

Environmental Effects of European Union Sea Transport Policy

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Abstract

Discharges of oil or oily waters from ships, either accidental or intentional, constitute a serious environmental hazard. Numerous laws to control oil discharges at sea from ships have been adopted at international and European Union (EU) level. This paper offers an analysis of the political, legislative, operational and financial factors that shed light on the weaknesses of these policies. Improvements could then be made to reduce the risk factors endangering the marine environment.

Keywords: Safety at work; Accidents at sea; Risk management

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1. INTRODUCTION

In order to maintain their living standards, countries need to transport large quantities of goods by sea. This often involves carrying what is defined as dangerous goods, materials or objects that pose risks to health or national security or that can cause damage to the environment, property or people. These goods require special attention, at the international level, in fields related to construction and shipping safety, business management, crew training and the security of port facilities. Current legislation aims at reducing the risk of accidents and the collateral damage that can affect people, flora and fauna in the immediate area of an accident. Of all dangerous goods, the transport of oil products plays a predominant role in accidental marine dumping. The most serious spills are caused by vessels when they are grounded, collide or endure structural damage, fires and explosions. Other important factors are the discharges made during tank deballasting, bilge discharges and discharges in ports and loading and unloading terminals [1] (Table 1).

Table 1: Incidence of spills by cause, 1974-2011

CAUSE	< 7 tonnes	7-700 tonnes	> 700 tonnes	Total
<u>OPERATIONS</u>				
Loading/discharging	3156 (40%)	388 (29%)	41 (9%)	3183
Bunkering	563 (7%)	33 (2%)	1 (0%)	574
Other operations	1270 (16%)	136 (10%)	329 (72%)	1235
Unknown	2852 (37%)	785 (58%)	83 (18%)	

<u>ACCIDENTS</u>				
Collisions	182 (2%)	344 (26%)	134 (33%)	660
Groundings	239 (3%)	269 (20%)	148 (35%)	656
Hull failures	577 (8%)	100 (7%)	59 (16%)	736
Equipment failures	1679 (21%)	202 (15%)	19 (2%)	1900
Fires & explosions	173 (2%)	47 (4%)	54 (9%)	274
Other/Unknown	4991 (64%)	380 (28%)	40 (5%)	5411
TOTAL	7841 (82%)	1342 (14%)	454 (4%)	9637

(The International Tanker Owners Pollution Federation Limited)

Statistics from the International Tanker Owners Pollution Federation show that, since 1974 out of 10,000 oil tankers incidents, it is small spills of less than 7 tonnes that amount to 84% of the total discharged products at sea. The average number of large spills has declined considerably in recent decades. However, when oil tankers suffer collisions or run aground, there are serious consequences for the environment and the economy of the exposed countries. Western Europe is the most affected area with the highest incidence in the English Channel and the Northwest of Spain [2] (Table 2).

Table 2: Accidents involving oil outflow in Western Europe

LOCATION	YEAR	SHIP	TONNES	Total
SPAIN	1976	Urquiola	100.000	237.000

	1992	Aegean Sea	74.000	
	2002	Prestige	63.000	
FRANCE	1978	Amoco Cádiz	223.000	243.000
	2000	Erika	20.000	
UNITED KINGDOM	1967	Torrey Canyon	119.000	189.000
	1996	Sea Empress	72.000	
PORTUGAL	1975	Jacob Maersk	88.000	88.000
ITALY	1991	Haven	144.000	144.000

2. INTERNATIONAL AND EUROPEAN UNION POLICIES ON THE TRANSPORT OF DANGEROUS GOODS

The sea transport of dangerous goods is regulated by the International Maritime Organization (IMO) with a dual approach. On the one hand, the Maritime Safety Committee (MSC), the highest technical body of the Organization, aims at reducing the risk level and, in the event of an accident, minimizing damage to the ships and crews. Its flagship regulation is the International Convention for the Safety of Life at Sea (SOLAS), arguably the most important of all international treaties concerning the safety of merchant ships. First adopted in 1914, in the wake of the Titanic disaster, the Convention currently in force was adopted in 1974 (and is referred to as SOLAS 1974), although it has been updated and amended on numerous occasions many times since then. The new rules adopted by the IMO and the EU should be enough to produce a dramatic decrease in these accidents, in Table 3 a brief summary of current regulations is presented.

Table 3: Summary of EU sea transport regulations

2.1.Performance	EU Directive 96/98/EC on Marine Equipment. (See amending acts) [4]
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improvement aimed at shipbuilding	EU Decision 2004/425/EC on the conclusion of an Agreement between the European Community and the United States of America on the mutual recognition of certificates of conformity for marine equipment. [5] EU LeaderSHIP 2015 Defining the future of the European Shipbuilding and Repair Industry-Competitiveness through Excellence
2.2. Improving risk prevention management in shipping companies and ships	IMO Resolution A.741 (18) International Safety Management Code (ISM Code) [6] IMO Resolution A.913 (22) Revised Guidelines on Implementation of the International Safety Management by Administrations [7] EU Regulation 336/2006 on the implementation of the International Safety Management Code [8]
2.3. Improvements to management and security of ports	IMO International Ship and Port Facility Security Code (ISPS Code) [9] EU Regulation 725/2004 on enhancing ship and port facility security [10] EU Regulation 884/2005 Laying down procedures for conducting Commission inspections in the field of maritime security [11]
2.4. Academic and practical training of crews	IMO International Convention on Standards of Training, Certification and Watch keeping (STCW) [12]
2.5. Increasing and improving the inspections and control of ships	IMO Memorandum Of Understanding (MOU) on Port State Control EU Directive 2002/59/EC Automatic Identification System (AIS) [13] EU Directive 2001/105/EC Rules and Standards for Ship Inspections and for the Activities of Maritime Administration [14] EU Directive 2002/84 EC International Standards for maintaining ship safety, prevention pollution and living and working on Board [15] EU Directive 2002/84/EC amending the Directives on maritime safety and the prevention of pollution from ships [16]
2.6. Voluntary audits of Member States	IMO Resolution A.946 (23) Voluntary IMO Member State Audit Scheme [17]
2.7. Recall of substandard ships	IMO 46 and 50 Of the IMO Marine Environment Committee
2.8. Creating organisations and control systems for maritime safety, pollution and salvage	EU Regulation 1406/2002 establishing a European Maritime Safety Agency [18] EU Regulation 2099/2002 establishing a Committee on Safe Seas and the Prevention of Pollution from Ships (COSS) [19] EU European Quality System (EQUASIS) [20]
2.9. Liability for oil spills and other harmful substances	EU Directive 2005/35/EC on ship-source pollution and on the introduction of penalties for infringements [21] EU Decision 2005/667/JHA, to strengthen the criminal-law framework for the enforcement of the law against ship-source pollution [22]
2.10. EU ports of refuge	EU Directive 2002/59/EC Automatic Identification System (AIS) [13]

On the other hand, the Marine Environment Protection Committee (MEPC) is concerned with the prevention of marine pollution, either from accidents or other causes (dumping, loading/unloading, bunkering...) Its main norm is the International Convention for the Prevention of Pollution from Ships, adopted in 1973 and subsequently modified by the Protocol of 1978 (hence briefly known as MARPOL 73/78) [3]. In spite of the dates in its name, MARPOL 73/78 only entered into force in 1983.

EU policies and initiatives on the environment, worker protection and product safety affect the overall maritime business in member countries, from shipbuilding to shipbreaking: shipping, ports, navigation in its territorial waters and inspections. EU regulations and directives complement the IMO legislation, as is detailed in the following sections.

2.1. Performance improvement aimed at shipbuilding

The project LeaderSHIP 2015 “Defining the future of the European Shipbuilding and Repair Industry - Competitiveness through Excellence” was presented to the European Commission in October 2002. In it, the European shipbuilding industry outlined its long-term vision and presented a strategy designed to meet key challenges and guarantee a leading role for the European naval industry by 2015. A crucial aspect of this strategy is the promotion of safer and more environmentally friendly vessels. With this in view, the project recommends the following: implementing current and future legislation, heightened to an international level; promoting ship inspection that is more transparent, uniform and efficient and with greater technical independence; creating a global quality evaluation system for shipyards that include new building and repair work; maintaining and strengthening ship repair capabilities in Europe to ensure a high level of safety and environmental protection; creating a committee of experts to provide technical assistance to the European Commission and EMSA; and exploiting the great potential of short ship shipping through the appropriate political and economic framework conditions.

The EU Internal Policy on Product Safety, through the Council Directive 96/98/EC on Marine Equipment [4], sets safety conditions and defines policy for certifying salvage procedures, marine pollution prevention, fire protection, and the navigation and communication equipment used on ships. In order to improve the cooperation between UE and U.S. in this field Council Decision 2004/425/EC [5] was adopted as a regulatory cooperation framework agreement. The aim of this framework is promoting mutual recognition between the EU and U.S. respective regulatory requirements for marine equipment. Thus, while fully respecting

the regulatory autonomy and develop their own policies and regulations is to encourage improvement of these requirements to enhance safety at sea and prevent marine pollution.

2.2. Improving risk prevention management in shipping companies and ships

On many occasions, accidents are related to problems with the shipping companies' global management system. For this reason, the IMO Assembly in 1993 adopted Resolution A.741 (18), the International Management Code for the Safe Operation of Ships and for Pollution Prevention, (International Safety Management - ISM Code) [6], which acquired mandatory status under Chapter IX of SOLAS, as amended by resolutions MSC.104 (73) and MSC. 179 (79). It aims to ensure maritime safety and to avoid both personal injury and loss of life, as well as damage to the environment, specifically to the marine environment and its resources.

A company's safety management includes safety procedures for on board operations and the working environment. Precautions are taken against all identified risks, while there is continuous improvement in safety management procedures and the crews' skills, both ashore and aboard. A greater degree of readiness is achieved to deal with emergency situations that affect safety and the environment.

The ISM code requires that shipping companies develop, implement and maintain a safety management system embracing a variety of functional requirements: safety and environmental protection principles; instructions and procedures to ensure operational safety on ships and environmental protection under international law and state legislation; clearly defined levels of authority and lines of communications between onshore entities and on board personnel, as well as within these groups; procedures for reporting incidents and breaches of the ISM code; preparatory procedures for dealing with emergencies; and measures for conducting internal audits and management reviews. The Certificate of Safety Management issued to a ship confirms that the company and its on board management system meet with the approved safety management recommendations.

Thus, Resolution A. 913(22) of 29 November 2001 Revised Guidelines on Implementation of the International Safety Management by Administrations [7], establishes the basic principles for verifying the safety management system of a company responsible operating a ship. It also confirms if the safety management system of a vessel or vessels controlled by the company complies with the ISM Code. It explains how to issue and verify the compliance document on a yearly basis, along with the Safety Management Certificate.

In order to apply the ISM Code in the EU Regulation 336/2006/EC of the European Parliament and Council [8] has been adopted. The aim is to improve the control of management systems by the administrations of both the Registration and Port State. This regulation is focused on the safe operation and the prevention of marine pollution and involves the following ships:

- Cargo and passenger ships engaged on international voyages with the flag of a Member State.
- Cargo ships and passenger ships engaged exclusively on domestic voyages, regardless of their flag.
- Cargo and passenger ships operating regular maritime transport or from ports of Member States, irrespective of their flag.
- Mobile offshore drilling providing services under the authority of a Member State.

In addition, companies operating such vessels must establish, implement and maintain appropriate management systems for safety, both on board ships and on land. The main point of this regulation is that its compliance may be supervised by flag State Administrations and each port State.

2.3. Improvements to management and security of ports

In 2002 the International Ship and Port Facility Security Code (ISPS Code) [9] for loading and unloading operations in ports was approved and came into effect on 1 July 2004. It

states that risk management procedures are necessary to ensure the security of ships and port facilities. Before risk control procedures are implemented, an evaluation of these risks must take place.

Assessing security risks within a port involves three key areas. One entails identifying and evaluating the assets and infrastructure that are critical to port facilities as well as areas or structures that, if damaged, could cause significant loss of life or could harm the economy of port facilities and the environment. Another action is to identify real threats to critical assets and infrastructures. It is also necessary to determine the vulnerability of the facilities, identifying weaknesses in physical security, structural integrity, protection systems, procedural rules, communications, transport infrastructure, services and other areas where the facilities can be a possible target.

To manage risk effectively, the ISPS Code must contain a minimum set of functional security requirements. For port facilities they should deal with security plans, security officers, security equipment, surveillance and access control, the surveillance of personnel activities and cargo as well as security communications. For vessels the list includes the ship's security plan and security officers, along with the security officers of the operating company and the security of certain on board equipment.

Therefore the European Parliament and Council approved Regulation 725/2004 [10] to cope with the threat of intentional unlawful acts. Its main objective is to introduce and implement Community measures to protect ships used in international trade and domestic traffic, as well as the port facilities they use. Furthermore, the Regulation seeks to lay the foundations for joint interpretation and implementation, as well as Community control, of the special measures to enhance maritime security adopted by the ISPS Code. Implementation procedures are set by Regulation 884/2005 [11] of the European Community Commission.

The procedures for conducting inspections include all the details to the notice of inspections, preparing inspection, fulfillment, content inspection report, timing and content of the response of the Member State and finally, the actions taken in case of default.

2.4. Academic and practical training of crews

The human factor plays a key role when limiting maritime accidents: crew skill levels are especially important here. 80% of maritime accidents are caused by human error. Thus, in 1978, the IMO approved the International Convention on Standards of Training, Certification and Watchkeeping (STCW) [12]. This agreement, completely revised in 1995, looks at inspections carried out under the supervision of the Port State. It deals with the academic and practical training of crews in the various departments and contexts on board ships and in particular for different types of ships. Implementing STCW 95 took time and effort owing to the need for expert groups to examine the documentation presented by each country and offer their conclusions to the MSC. By 2005 115 countries complied with the STCW. However, during a MSC meeting in May 2006, it was decided that the STCW pact had to be amended to include new and future technologies.

2.5. Increasing and improving the inspections and control of ships

Although not all MOU (Memorandum Of Understanding) on Port State Control are equally effective, the IMO encouraged their use to monitor and verify that ships entering the ports of each of the eight areas covered, comply with international regulations relating to vessel safety and the prevention of marine pollution.

Since March 2005 the Paris MOU adopted a new inspection regime with measures for identifying shortcomings based on risk. This makes it easier to identify substandard vessels while benefiting low-risk vessels, incrementing the period between inspections.

Discharges into the sea from ships are regulated by the IMO, allowing some degree of contamination, so-called “operational pollution”, according to the sensitivity of the shipping areas. The main environmental problems come from liquid discharges, especially when the bilge and ballast tanks are being cleaned.

Oil tankers on their journey back to loading areas require large quantities of ballast to improve their behavior at sea. When a vessel with dirty ballast water in its tank is about to enter zones in which discharge is prohibited, there may be an illicit discharge of oil into the sea with consequent environmental damage[13]. After the vessel is identified and the discharge is documented, this act will result in remedies allowed by current legislation.

To discourage this illicit dumping activity, Directive 2002/59/CE of the European Parliament and Council [14], recommends two measures within the EU. One is an Automatic Identification System (AIS) to keep better track of vessels. The other- a Voyage Data Recorder (VDR) system with black boxes- records voyage data. This device makes it easier to investigate accidents and incidents. These systems are expected to improve the safety and efficiency of maritime traffic, so that authorities respond with greater agility to incidents, accidents and potentially dangerous situations at sea, through search and rescue operations. Pollution from ships will be detected and controlled more effectively. Member states of the EU will monitor the situation and take all the appropriate measures to ensure that captains, ship operators and shipping agents as well as shippers or business owners dealing with dangerous or polluting goods carried on board such vessels meet the requirements of this Directive.

In this way Council Directive 94/57/EC [15] provides the development and application of rules, standards and common safety requirements for hull, machinery and electrical and control installations of ships, measures to be followed by States members and defines organizations responsible for the inspection, survey and certification of ships for compliance

with international conventions on safety at sea and prevention of marine pollution. Thus, Member States are responsible for issuing certificates for safety and pollution provided for under conventions such as SOLAS 74, Load Lines 66 and MARPOL 73/78, and the application of its provisions. Because some of these tasks are delegated to classification societies a minimum criteria for the recognition of organizations has been settled in order to warranty the quality of all inspections in the EU.

From another point of view Directive 2001/106/EC [16] is intended to comply with international standards for maintaining ship safety, preventing pollution and living and working on board. This applies to vessels using EU ports or facilities in waters under the jurisdiction of Member States (Port State control). It enables uniform inspection procedures of ships and provides detention procedures for those at high risk for accidental or serious pollution. These ships also typically frequent inspections during stopovers in ports of the United States. This process has required taking into account changes to the conventions, protocols, codes and resolutions of the IMO that have come into force, and may lead to deny of access to EU ports of those vessels deemed high risk.

In addition Directive 2002/84 [17] has been approved in order to facilitate the application of EU legislation in the field of maritime safety, protection of the marine environment and the living and working conditions aboard ships.

2.6. Voluntary Audits of Member States

Resolution A.946 (23) adopted on 27 November 2003 approves the Voluntary IMO Member State Audit Scheme [18]. Its aim is to encourage audited Member States to take an active role when implementing instruments that promote security and maritime protection and prevent contamination from vessels. According to this text, the effectiveness of these actions ultimately depends on Member States implementing these instruments fully and submitting to the IMO. There could then be ongoing improvement when deploying the audit results of

instruments and identifying the need for technical cooperation of the States that were audited. Without such measures, these states would be unable to correct their deficiencies. Nor could they step up their efforts in critical aspects of the implementation.

2.7. Recall of substandard ships

The way single-hull tankers are designed means that they respond poorly to maritime accidents, such as stranding or collision. In both cases, the tank integrity may be compromised. Those tanks that initially contained an inert blanket would lose this protection creating a potentially flammable atmosphere. In this case, in the event of a cargo fire, the crew, the ship and the environment are endangered. On other occasions, a weakened structure may not support adverse navigation conditions, and one or more cargo tanks may fail structurally. Such was the case with the Prestige, which subsequently sank. This and other accidents have resulted in a change in the construction and control of such vessels, resulting in the complete elimination of single hull tankers.

A much more forceful and effective line of action was taken in meetings 46 and 50 of the IMO Marine Environment Committee: phased withdrawal schedules were adopted for single-hull tankers, depending on the vessel category. Thus, Category 1 tankers (oil tankers that did not meet the requirements of Annex I of MARPOL 73/78 and Pre-MARPOL tankers) would be withdrawn by May 2005; Category 2 tankers (MARPOL), by May 2005; and those of Category 3, between 2005 and 2010.

2.8. Creating organisations and control systems for maritime safety, pollution and salvage

EC Regulation 1406/2002 of the European Parliament and Council created the European Maritime Safety Agency (EMSA) [19] to assist the Commission and Member States in

promoting maritime safety and preventing pollution from ships. EMSA was created to effectively monitor the implementation and evaluation of the effectiveness of existing measures on maritime safety and preventing pollution from ships in the EU. It assists the Commission and Member States, giving them the technical and scientific assistance needed and a high level of technical expertise for successful implementation.

EC Regulation 2099/2002 of the European Parliament and Council saw the foundation of Committee on Safe Seas and the Prevention of Pollution from Ships (COSS) [20], which centralizes the tasks of the committees established under Community legislation to boost maritime safety, prevent pollution from ships and protect living and working conditions aboard ships. In addition, it accelerates upgrade of maritime legislation in the EU and facilitates updates depending on developments in the conventions, protocols, resolutions, codes, compilations of rules, circulars, rules and regulations from the IMO and the International Labour Organization (ILO).

There are major stumbling blocks to achieving a genuine quality culture: operators are not fully transparent about the state of their vessels and information is not freely available. For this reason, a European Commission initiative, European Quality Information System (EQUASIS) [21], was presented to the IMO headquarters in London in May 2005. The European Commission and France were given the responsibility for developing it and for gathering information from both public and private sources.

EQUASIS is a tool aimed at reducing substandard shipping and should be limited to information concerning their safety. It has no commercial purpose; it is a public entity and acts accordingly. Since its database covers the whole world fleet, it requires active cooperation with all stakeholders in the maritime industry. It is a voluntary tool used for the better selection of ships without applying legal pressure on the industry to use the system.

So far it has been a success, reaching a monthly average of 3,000,000 queries for a database of 75,000 ships.

2.9. Liability for oil spills and other harmful substances

The experience gained from past shipping accidents makes it patently clear to the EU how crucial it is to create a legal framework to sanction the discharge of oil and other harmful substances in EU waters. It may even be necessary to apply criminal measures.

Therefore, with Directive 2005/35/EC [22] on ship-source pollution and on the introduction of penalties for infringements, discharges of oil and harmful liquid substances from ships must be considered an infraction and duly punished when it appears to be through intentional, reckless or grossly negligent conduct. Penalties for such behaviour are specified in the Council Framework Decision 2005/667/JHA [23], which strengthens the criminal-law framework for ship source pollution law enforcement.

2.10. EU ports of refuge

EU Directive 2002/59/EC addresses the problem of EU ports of refuge. In point 16 and Article 20 it acknowledges that the reduced number of refuge sites could have serious consequences in the case of accidents at sea. It establishes that State Members must develop plans with necessary arrangements and procedures, taking into account operational and environmental constraints. Thus, if a situation so requires, ships in distress may seek refuge in their ports or any other sheltered area under the best possible conditions and subject to approval by the competent authority. Plans for accommodating ships in distress should be available upon request.

In addition, where necessary and feasible, these plans should include arrangements for providing resources and equipment to assist, activate salvage operations and intervene in the case of contamination.

3. DISCUSSION

Statistics show that major accidents involving ships carrying dangerous goods take place regularly in highly specific areas. Incidents with major discharges have caused suffering, huge economic losses and incalculable damage to the environment. For inspections carried out by the Paris MOU in recent years, ship safety equipment for salvage, fire-fighting and navigation have balanced out the shortcomings of other areas.

The European Union faces a difficult task in legislating and implementing maritime environmental policy. Although the results of implementing the ISM Code are positive, they could go farther if a prevention culture were deeply rooted in shipping companies.

Implementing a prevention management system is always problematic. Some companies have tried to comply with the Code convinced they would get medium-term profits. Others have started the administrative process with the mistaken idea that implementing preventive measures is nothing more than a business expense. The development of planning, organisation, direction and control activities leading to an acceptable level of safety in ships must fully involve the participation of shipping companies in an increasingly challenging future.

The EQUASIS database contains the entire world's commercial fleet. It is therefore possible to know whether the safety management system of a company responsible for the operation of ships, or the safety management system of a ship or ships controlled by the company, comply with the ISM Code. If this is not the case, substandard ships operated by these companies should not be allowed to enter EU waters.

Authorities must monitor to what extent companies and ship safety management systems adhere to the International Convention on Standards of Training, Certification and Watchkeeping (STCW). If the MSC does not successfully revise the STCW Agreement, law suits via a complementary Directive to the Agreement will need to increase. Thus, it will be

possible to take effective action on crews that do not reach the necessary level of academic and practical training.

Implementing Directive 2002/59/E deals with the installation of AIS and VDR systems on ships. The penalties related to the behaviour described in Directive 2005/35/EC should eliminate recklessness or gross negligence and help the courts with an unequivocal clarification of responsibilities. There is no doubt that the demand for accountability should cover the total damage which, when applied to the environment, is very difficult to quantify. It should include the losses suffered by the populations affected by the discharges. For example the court trial relating to the Prestige accident is still ongoing and it highlights the impacts associated with vessel loss and subsequent pollution.

Statistics show that many accidents occur in the approach to port operations, whether as a consequence following wrong routes, errors in the charts or the weather. As for storms, there is no justification in taking risks when the ship is in safe anchorage. However, pressures from the companies to reduce inport time often affect all parties involved in the accident.

There are also accidents with ships docked at port facilities. The application of the ISPS Code mandates special attention to functional safety requirements for ships and facilities in order to promote effective management of risks arising from loading and unloading operations.

Auditing helps make management systems effective. It is very important that the IMO Member States commit themselves to implementing the IMO Voluntary Member State Audit Scheme in order to promote safety and maritime protection and to prevent contamination from ships.

Regular inspections of vessels must ensure the highest level of safety conditions, close to those at the design stage, even if this gets complicated as the ship's age increases. The MOUs should reach their maximum effectiveness in monitoring and checking that ships entering the ports of each of the areas comply with the requirements of international regulations. Furthermore, the level of expectation in all MOUs is currently very uneven and these differences should be reduced.

Modern tankers are being designed with a double-hull to minimize the impact of catastrophes due to equipment failure, navigational errors, fires, explosions or damage to the hull. There are also measures making it possible to respond with a high degree of reliability to emergency situations caused by previous failures.

4. CONCLUSIONS AND RECOMENDATIONS

The LeaderSHIP 2015 programme promotes safer and environmentally friendly ships, but only if these laws are strictly applied. The implementation of quality management systems for shipyard construction and repairs is another prerequisite.

EMSA plays a crucial role in implementing European legislation on maritime safety and preventing pollution from ships. It also encourages cooperation between Member States, adding to the contribution of COSS. If they abdicate their functions, environmental disasters in the EU will again occur with greater frequency.

Even after all efforts are made, no management system can totally eliminate risks. Risk is inherent in everyday life. On a bad day there will be an accident like the Prestige or Erika. Although the political atmosphere enabling these accidents has changed. Incident management will likely continue be done under political pressure.

Technical problems require technical solutions and these, in turn, require economic resources, and in this case it also requires prior political agreements and commitments within the EU. We cannot present again the eternal dilemma of keeping vessels away from the shore or place them in a protected area. We cannot leave the initiative to shipping companies or rescue and salvage firms. We need effective action protocols developed by expert groups.

Moreover, we still do not have one single official port of refuge. A political decision to establish them in the EU has to be made since no country will do so by itself. Given that a port of refuge needs a special infrastructure, there must be an adequate system of initial compensation. In the case of hosting a ship in distress, a procedure is needed to provide

immediate compensation for costs and damage. The EU should require vessels bound for community ports to have adequate insurance coverage for environmental damage.

The EU considers that preserving the environment depends on our collective actions and that tomorrow's environment will depend on our behaviour today. We have the tools for environmental management but if not applied with a firm hand we cannot guarantee that our descendants will enjoy quality of life and the beauty of our seas and coasts.

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