been made to help developing countries strengthen their environmental institutions and administrative systems. Since the mid-1970's, when the United Nations General Assembly called on UNEP's Executive Director to provide technical assistance to developing countries, the Programme has assisted more than 40 such countries in creating environmental legislation and administrative systems.¹⁰⁰

Recognizing the seriousness of environmental problems, an array of measures have been proposed internationally by

¹⁰⁰ "New Directions in Environmental Legislation and Administration Particularly in Developing Countries." UNEP, Environmental Law and Machinery Unit, Nairobi, 1989:1.

environmental experts to strengthen nations' capabilities to comply with the agreements. In any case, it clearly appears that endeavors to this end will require both international financial support and the commitment and national effort of the respective countries.

5.1 TECHNICAL ASSISTANCE AND FINANCIAL SUPPORT OFFERED THROUGH IMO

IMO is one of only two specialized agencies which do not allocate funds out of their regular budgets to finance technical cooperation projects. Instead, it relies on the United Nations Development Programme (UNDP) and other extrabudgetary sources.

During the last ten years or so, the chief financial backer of IMO's programme has been the Swedish International Development Authority (SIDA), while the support from UNDP has continuously been shrinking. In the period between 1987 - 1990 more than 15 missions and activities were jointly supported by SIDA and IMO around the world.¹⁰¹

From its inception IMO has focussed on human development with training as a major component. Up until the early 1980's efforts had been directed at improving the quality of seafarers. Then in 1983 World Maritime University (WMU), a new training institution was established under IMO's auspices. The University is located in Malmö, Sweden and operates based on direct (budget) contributions and income from fellowships. According to the 1993 figures, the Government of Sweden is

¹⁰¹ Final Reports of IMO Technical Cooperation Committee, documents nos. TC 30/3, TC 32/3, TC 33/3.

contributing the largest percentage (33%) to the University's budget, providing in addition, a series of practical facilities through the local administration of the City of Malmö. The World Maritime University targets an elite group of specialists, who have already achieved considerable success in their careers. Their average age is 35 years. Expertise and high level specialized training is not generally available in developing countries which lack the experience of the traditional maritime nations. The University endeavors to overcome this by providing a two year programme in such subjects as maritime administration, safety, port and shipping administration and maritime education. In the ten years since the University was established some one thousand students have been enrolled at WMU. So far 120 different countries have been represented here, including several traditional maritime countries, and that makes the University unique in the maritime world.¹⁰² This year, as a follow-up to the 1992 UNCED in Rio de Janeiro, the University's academic curricula was reviewed and a new and strengthened environmental component has been introduced.

In addition to SIDA and the Swedish Government, other donors are currently financially contributing IMO's programmes - Norway, Germany, United States, the European Economic Community (EEC) and Canada are among the most prominent. Contributions in kind have been made by Japan, the oil industry and various international organizations such as INMARSAT, BIMCO, and others. A new feature of IMO's programme is the involvement of the developing countries themselves in contributing to global efforts through the provision of facilities for training events, or

¹⁰² IMO/WMU "Serving the International Maritime Community", Malmö, 1993.

secondment of experts for different missions. A preliminary investigation aimed at identifying further possibilities for this type of cooperation is currently being developed by the Romanian Maritime Administration in cooperation with WMU. Hopefully, next year a field-trip would be provided for WMU students in Romania.

Despite the lack of regular budgets for technical cooperation, in 1989 alone IMO has executed or supported some 70 programmes and projects in developing regions, with an annual delivery of USD 15.5 million.¹⁰³ The most labour-intensive aspect of IMO's programme for technical cooperation is the fielding of specialized missions by maritime experts and consultants. More recently, normally projects involving support by long term resident experts, are steadily being replaced by short-term high level experts who often service a number of countries through repeated technical missions. An appropriate example is the two week mission in the Kingdom of Thailand aimed at identifying the technical implications of the ratification of MARPOL 73/78 by that country. Although relatively short for its goal, the mission was considered one of the most objective and successful in this field.¹⁰⁴ More than 170 such missions have been reported in 1989.

Due to the fact that IMO's programme for technical cooperation is reliant on outside funding, a strategy was formulated early in the 1990's. The main components of this strategy are:

- A. Promotional efforts undertaken jointly by selected maritime administrations and IMO, focusing on how

¹⁰³ IMO document TC 34/3, 8 Nov.1990

¹⁰⁴ Brathaug, Henning. Implementation Officer, Marine Environment Division, IMO. Personal interview. 15 March 1993.

technical cooperation activities benefit all nations by promoting the implementation of global standards; address identifiable assistance needs of developing countries; and place primacy upon human resources development.

- B. Innovative approaches to technical cooperation modalities and financing. This may include the development, in addition to existing programmes of new comprehensive modules on maritime safety and maritime law.
- C. Collaboration with multilateral finance institutions such as the World Bank and regional development banks currently undertaking large-scale, loan-financed shipping and ports projects, through the provision of IMO technical support service.
- D. Further appeals to "non-traditional" donors such as foundations and private sector shipping entities for programme support.¹⁰⁵

Some successes have been reported during the last two or three years in the technical cooperation field, but additional financial contributions are required to implement the full range of activities planned for the period 1993 - 1995. To this end, fund-raising is now one of the principal tasks of the Technical Cooperation Division.

In 1991, when addressing the Advisory Group on IMO's Technical Assistance Programme the Secretary-General said:

"However, we have not succeeded in capturing the hearts and minds of those who hold the purse strings to the extent we hoped. (....). But unless more resources are made available, the

¹⁰⁵ IMO document TC 34/3, 8 Nov. 1990

many important tasks which need to be done will be either postponed or not tackled at all. (...). Why are we failing to get the message across to possible donors? There seems to be a wealth of political commitment to solving the environmental problems and I hope you will be able to indicate how we could harness this political will more effectively and successfully."¹⁰⁶

After almost three years, the challenge continues to be in place.

5.2 A PROPOSED FUND FOR RECEPTION FACILITIES (FRF) TO HELP THE IMPLEMENTATION OF MARPOL 73/78

A new approach of the financing issue has been put forward in 1990 by a study coordinated through IMO on the establishment of a fund for reception facilities. The financing of the fund was supposed to be based on the "polluter pays principle" which means that the resources should be derived from those who benefit from the economic activity which makes those facilities necessary. The fund should be seen to represent not so much a stock of cash upon which qualified applicants may draw, but rather a mechanism through which finance is organized and channelled.

The FRF Member States' responsibility should deal with the acceptance of the "polluter pays principle" and with the provisions of adequate reception facilities as soon as possible in all ports under their respective control. A

¹⁰⁶ Opening statement of the Secretary-General of IMO to the Advisory Group. IMO AG/2, January 1991.

revision of current worldwide provision of reception facilities would also be required and the need for new facilities or upgraded ones should be clearly identified.

The most innovative characteristic of the proposal is that charges for the use of the reception facilities should be made at all ports, covering full costs, including capital costs, and these charges be made irrespective of whether facilities exist or not. At ports where facilities do not exist, or are inadequate, receipts for the charges should be transferred to the FRF to be held on behalf of the port or country involved. Funding would only be released when construction or upgrading of reception facilities are in progress, and agreement reached that the appropriate receipts will be channelled into repayments.¹⁰⁷

Given that the appropriate support from member states will be available, it was felt that finance to construct new facilities may be also ensured through normal financial institutions. That means the fund should be a complement and not a substitute for the regular financial sources.

The need for reception facilities should not be seen as a problem of developing world alone, as shortcomings in this area are common in almost all the ports.

The resources of FRF should be available to all, but priority should be given to countries bordering the designated Special Areas under MARPOL 73/78 Convention. The FRF was proposed to be set up under the auspices, or at least in close association with IMO, and should not be regarded as another aid-giving or international development agency. Any aid should be restricted to a form which

¹⁰⁷ "Study on Mechanisms for Financing Facilities in Ports for the Reception of Wastes from Ships" University of Wales, Cardiff, 1990.

assists capital-scarce countries to meet their obligations under MARPOL without putting a supplementary burden on their internal development.

The International Oil Pollution Compensation (IOPC) Fund was considered a model for FRF and beyond a series of practical similarities the IOPC type is attractive because its mode of finance perfectly accords with the "polluter pays principle".¹⁰⁸

Many advantages were seen to arise from allowing the FRF to delegate some of its powers and responsibilities to appropriate regional bodies especially within designated Special Areas. While a central authority is needed to establish the adequacy of facilities globally, transferring financial control to regional authorities would make the formation of the fund more attractive and its activities more effective. Money is more easily collected and transferred when it is clear that they will be spent in the region. Moreover, organizations already exist in designated Special Areas for coordinating marine anti-pollution measures. Administering the FRF's activities would be a natural extension of their work. Regionalization should also assist the FRF by making local financial institutions more willing to invest in activities in which their own governments have a direct interest.

With regard to the developing world and its traditional North - South relation, it has been underlined that this is not the case for FRF. Rather than to provide traditional financial aid, the main contributions of the developed world would be to ensure that reception charges are properly accounted for in Charter Parties and to help put the collection mechanisms in place.

¹⁰⁸ Ibid 107.

A Port State Control to oversee the use of reception facilities by all vessels is also essential to ensure that the efforts are combined to maximum effect.

Last of all, the FRF could only be effective as a part of the total antipollution effort at national, regional and international level.¹⁰⁹

The concept of FRF has not yet been translated into practice but many of its ideas are of particular value and further consideration will, for sure, be given.

A major drawback to this plan is that it does not follow the principle of sustainable development. By the time that low use ports have accumulated enough port fees to finance reception facilities, the vessel traffic must have already built to a point that lack of facilities will have already caused the local environment to be contaminated.

5.3 THE COORDINATING ROLE OF UNITED NATIONS ENVIRONMENT PROGRAMME IN EVALUATION OF THE ENVIRONMENTAL PROJECTS

The environmental threats facing the world are so great and so universal that no country or group of countries, can hope to tackle them alone. A global partnership of mankind was required and in 1968, Sweden proposed that the United Nations should convene a conference through which the problems of the human environment could be addressed. The conference took place four years later, in Stockholm, and its recommendations were endorsed by the United Nations General Assembly in December 1972. Resolution 2997 provided for the

¹⁰⁹ Ibid 108.

establishment of four new entities as follows:

1. The Governing Council of the United Nations Environment Programme, composed of 58 nations, elected by the General Assembly for three year terms, to act as the UN's intergovernmental organ for the environment. Among other functions, it is to promote international cooperation, provide general policy guidance for programmes within the UN system, and keep both the world situation and the implementation of UN programmes under review.
2. The Secretariat based in Nairobi, was to provide a focal point for environmental action and coordination within the UN system, with the aim of ensuring effective management.
3. A voluntary Environment Fund, was set up to finance new environmental initiatives.
4. The Environment Coordination Board (ECB) was established to ensure cooperation and coordination among all UN bodies involved in environmental programmes. ECB was to be chaired by the Executive Director of UNEP.¹¹⁰

As its name indicates, UNEP is not an institution, but a programme which comprises all the activities undertaken within the United Nations system that relate to the environment. The Secretariat in Nairobi services and coordinates that programme and has become known as "UNEP".

Ever since it was created, UNEP has recognized that economic development and the environment are closely linked and therefore the programme promotes environmentally-sound development which maintains and improves economic progress without damaging the environment and natural resources on

¹¹⁰ "Two Decades of Achievement and Challenge". UNEP, 1992.

which future development depends. UNEP is dedicated to bridge the gap between awareness and action. It exists as a catalyst working through other UN agencies and governments.¹¹¹

UNEP was set up to catalyze, coordinate and stimulate action within the UN system, and not to execute or to finance it. Nevertheless one of its primary objectives is to assist all countries, especially developing countries, to deal with their environmental problems and to help mobilize additional financial resources, for the purpose of providing the required technical assistance, education, training and free flow of information and exchange of experience. It has been estimated that each dollar that the Environment Fund spends on an environmental activity generates another four dollars from supporting organizations, cooperating agencies and governments.

UNEP cooperation with IMO, materializes in direct action to protect the oceans and the coastal areas. Seventy-one percent of the Earth's surface is covered by sea. Through their interactions with air, land and biosphere, the oceans have helped to crystalize the conditions which make life possible. Coastal waters contain many vital ecosystems and provide about 95 percent of the living harvest of the seas. But man by its continuous search for survival and development had a dramatic impact on the oceans of the planet.

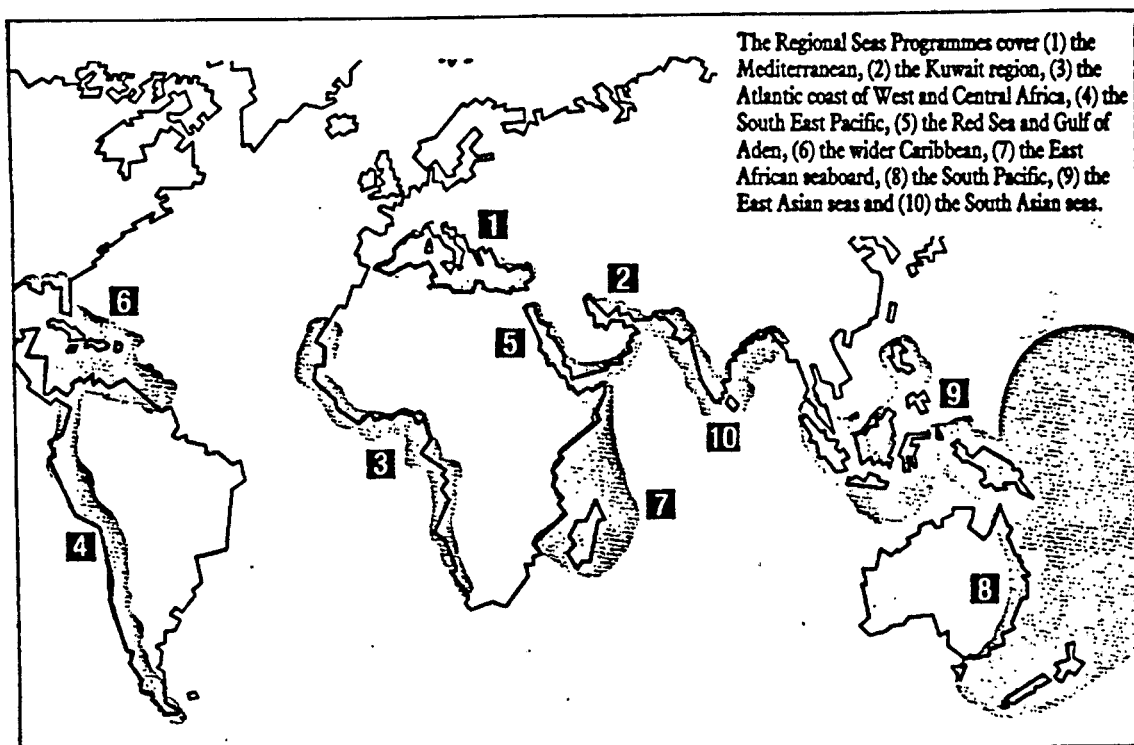
Faced with this global problem, UNEP decided in the mid-1970's to take a regional approach. Its Regional Seas Programme ties coastal nations together in a common commitment to mitigate and prevent degradation of the world's costal areas, inshore waters and open oceans. One

¹¹¹ Tolba, Mostafa K. Executive Director, UNEP. Nairobi, October 1992.

of the priorities established by UNEP for the next decade is a global plan to combat marine pollution with a target to reduce it to the 1990 level by the year 2000. ¹¹²

Today, nearly 140 countries take part in Regional Seas Programmes catalyzed and coordinated by UNEP, covering the Mediterranean, the Kuwait region, the Red Sea, the wider Caribbean, the Atlantic coast of West and Central Africa, the eastern African seaboard, the Pacific coast of South America, the islands in South Pacific, the East Asian region and South Asia (see Figure 9). Action plans for the Black Sea and the North West Pacific are currently being developed.

Figure 9. UNEP Regional Seas Programme.



Source: UNEP "Two Decades of Achievement and Challenge"

¹¹² Two Decades of Achievement and Challenge. UNEP 1992.

Funds for these activities came initially from UNEP and then from trust funds set up by the governments involved. So far, UNEP has facilitated 8 international conventions and 18 protocols and agreements on the protection of regional seas. In the last two decades, the need to provide technical and financial assistance to developing countries in addressing their environmental problems has become more evident. Such help is of fundamental importance if these countries are to pursue sustainable paths of development. For this reason, in 1982 UNEP established the Clearing-house mechanism to act as a bridge between developing countries and potential donors. It functions as an integrated part of UNEP's task of coordination and catalysis. In this way, developing countries are assisted in their efforts to deal with their environmental problems and helped to find financial and technical resources they need. Clearing-house helps these countries to formulate priority programmes and projects, and mobilizes financial and other resources. In addition, it acts as a broker, matching up potential donors with identified projects and forging links between developing countries and donors. The mechanism has provided assistance to some 45 countries, from small individual projects to complete national action plans. These activities depend completely on voluntary contribution and support from the international community. Support has been provided by Canada, the European Community, Finland, France, Germany, the Netherlands, Norway, the United Kingdom as well as the USA. Another important source of aid to developing countries has been the Arab Gulf Programme for United Nations Development organizations (AGFUND).

To protect the planet and to preserve its resources

for the coming generations good political intentions must be translated into practical collective actions and the clearing house provides the right "tool" to do that.

5.4 GLOBAL ENVIRONMENT FACILITY - PARTNERS IN GLOBAL SOLUTIONS.

The Global Environment Facility (GEF) is a three year experiment providing grants for investment projects, technical assistance and research. Its resources are to be used to explore ways of assisting developing countries to protect the global environment and to transfer environment-friendly technologies.

In 1987, the Brundtland Commission's report concluded that there was a "serious lack of funding for conservation projects and strategies that improve the resource base for development"¹¹³

In September 1989 the French Government, backed by Germany, proposed the establishment of the Global Environment Facility. The first meeting of participating countries was held in Washington D.C. in May 1991.

The Facility was set up to assist developing countries deal with four main global environmental problems:

1. Global warming, particularly the effects on the world's climate of greenhouse gas emissions resulting from the use of fossil fuels and the destruction of carbon-absorbing forests.
2. Pollution of international waters through, for example, oil spills and the accumulation of waste in oceans and international river systems.

¹¹³ "Our Common Future". The World Commission on Environment and Development". 1987.

3. Destruction of biological diversity through the degradation of natural habitats and the "mining" of natural resources.
4. Depletion of the stratospheric ozone layer from emissions of chlorofluorocarbons (CFCs), halons and other gases.¹¹⁴

The Facility has Special Drawing Rights (SDR) 1 billion (USD 1.3 billion) to commit over the three year experiment that began in 1991. The main part of its resources is called "core fund" or the global environment trust fund (GET). With USD 800 million in commitments, the GET accounts for the bulk of the GEF's reserves. In addition, the GEF includes associated cofinancing arrangements which are available through grants or highly concessional terms and amounts at USD 300 million. The GEF also includes some USD 200 million provided under the Montreal Protocol regarding the ozone-destroying substances.¹¹⁵ Although only 10 - 20 percent of the Facility is designed to protect international waters, compared to 40 - 50 percent for the global warming, resources for the marine environment protection are still available and developing countries should look for them.¹¹⁶

Twenty-four countries have contributed to the core fund by December 1991: Austria, Belgium, Brazil, Canada, China, Denmark, Egypt, Finland, France, Germany, India,

¹¹⁴ Guidelines for National Coordinators and Selection Committee in Pilot Countries. The World Bank, UNDP, UNEP. New York, July 1992.

¹¹⁵ Global Environment Facility. UNDP, UNEP, World Bank. New York, Dec. 1991.

¹¹⁶ Mann-Borgese, Elisabeth. "UNCLOS 1982". Lectures at the World Maritime University. July 1992.

Indonesia, Italy, Japan, Mexico, Morocco, the Netherlands, Norway, Pakistan, Spain, Sweden, Switzerland, Turkey, and the United Kingdom. In addition to their contributions to the GET, Belgium, Canada, Japan, and Switzerland have separate cofinancing arrangements. Australia has established cofinancing arrangements too and the United States has announced plans for parallel financing of GEF type projects.¹¹⁷

The GEF is implemented by three agencies: the United Nations Development Programme (UNDP), which is responsible for technical assistance; the United Nations Environment Programme (UNEP), which provides scientific experience and support to the Scientific and Technical Advisory Panel (STAP); and the World Bank, which is responsible for investment projects, administration of GEF and the trust fund. It should be stressed that UNDP is also charged with running the small grants programme for NGOs. From the very beginning, the three implementing agencies agreed to work with NGOs recognizing that their specialized knowledge of both global and local issues is extremely useful in identifying, reviewing, preparing and implementing projects. In many cases NGOs may act as implementing agents particularly when the projects are financed through the small grants programme. A USD 5 million small grants fund supports community-based activities carried out by local people's associations and NGOs in developing countries. Individual grants cannot exceed USD 50,000, except for regional or sub-regional projects that are eligible for up to USD 250,000. All countries with a per capita income of less than USD 4,000 a year and a UNDP in place are eligible for GEF funds. The projects to qualify

¹¹⁷ Ibid 115.

for funding under the GEF must primarily benefit the global environment (as distinct from the local one). They must also be innovative and demonstrate the effectiveness of a particular technology or approach. The contribution a project makes to human development (through education and training) is also an important criteria for qualifying. GEF funding is possible if a project offers substantial global benefits but is unlikely to be viable without some concessional funding. The same applies for a project that is economically viable but requires supplementary finance to bring about global benefits.

The above mentioned STAP encompasses a group of 15 eminent scientists from the industrial and developing world who formulate criteria and priorities for project selection. It is important to know that all money from the core fund is provided in grant form. Cofinancing arrangements must be provided through a grant or highly concessional terms.

For a country which is applying for the first time for GEF, it is important to know how the cost-effectiveness of the projects is assessed. This is determined on the basis of physical rather than monetary measures of global benefits. For marine pollution, for example, the amount of ship-generated waste disposed of, or the expected improvement in the health of the ecosystem is the main criteria.

Proposals for GEF funding can be generated in several different ways. Government, the Bank, UNDP and UNEP, as well as NGOs and private sector, can all put forward suggestions or projects that meet GEF criteria. All projects must be endorsed by the government of the country in which the project is situated. In most cases, governments will submit projects and ideas directly to the

implementing agencies, either through a UNDP Resident Representative, a World Bank field office, the appropriate World Bank Regional Environment Division/Country Department or UNEP. Governments may apply for GEF funds directly to the UNDP or to the Bank. NGOs can do the same once the Government has accepted the project in principle. For projects submitted for funding under the small grants programme (where this is already operating), no specific government permission needs to be sought. Applications for small grants should be made directly to the UNDP. Private firms can apply to the International Finance Corporation (IFC) for eligible investment projects. The IFC is the World Bank's private sector affiliate and in such cases an appropriate Government endorsement needs to be sought.

All projects have to meet the basic criteria. Investment projects undergo a technical review by a panel that includes at least one person chosen from a list of independent experts compiled by the GEF. If the project is cleared, it is submitted to the Implementation Committee, made up of the three implementing agencies. Projects selected by the Committee are then forwarded to the participating Governments for review at their biannual meetings. After that, projects return to their sponsoring agencies for further preparation, appraisal and final approval according to each agency's regular procedures. The responsibility for implementing the approved projects remains with the recipient of the GEF funds (mainly governments) which must seek and engage executing agencies according to established procedures for UNDP and World Bank projects.

Donors and implementing agencies set a premium on involving local people in project identification and design. In addition to the small grants programme, aimed

specifically at projects put forward by community groups in cooperation with NGOs, there is an active preoccupation to involve individuals at the local level. There is also an international commitment to increase awareness and public understanding in developing countries about global environmental issues.

GEF should be seen as an attempt to persuade people to recognize the importance and practicability of long-term environmental management. The pilot phase comes to an end in mid-1994. In the meantime, the international community is assessing the effectiveness and the contribution to the global environment. The lessons learned will form the basis for cooperation in the years to come and that may be the most important aspect of this whole experiment. Developing countries should closely study the programme, draw the right conclusions, and be prepared for the next stage. There is a continuing need for development assistance and GEF is already quoted as the possible framework for the future arrangements.

Up to this point, the institutional aspects of GEF have been outlined. Now a brief look at the problem of "protecting the international waters" will be presented.

Under the GEF criteria, international waters include the seas, shared rivers and lake basins, shared estuaries and wetlands, and shared groundwater aquifers, in other words fresh water and marine systems accessed by more than one nation.¹¹⁸ Of all these types of international waters and river systems, coastal areas are given the highest priority.

STAP concludes that the environmental integrity of

¹¹⁸ Guidelines for National Coordinators and Selection Committee in Pilot Countries. The World Bank, UNDP, UNEP. New York, July 1992.

international waters is being threatened by pollution, excessive rates of extraction and drought-induced depletion.¹¹⁹ Focussing on pollution, two main sources were identified under GEF:

1. Direct pollution, e.g. oil spills from ships, and
2. Pollution arising from watershed resources management practices, e.g. wastes, agriculture and forestry practices etc.

It is obvious that the situation perfectly fits for the Black Sea area described in Chapter 3.

The priorities given by STAP to different projects related to water management are enumerated below:

- Improvement of the institutional capability to enhance human well-being, especially through maintaining and enhancing the productivity of water ecosystems;
- Sustainable maintenance of water-based biodiversity;
- Adaptation of local water-based ecosystems to global warming in order to protect water systems and their biodiversity;
- Basin wide monitoring and inventory of pollution sources;
- Management plans for pollution reduction, integrating basin land use, water extraction, wastes and sediment flows;
- Monitoring and assessment of port and traffic based pollutants and management plans for their reduction.¹²⁰

Projects that address problems in more than one GEF area should be given highest priority (e.g. reducing wetlands

¹¹⁹ Ibid 118.

¹²⁰ Criteria and Procedures for Choosing Projects. The World Bank, UNDP, UNEP. 1992.

pollution, contributes to both the reduction of pollution in international waters and the conservation of biodiversity).

From this overview, then, of GEF, it appears that almost all aspects indicated under the MARPOL 73/78 implementation find a corresponding location in the Facility sphere. It remains for Maritime Administrations to further explore these links, identify the common areas of concern and integrate GEF in their future policies.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

The dissertation has focused on some of the most pressing issues confronting the shipping community in general and the Romanian shipping industry in particular.

It has been demonstrated that maritime activities are by their nature international. Shipping cannot be considered from a national or unilateral perspective; it requires an international approach and global standards.

The essential role of IMO in this field was underlined several times during the study and a possible reorganization of its functions in the future was suggested in Chapter 1. The lesson to be learned from this is that countries, and developing countries in particular, should increase and strengthen their participation in IMO as the only legitimate forum for debating the technical aspects of shipping and, at the same time, the only official source of international standards. It is important to understand that IMO is no longer "a rich men's club", as they used to call it 15 years ago. Today, 143 Member States have the opportunity to participate equally in IMO's work and express their points of view and concerns.

The Romanian Maritime Administration should take this

opportunity to upgrade its participation in IMO, in accordance with the size and future prospects of its shipping industry. More than 40 countries, many of them from the developing world, have understood this necessity and sent highly trained specialists to represent their interests at the international forum. In recent years the input to IMO's work from countries such as India, Iran, Liberia, Poland or Venezuela has considerably increased due to their permanent representation. They are now playing an important role in all the committees and they are present in all the ongoing developments in international shipping. Their example should be considered by all the maritime nations that want to keep pace with the modern shipping industry.

It was stressed that IMO has been a very prolific agency in terms of drafting conventions, protocols and other international instruments. It is time now for implementation. Perhaps the most important message of this dissertation is that ratification of the instruments, and even more importantly, implementation of international standards are the only solution to bridge the gap between "the best countries and the worst"¹²¹ and to maintain a cohesive shipping world.

As it was highlighted in Chapter 1 implementation, is by no means a simple and smooth process which ends once the right legal framework is in place. It requires considerable work, implies different approaches (indeed sometimes opposite opinions) and needs constant updating in accordance with the rapid changes in the shipping industry. The only forum for bridging the differences, finding common solutions to problems and reaching acceptable international

¹²¹ Molony, Sean. "IMO sets out to bridge the safety gap". Lloyd's List. 10 March 1993 : 3.

standards is offered by IMO. Separate development based on unilateral enforcement of unilateral regulations is seen by the author as the major threat to international shipping.

Effective implementation of the environmental instruments is particularly required, before it is too late. "Today man is still a formidable destroyer" said the UN Secretary General last year during the Rio Summit. The cost of inaction could outweigh the costs of implementation. Inaction will irreversibly harm the global environment and will narrow the choices of future generations.¹²² "Our Common Future" should not simply remain the title of one of the most astounding documents of the last decade, but become an omnipresent concern for governments when setting their policies.

Following the Brundtland Report, awareness of the need to protect the environment increased. It grew even more after UNCED 1992 in Rio where it reached the top administrative levels of the world. Although spectacular commitments of the industrialized nations were not achieved, the principle of sustainable development and the need for technical cooperation gained global recognition. One of the next steps to be taken is that countries which need assistance should ask for it. The developing world has to become aware of its own environmental problems. It has to identify the threats, evaluate the consequences and consider the possible solutions. Once a country has a complete picture of its problems, it should confidently apply for international support. It is the author's belief that an intelligently designed environmental project that masters all the relevant details will never be left

¹²² Strong, Maurice. "Outcomings of UNCED 1992". UN Chronicle, No. 3, Sept. 1992:61+

unfunded. Some possible sources for financing environmental projects were indicated in Chapter 5.

In the particular case of MARPOL 73/78, it was demonstrated that the provision of adequate reception facilities is crucial. But funding is not always in place and therefore financial support is needed in many cases. The provisions of the convention with regard to technical cooperation are not formulated in a compelling manner.¹²³ The operative word is not a "must" but a "shall." IMO has the institutional means and the expertise to provide technical cooperation in this field, under its Global Programme, but they can only be given at the request of the recipients and with the financial support of international organizations or voluntary donors.

A series of recommendations for the Romanian Maritime Administration may be drawn from the present study.

The current transition period with major changes in the most fundamental economic mechanisms should be accompanied by upgraded and adequate legislation. In many countries with a long maritime tradition and constitutions inspired by British law, the new legislation is adopted "by incorporation" based on the text of the relevant international convention. This is a relatively simple and elastic way to draft new laws but a thorough understanding of the "in depth" provisions of the convention is needed. As a general rule, "ad-hoc" legislation should be avoided. It may address a particular situation for the moment, but in time it always creates problems. Support for the activity of drafting legislation may be sought both in IMO and through bilateral cooperation.

Romania should strengthen its capability to access

¹²³ MARPOL 73/78, Art. 17 (Promotion of Technical Cooperation) .

international assistance and support. This will only be possible through active international cooperation and direct participation in the most important developments in the shipping world.

More aggressive promotion, on the international level, of the real magnitude of the Romanian shipping industry will undoubtedly increase communication with the shipping world and awaken the interest of potential donors or partners. In this respect, the role of international NGOs should be carefully reconsidered and selected organizations should be encouraged to extend their activities in Romania.

When seeking international support, representation in experiments of the GEF type is essential. When the facility was set up, the hope was that it would involve at least one country from each of the constituency groupings in the Development Committee (a joint World Bank/IMF body). To increase participation, the minimum contribution to the "core fund"¹²⁴ has been set at SDR 4 million, which developing countries donors can pay in over eight years. Furthermore, the World Bank will contribute half of the amount on behalf of the respective country. Some nine developing countries had pledged funds to GEF by December 1991.¹²⁵ The financial effort is not unbearable and the benefits, both economic and political, are enormous. The future developments generated by GEF should be closely followed in Romania, and active participation in the next phase (after the conclusion of GEF IN mid-1994) should be envisaged.

¹²⁴ See page 134.

¹²⁵ Global Environment Facility. UNDP, UNEP, World Bank., New York. Dec.1991.

In Chapter 4 it was shown that proper reception facilities are possible in Constantza at a cost which may be reasonably controlled. By pursuing this policy, the Maritime Administration could reduce the sources of pollution, gain international credibility and help the development of the national shipping industry.

Last but not least, human resources are of overwhelming importance. All the above measures are only possible with a highly trained and an up-to-date labour force. Good training programmes, seminars, specialized courses are excellent investments that pay off the initial efforts. Sending professionals with experience in shipping matters to the World Maritime University remains a valid option which should not be neglected in the future.

In illustrating step by step how MARPOL 73/78 can be properly implemented in Romania, the intention of the author was to give a pragmatic character to the research, emphasizing the practical applicability of the implementation process.

If the reader's awareness of marine environment problems has been awakened, and if the attention of decision makers has been focused on these issues for a while, then the purpose of the dissertation will have been achieved and a modest contribution to the global process of implementation will have been made.

ANNEXES

ANNEX 1

Checklist with recommended activities when drafting national legislation

- (1) Identify specific problems to be solved:
 - a) The present condition of the maritime industry (the number of vessels, if any, registered or intended to be registered in the state; the type and number of vessels, and the value and volume of cargo handled in the ports of the country, existing or likely threats to the marine and coastal environment; availability of or need for services such as search and rescue, aids to navigation, notice to mariners, pollution response, etc).
 - b) The areas of marine affairs where new regulations or improvement in existing rules may be necessary or desirable.
 - c) The present state of the legal regime affecting the areas identified as requiring regulation (Registration of vessels; certification of vessels; licensing of personnel; adjudication of disputes; law establishing liability for pollution damage and clean-up costs, etc).
 - d) The availability of suitable personnel for undertaking the operations and functions involved in effective regulation of the areas identified.
 - e) The extent to which requirements in the international conventions concerned are relevant to the problems identified and the possible implications of such requirements in other areas of national development.
- (2) Identify parties (e.g., Ministries, Departments, Shipping Lines, Associations, etc) who would be affected by the proposed legislation:

- a) Which Ministries or Departments should be involved in determining the central policy? Which representatives of the maritime community should or may usefully be consulted to ensure that the views of the industry and other interested parties (such as environmental groups) are taken into account?
- b) What additional costs are likely to be involved in complying with the requirements of the convention in question and how would such costs be dealt with?
- (3) Identify measures which may be necessary to enforce new requirements, including arrangements for monitoring compliance, and provisions for dealing with cases of non-compliance, and sanctions which may be necessary and appropriate.
- (4) Identify the personnel who will be needed for the levels of enforcement proposed, and the facilities and powers which will enable them to perform their functions effectively.
- (5) Identify any difficulties which may be anticipated, from other Ministries and Departments, from the industry, or from other interested parties.
- (6) Identify possible alternative regulatory approaches which may be considered in place of, or as a supplement to, the proposed legislation.

Source: "Handbook on implementing international maritime safety conventions through national legislation." London: IMO, 1987: 10-12.

ANNEX 2

GUIDELINES FOR DRAWING A TYPICAL REPORT FORM AS PROVIDED BY INTERNATIONAL LABOUR OFFICE

A typical report form is composed as follows:

INTRODUCTION

- (i) reference to article 22 of the Constitution;
- (ii) reference to appended Recommendation(s) which may contribute to a better understanding of (the Convention's) requirements and facilitate its application;
- (iii) "Practical Guidance for Preparing Reports"- for the first reports after the convention has come into force for the country in question, the form says that full information should be given on each of the provisions of the Conventions and the questions set out in the form; for subsequent reports, information is requested:
 - in general, on new legislative or other measures affecting the application of the Convention,
 - in reply to the report forms' questions on practical application (e.g. statistics, results of inspections, judicial or administrative decisions),
 - on the communication of copies of the report to representative organizations of employers and workers and on any observations received from such organizations, and
 - in reply to any comments by the ILO's supervisory bodies, i.e. the Committee of Experts on the application of Conventions and

Recommendations and the Conference Committee on
the Application of Standards;

- (iv) insertion of the period covered by the report;

PART ONE

- (v) a request for a list of the laws and regulations and (depending on the methods of application permitted by the Convention) collective agreements, company rules, arbitration awards, court decisions or other national provisions applying the Convention, and, where they have not already been forwarded to the Office, copies of them;
- (vi) a request for indications as to whether those provisions have been designed, enacted and modified in order to permit or as a result of ratification;

PART TWO

- (vii) a question as to any provisions of the national constitution giving the force of law to ratified Conventions;
- (viii) a question as to action taken by a national authority to comply with provisions of the Convention requiring, e.g. definition of scope or persons responsible for compliance, institution of procedures, consultation of employers (viz. shipowners) and workers (viz. seafarers) and respective organizations;
- (ix) a specific request for information on steps taken in response to the Committee of Experts or the Conference Committee;
- (x) under each article of the Convention as reproduced in the report form, there appear italicized specific requests designed to elicit from governments sufficient information to determine whether the provisions are applied, particularly where the

provisions seem complicated or are not self-explanatory;

PART THREE

- (xi) a request for indication of which national authority is responsible for implementation of the Convention, including inspection or application of penalties, and by what methods;

PART FOUR

- (xii) a request as to any relevant judicial decisions for copies of them;

PART FIVE

- (xiii) a request for a general appreciation of how the Convention is applied, with number of workers (seafarers) covered, numbers and nature of contraventions, extract from official reports, etc.;

PART SIX

- (xiv) a request for the names of the employers' and workers' organizations to which copies of the report have been communicated under article 23(2) of the Constitution, or any particular circumstances explaining some different procedure;
- (xv) a request for a copy of any observations - whether relating in general to the legislation applying the Convention or directly to matters raised in the report - received from those organizations;

APPENDIX

- (xvi) the text of any relevant Recommendation.

Source: "The ILO's system for the supervision of international labour standards", IMO document No. FSI 1/INF.10, 18 Feb. 1993.

BIBLIOGRAPHY,

A blue plan for the Mediterranean people. RAC/MAP 1992, Sophia Antipolis, France.

"Are Port Reception Facilities Adequate?" BIMCO Bulletin 4/92, July/August.

Balkas, T., et al. "State of Marine of Marine Environment in the Black Sea Region. 1992.

Blydt-Hansen, Ove. INTERTANKO, Manager Ports and Terminal Section. Personal interview. 5 Oct. 1993.

Chapman, E. Stephen, and Iain Irving. "STCW - the Change Process has Started". Seaways . June 1993: 25.

Conference on land based sources of marine pollution in the seas adjacent to the Commonwealth of Independent States. Sevastopol, 6-10 April 1992.

Convention on the Protection of the Black Sea Against Pollution, Bucharest 21 April 1992.

Cooper, D. Alister. "Flag State versus Port State in maritime safety"

Cowling, Peter. "The meaning of the Quality". Ship Management . 1992: 30.

Draft Report to the Maritime Safety Committee and the Marine Environment Protection Committee.

IMO document no. FSI 1/WP4, 21 April 1993: London.

Flag State Implementation: new sub-committee to meet. IMO news. 1:1993.

Focus on IMO. "IMO Conventions status at 1 January 1993. J/4884/Rev.2

" Follow-up: UN Conference on Environment and Development" UN Chronicle. Volume XXIX, No. 3, September 1992: 59-67.

Gilbertson, David. "Patience the virtue of IMO's consensus manager". Lloyd's List. 15 Sept. 1992.p.5

Göranson, Magnus. "The Legal Framework of the IMO". Lectures presented at WMU. 13 Apr. 1992

Guest, Andrew. "Flag State system refuses to wave the banner of surrender". Lloyd's List. 28 Apr. 1993: 5.

Horrocks, J. Christopher. Lectures, World Maritime University, June 1992. "The ILO's system for the supervision of international standards"

IMO document no. A17/33. London: IMO, 1991

IMO in a Changing World. Hazardous Cargo Bulletin, Feb.1993

IMO Resolution A 237(VII), 1971.

IMO Document no. MEPC 3/WP1

IMO Document No. MEPC/Circ. 234.

IMO doc. LDC/INF.3

IMO/UNDP International Seminar on Reception Facilities for Wastes, London, 30-31 August 1984.

IMO Document No. LDC 15/3/1. Review of the outcome of the United Nations Conference on Environment and Development. 18 Sept. 1992.

IMO document no. FSI 1/6/4, Annex, para 2.2.1. 3 Feb. 1993:2.

IMO Resolution A. 176(VI), 21 Oct. 1969

IMO Handbook on implementing international maritime safety conventions through national legislation, London; IMO, 1987: 10-12.

IMO document no. FSI 1/6/4, Annex, para 2.2.3. 3 Feb. 1993: 3.

IMO document no. FSI 1/10, Annex 1, 9 Feb. 1993:36.

IMO document no. FSI 1/10, Annex 2, 9 Feb. 1993.

IMO document no. FSI 1/W.P. 4, para 6.34. 21 Apr. 1993: 15.

IMO document no. FSI 1/INF. 10. 18 Feb. 1993:6

IMO document no. FSI 1/7. 26 Feb. 1993.

IMO's Global Programme for the Protection of the Marine Environment. "Save Our Seas". IMO, London. 1992.

International Chamber of Shipping. "Shipping and the environment. A code of practice". London, 1993: 11.

International Symposium on Reception Facilities for Noxious Liquid Substances, London, 13-15 May 1987.

Jagota, S.P. "The United Nation Convention on the Law of the Sea in perspective and development". International Ocean Institute, Canada, July 1992.

Kybart, Werner. "Aspects and trends of container handling". Lectures presented at World Maritime University. Oct 1992.

Lems, Jaap. "Matters Regarding Port Reception Facilities and the Procedures Related Thereto." European Harbour Masters' Association Fourth Congress, Bristol, 10-15 May 1992.

MARPOL 73/78, Annex 1.

MARPOL, Article 5, Certificates and Special Rules on Inspection of Ships.

MARPOL, Article 17, Promotion of Technical Cooperation IMO Model Course 1.11 on Annex 1 of MARPOL 73/78, 1988.

Motram, David. Lectures at World Maritime University. May 1993.

Mulrenan, Jim. "IMO refuses to be seen as international 'scapegoat'". Lloyd's List. 21 July 1993: 3.

Noelke, Eberhard. "Three Year Reception Facilities Pilot Project" European Harbour Masters Association. Fourth Congress, Bristol, 10-15 May 1992.

Noelke, Eberhard. "The Federal Republic of Germany's Three Year Reception Facilities Pilot Project." European Harbour Masters Association, Fourth Congress, 10-15 May, 1992.

Novi, Carlos. Global Implementation of IMO's International Standards. IX Asamblea Fidalmar - Chile, 23-26 October 1990, Valparaiso.

Okamura, Bin. "Overview of the Annex V of MARPOL 73/78". Lectures presented at the World Maritime University. April 1992.

Peet, Gerard. "The role of (environmental) NGOs at the MEPC of the IMO, and LDC". Delft, Holland 1992.

Pielow, Colin. "Guide to Tanker ports", London, 1992.

Recommendations of ACOPS (Advisory Committee on Protection of the Sea) Conference on land Based Sources of Marine Pollution in the seas Adjacent to the CIS, Sevastopol 6-10 April 1992.

"Romania Introductory Survey". The Europe World Yearbook
1992, vol.II:+2230

Sampson, Theodore. "Waste Reception Facilities: a Global
Perspective". Oslo, 14 May 1993.

"Secretary-General looks for speed-up of IMO measures". IMO
News . 1, 1993: 24+.

Squires, M. D. European Harbour Masters' Association Forth
Congress. Bristol 10-15 May 1992.

Status of International Conventions Relating to Marine
Pollution, FOEI, 1990.

Stuberund, Gunnar. "Prevention of Marine Pollution from
Ships" Lectures presented at the World Maritime University.
June 1992.

"The Greening of Norway" Lloyd's Ship Manager. Dec.
1992:51.

UNCED. Document No. A/Conf. 151/4 (Part II): 144+.

US General Accounting Office (GAO)/RCED-92-43.
International Agreements Are Not Well Monitored: 42.

Williamson, H. NGOs lectures at WMU, June 1993.

World Commission on Environment and Development. Our Common
Future. Oxford: Oxford Univ. Press. 1990.