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## LAW, CRIMINOLOGY & CRIMINAL JUSTICE | REVIEW ARTICLE

# The impact of shortage implementation of the international regulations on maritime safety

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**Abstract:** This study reveals the most important role of effective marine accident investigation in the improvement of maritime safety through prevention similar casualties from occurring in the future, explores the legal obligations of all parties under different international maritime conventions, and codes. As most of marine accidents resulted from shortage in applying international regulations related to maritime safety, so this research determines, the shortage of application of the international regulations adopted by IMO related to maritime safety, and the shortage of legal measures to support safety at sea and protection or reduce marine pollution. This research also aims to improve special measures for procedures of marine accident investigation, with case study are highlighted, and the importance of identifying the liability. Finally the shortage of civil liability of damage resulting from marine accident under International and National Jurisdiction are discussed with some illustrative cases.

**Subjects:** International Law - Law; Regulation; Shipping & Maritime Law

**Keywords:** international conventions; maritime law; marine safety; marine accident investigation

### 1. Introduction

There are various causes of marine accidents some of these accidents caused by collision of ships or internal setting fire or exposure to storms or stranding ships or direct pollution incidents. Most of these incidents resulted from shortage in applying international regulations related to maritime safety.

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### PUBLIC INTEREST STATEMENT

The international shipping industry is already one of the most world's important and unsafe industries. So it is necessary to improve marine safety by undertaking the robust implementation of the international regulations. As most of marine accidents resulted from shortage in applying international regulations related to maritime safety, so this research determines, the shortage of application of the international regulations adopted by International Maritime Organization related to maritime safety, and the shortage of legal Measures to support safety at sea and protection or reduce marine pollution.

Maritime safety and security are increasingly importance to international industry, where main accidents have wide - reaching impacts. The international shipping industry is already one of the most world's important and unsafe industries. So it is necessary to improve marine safety by undertaking the robust implementation of the international regulations.

“Shipping is perhaps the most international of all the world’s great industries and one of the most dangerous” considering “the billions of tons of material shipped on the high seas every year, the millions of miles of wake left behind, and the seeming infrequency of major accidents, shipping might be said to be a rather safe industry” (American Bureau of Shipping 2004).

Shipping accidents, “many involving spills of mineral oil, have been a catalyst for environmental protection regulation over the past 40 years, environmental risk is linked to the type and amount of oil and/or hazardous substances being carried and the sensitivity of the marine area where any accident happens, a clear link can be made between environmental protection and shipping safety, with shipping accidents, often the subject of dramatic media coverage, provoking a strong response from civil society and politicians” ([http://awsassets.panda.org/downloads/15\\_years\\_of\\_shipping\\_accidents\\_a\\_review\\_for\\_wwf\\_.pdf](http://awsassets.panda.org/downloads/15_years_of_shipping_accidents_a_review_for_wwf_.pdf)). “Maritime safety is increasingly significant in a growing, global industry where major accidents have wide reaching impacts, the overall industry picture is one of continual improvement with Lloyds List Casualty Survey noting an 18% decrease in the number of accidents and the International Union of Marine Insurers recording a continuing downward trend both in tonnage and the percentage of the world fleet lost since 1980 (over the past 30 years)” (Arendt, Haasis, & Lemper, 2010).

In general, “accidents that involve property loss, death, injury, or environmental damage are subjected to investigation, often with the objective of identifying liability and culpability, other uses for accident and incident data. One of these is to find, assess, and review existing maritime incident/accident databases to identify causal factors and trends associated with those maritime events”.<sup>1</sup>

The IMO “has long made a concerted effort to improve the safety record of all ships, particularly those registered under flags of convenience, but that effort understandably focuses on the safety of the ships themselves” (Hoppe, 2000). Therefore, accident research code has been accepted as “an obligation in the 84th meeting of Maritime Safety Committee (MSC), which was held by International Maritime Organization (IMO) in London on dates between 7th and 16th May 2008. Such code includes a safety research, recommended practices and international standards for marine accidents or marine incidents” (IMO, 2005). “Parties to the convention shall undertake a marine safety research for each serious marine accident in accordance with that code and provide its findings in researches to be transferred to IMO. Within the internet site of IMO, a database is available, which is called as GISIS. This database includes a module by the name of marine incident and accident. This module contains marine accident reports which have been reported to IMO” (IMO, 2010). “The international maritime authorities have made significant efforts to promote safety at sea in the shipping transportation industry” (O’Neil, 2003). “The lessons taken from marine accidents experienced in the history form a basis for the conventions and contracts produced for the prevention of marine accidents” (Ugurlu, 2011).

The “IMO” adopted on 27 November “the Investigation of Marine Casualties and Incidents” Code by “(resolution A.849 (20))” amended by “resolution A.884 (21)” and “(resolution A.849 (20))”.

“IMO” on 16 May 2008 also issue new version of “the international standards and recommended practices for a safety investigation into a marine casualty or marine incident” “(Casualty investigation Code)” This Code entered into force on 1\1\2010 by “resolution MSC.255 (84)”.

The investigation of all dangerous marine accident are required by IMO, and that investigation should determine the total loss of the ship, the victims of persons, and any different types of damage to marine environment.

The main aim of this study is to remedy the shortage of applying the international provisions issued by the IMO regarding marine safety to protect the environment. The importance of applying legal Measures to support safety of navigation is explored, the shortage of application of “the International Safety Management (ISM) Code”<sup>2</sup> provided by IMO is reviewed also. Finally, the shortage of civil liability of damage resulting from marine accident under International and National Jurisdiction is discussed with some illustrative cases.

## **2. IMO's measures to marine accident**

The IMO has recognized “the importance of enhancing safety at sea has through improving technology-based regulations in the SOLAS Convention with a view to keeping them update with the latest marine technologies used in ship design. As such, the MSC routinely adopts numerous codes and guidelines to support matters related to fire safety, lifesaving, marine equipment, stability and the carriage of dangerous goods and hazardous cargoes”,<sup>3</sup> The Maritime Safety Committee, at its eighty-sixth session (27 May to 5 June 2009), approved amendments to the aforementioned Guidelines (annexes 1 and 2 to MSC.1/Circ.1206) concerning inspection and maintenance of lifeboats, launching appliances and on-load release gear, following the recommendations made by the Subcommittee on Ship Design and Equipment, at its fifty-second session. The revised Guidelines are set out in annexes 1 and 2 to this circular. Eight Members Government are invited to give effect to the annexed Guidelines as soon as possible and to bring them to the attention of ship owners, ship operators, ship-vetting organizations, ship personnel, surveyors, manufacturers and all others concerned with the inspection and maintenance of lifeboats, life rafts, rescue boats, fast rescue boats and life jackets according to type of ship, their release launching appliances and on-load launching equipment”,<sup>4</sup> which states mandatory under Regulation 34 of “(LSA Code)”.<sup>5</sup>

But there are some of the shortcomings of international regulation to prevent some specific marine accidents as follow:

## **3. The effective marine accident investigation**

The requirements effective of marine accident investigation are demonstrated as follow:

### **3.1. The independence of all parties**

The marine accidents investigations shall carried out by another administration to ensure effective investigation, and to maintain the independence of all parties.

#### **3.1.1. Case study**

On 27 March 2014, “The Marine Accident Investigation Branch (MAIB)”, and the National Police in London ratification “Memorandum of Understanding (MoU)” to ensure effective investigation of marine accidents involving a United Kingdom ship. The principals of this “MoU” are “safety investigation will be entirely independent from but can also proceed in parallel to a police investigation”

“There is a need for early contact and close co-operation between the MAIB investigator-in-charge and senior investigating Police officer, and there should be an exchange of factual information concerning the details of an accident or incident as both forms of investigation proceed”.<sup>6</sup>

## **4. The shortage of legal procedures**

### **4.1. Accident related to the shortage of applying the international regulations**

#### **4.1.1. Case study**

Denmark’s Maritime Authority said: “In recent years, the shipping industry has experienced an unacceptable number of serious accidents during abandon ship drills and fire drills, and issued guidelines for abandon ship and fire drills following a fatality aboard the containership *Anna Maersk* on 27 March. Where one Filipino seafarer was killed and a Danish officer seriously injured in the incident in Kobe, Japan when boat falls allegedly failed” (<http://maritimeaccident.org/2012/04/dma-issues-mob-boat-guidelines-after-anna-maersk-fatality-accidents-inacceptable>).

## 4.2. Case study

### 4.2.1. *The shortage of application “the International Safety Management (ISM) Code” provided by IMO*

In 2011 occurred disaster on board ship “a Norwegian cruise ferry Resulting from fatal fire marine accident investigation has heavily criticized ship owner and called to review, monitoring and control of fixed CO<sub>2</sub> firefighting systems”.

“The cruise ferry Nordlys caught fire as it approached Alesund in September last year”.

Two of crew members seriously injured and others were died.

“All 207 passengers were safely evacuated from the vessel which had 55 crew on board nine including two cadets were engineers, and the two dead men were engine staff”. “The report by the Norwegian Maritime Accident Investigator blamed the fire on poor vessel maintenance and training and while Hurtigruten has responded to much of the report’s content it does raise questions about the application of the International Safety Management code. The report highlighted that although the operator had a validated ISM code on paper, there were serious questions over its ability to put it into practice” (Code for Casualty Investigations, 1997).

## 4.3. Case study

### 4.3.1. *“The Saudi Arabia registered container ship” “Najran” at “Kwai Chung Container Terminal”<sup>8</sup>*

An industrial accident occurred on 15 May 2008, on board “Saudi Arabia registered container ship”, this accident was resulted from the shortage of applying the rules and regulations of safety and security requirements under the port control, Shipping regulations and the International Labour Organization (ILO) conventions.

This accident was investigated in accordance with “the Investigation of Marine Casualties and Incidents” stated under “IMO” Assembly “Resolution A.849(20)” and published by “IMO”.

4.3.1.1. *The facts.* This accident was occurred when “a stevedore was walking along a walkway on a lashing platform on the main deck in between No. 5 and 6 cargo holds he fell about 20 m down to the bottom of cargo hold and sustained fatal injuries”.

The accident was informed by a stevedore foreman who rushed to the place where this accident occurred. On his way to the scene, he had an electric shock injury.

4.3.1.2. *The investigation results.* The investigators explored that this deadly accident was caused by the insufficiency of providing suitable lighting to the work place.

The accident was also caused by “the removal of proper fencing to prevent fall of person, the injury case was caused by exposed live electric cable”.

## 5. Shortage of civil liability

The civil liability principles were introduced as a way “to provide guidance and controls over juries, which, prior to its imposition, were likely more swayed by motives of punishment, deterrence, and consolation. The civil liability principles has occupied a central position in modern private law, changing views of adequate compensation have worked to modify its application across jurisdictions” (Berryman, 2008).

In this section the civil liability principles from marine accident according to general legal principles requires three basic legal pillars which requires three basic pillars are: error, the damage, the causal relationship between fault and damage.

### **5.1. Error**

The human error is the main cause of most marine accidents, human error is still the dominant and principal factor in marine incident and accidents. “It has also been supported that among all human error types classified in numerous databases and libraries of accident reports, failures of situation awareness and situation assessment overwhelmingly predominate, being a causal factor in a majority of the recorded accidents attributed to human error”.

“There is a consistency of this finding between the data and reports within the US, UK, Canada, and Australia for all accidents over the reporting period, approximately 80 to 85% involved human error of these, about 50% of maritime accidents were resulting from human error”.

“Another 30% of accidents were associated with human error, meaning that some event other than human error initiated an accident sequence, and that failures of human performance led to the failure to avoid an accident or mitigate its consequences”.<sup>9</sup>

### **5.2. Damage**

#### *5.2.1. Case study*

“The MV Rena, a 47,000 ton container vessel registered in Liberia and owned by the Costamare Shipping group, grounded itself on the Astrolabe Reef off the coast of Tauranga on 5 October 2011. Some containers were lost and some oil escaped from the vessel and washed onto local beaches. The government, MNZ and local port authorities swung into action to set up an exclusion zone around the harbour to minimize the risk of collision with loose containers and to prevent potential contamination of seafood catches, to assist the salvors to extract the remaining oil off the vessel, and to begin the cleanup of our beaches. The Transport Accident Investigation Commission (TAIC) immediately commenced a safety investigation into the accident, and MNZ launched its own concurrent investigations under the MTA. Just over a week after the accident the master of the ship was arrested and charged with operating a vessel causing unnecessary danger to persons or property, and the second officer (who was reportedly in charge of the ship at the time when it grounded) was charged a few days later. Investigations continue, with MNZ reportedly considering whether to lay additional charges against the crew members, and the Shipping company operating the vessel”.<sup>10</sup>

### **5.3. Causal relationship between error and damage**

#### *5.3.1. Case study*

In this case, the report of marine accident investigation included the estimated costs for repairing the damaged as follow:

“Collision between the M/V GLOBAL CARRIER and M/V ECOSTAR (moored alongside) in Oxelosund, Sweden on 27 February 2010: The report by the Finland Accident Investigation Board (2011) described consequences in terms of injuries to persons (stating that there were none) and damage to the ships. It was stated that repair costs for the M/V Global Carrier were around 220,000 Euros, excluding hire costs. The length of time at the repair yard was also provided—March 7 to March 30th (Efficient, Safe and Sustainable Traffic at Sea, 2012).

### **6. International and National Jurisdiction**

In this section the compensation aspects from marine accident and under International and National Jurisdiction.

### **6.1. The international jurisdiction**

To prevent or eliminate the recurrence of marine accident, there is a little need to the existence of a convenient regulations as an effective tool to guarantee compensations for damage.

The determination of the liabilities and the compensations for damage required that the marine accident report concluding who is responsible for damage resulting from the accident. In this regard, IMO established an *ad hoc* Legal Committee concerning the legal affairs raised by the world's marine accidents, and introduced rules, regulations and provisions which includes liability, responsibility, compensation and indemnification for different kinds of pollution damage caused from ships.

“IMO” convened many conferences, adopting conventions dealing with “the civil liability of the ship or cargo owner for damage suffered as a result of a pollution casualty” (<http://www.imo.org/KnowledgeCentre/ReferencesAndArchives/FocusOnIMOArchives/Documents>), as follow:

- (1) “International Convention on Civil Liability for Oil Pollution Damage (CLC)”1969.
- (2) “International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (FUND)”1971.
- (3) “Convention relating to civil liability in the Field of Maritime Carriage of Nuclear Material (NUCLEAR)”1971.
- (4) “Athens Convention relating to the Carriage of Passengers and their Luggage by Sea (PAL)”1974.
- (5) “Convention on Limitation of Liability for Maritime Claims (LLMC)” 1976.
- (6) “International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (HNS)” 1996.
- (7) “International Convention on Civil Liability for Bunker Oil Pollution Damage”2001

“The purpose of the International Convention on Civil Liability for Oil Pollution Damage was to ensure that adequate compensation was paid to victims and the liability was placed on the ship-owner, IMO's success in dealing with pollution compensation has encouraged Member States to refer a number of other legal matters to the Organization” (<http://www.imo.org/OurWork/Legal/Pages/LiabilityAndCompensation.aspx>).

### **6.2. The national jurisdiction**

The Federal statutory law of United States of America permits, marine cases be tried in state courts, where “Article III Section 2 of the United States Constitution gives judicial power to the federal courts to hear maritime cases which supposedly are to follow federal maritime law, not state law, when the cases are decided”.

However, “legal issues arising in maritime cases often are decided differently depending on whether the case is tried in federal or state court and whether federal or state law is applied” (<http://www.bullivant.com/Law-in-Maritime-Cases>).

## **7. Conclusion**

The international shipping industry is already one of the most world's important and unsafe industries. So it is necessary to improve marine safety by undertaking the robust implementation of the international regulations.

This study explored the impact of shortage applying of the international regulations on maritime safety demonstrating some of the shortcomings of international regulation. The compensation aspects from marine accident and under International and National Jurisdiction are discussed also.

Some specific marine accidents are discussed also, showing that the main cause of such accidents is the shortcoming of implementing the international regulations regarding maritime safety.

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### Notes

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