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# Corporate Social Responsibility in the Shipping Business

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# Summary

Globalization has brought numerous benefits to the world economy in general. On the one hand, it has contributed by giving opportunities and improving the quality of life of many people. It has also boosted some local markets in developing countries by giving local people employment as well as increasing their GDP, due to the fact that a vast amount of natural resources are found there. From the “first world” perspective it has brought endless possibilities, from the availability of raw materials that are not found locally to the reduction of manufacturing costs of many products. Nevertheless this phenomenon has not come without a cost, and this is, among others, the violation of people’s human rights and the impact that these activities have in the environment.

To mitigate these negative effects, CSR emerged as an idea that aimed at constituting a series of measures, voluntarily adopted by corporations, that are designed with the exclusive goal to reduce the impact that their business activities place into the society and the environment.

This thesis will explore what is the connection between CSR activities and the shipping industry in the field of the environment and human rights and through a case study analyze practical measures that have been designed and implemented.

# Acknowledgements

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# Abbreviations

AMOSUP	Associated Marine Officers' and Seamen's Union of the Philippines
CDC	Carbon Disclosure Project
CSR	Corporate Social Responsibility
CO <sub>2</sub>	Carbon dioxide
DNV	Det Norske Veritas
DSA	Danish Shipowners' Association
dwt	Deadweight tonnage
ECA	Emission Control Area
EEDI	The Energy Efficiency Design Index
GDP	Gross Domestic Product
GESAMP	Group of Experts on the Scientific Aspects of Marine Environmental Protection
GHG	Greenhouse gas
GRI	Global Reporting Initiative
ICC	International Chamber of Commerce
ILO	International Labour Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
ISO	International Standardization Organization
MARPOL	International Convention for the Prevention of Pollution from Ships
m/m	Mass/mass concentration
MOEPS	Master's Operations Environmental Performance System
MLC	Maritime Labour Convention
NATO	The North Atlantic Treaty Organization
NGO	Non-governmental Organization

NO <sub>x</sub>	Nitrogen oxide
OECD	Organisation for Economic Co-operation and Development
SEEMP	Ship Energy Efficiency Management Plan
SO <sub>x</sub>	Sulphur oxide
STCW	International Convention on Standards of Training, Certification and Watchkeeping for Seafarers
TBT	Tributyltin
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNGC	United Nations Global Compact

# 1. Introduction

## 1.1 Background

Human Rights' protection or environmental concerns have been in vogue during the last decades. Public awareness is brought up in cases when human rights have been massively violated or when devastating pollution incidents have had extreme effects in certain parts of the world. When this takes place, public opinion or even governments are fast to react by claiming the need of stricter regulations, or by strongly condemning such events. Some incidents have even led, in the long run, to the development and creation of new and stricter measures. If we consider, for example, both the field of human rights and environmental pollution, its legal development has mostly been hand in hand with extreme violations or events.

Therefore, legislative measures in these matters are often reactive, meaning that when an incident takes place, action is often taken in form of creating new regulations and stricter standards. Very few efforts have indeed taken place to prevent such occurrences from happening or to evaluate all potential risks and take action before it is too late. Even though this trend is experimenting a change, meaning that regulations have become more preventative in nature, the shipping industry is a great example of this fact as, for instance, single hulls were not banned until after the *Prestige* disaster in 2002, even though its potential danger and ineffectiveness could have been envisioned many decades earlier. This phenomenon of delayed action or of failure of having a preventative mindset has been compensated by some business-made initiatives that aim at counteracting the lack of preventative regulations and to offer innovative approaches to ongoing problems in order to prevent disasters from happening or to ensure that everyone's rights are respected in an efficient manner.

This concept, known as Corporate Social Responsibility is of unclear origin. This means that there is no clear origin of the concept and neither there is a clear concept in itself as of today. As early as the 1950s CSR was conceived



as a form of social accountability, which places a moral duty to corporations to contribute to the society as a whole. This effort is not backed up by any legal framework nor institution and the measures implemented are all of a voluntary character, even though public opinion, the media or NGOs can contribute a great deal into shaping the image of a particular enterprise through its –or lack of- CSR practices.

Traditionally CSR has developed around certain matters that pose a great concern to the society and which require a global effort and the cooperation of the businesses to address them in a proper manner. These areas are the environment, human rights, labour rights and anti-corruption practices.

The peculiarities of the shipping industry are very useful when it comes to show the environmental and human rights impacts an industry can have due to its truly global nature. Shipping activities often take place between different countries and they involve many different subjects from different nationalities. Jurisdiction is a concept that entails that each country within its boundaries can regulate every matter as they wish and therefore in a business with such a great amount of international elements very many differences in regulations could potentially be found. This can invite the ingenious minds to find mechanisms to avoid stricter regulations in their own countries and make other less stringent frameworks apply, like for example with the use of the so called *flags of convenience*. Nevertheless, shipping, as a truly global business is plagued with regulations that are international, or regional, in character and which apply virtually to every nation in the world and which aim at making the applicable standards homogeneous. These regulations, such as MARPOL, are considered of a strict character, especially regarding the environment, because of the great challenge they pose to the industry by creating mandatory standards that have to be implemented within a time frame. Besides the efforts that the shipping industry is facing when adapting current regulations, many corporations have gone the extra mile to implement a voluntary set of practices that aim at going beyond what the law dictates and which creates an extra benefit both to the business as well as to society.

## **1.2 Purpose**

The purpose of this dissertation is, therefore, to analyze the current status of CSR practices in the Shipping industry through a case study. For this reason, an attempt to define what CSR is will be made in order to delimitate the concept of CSR and to use it in the analysis of the chosen industry. Since CSR is a framework that goes parallel with the legal developments an analysis and overview of the current framework applicable to the shipping industry will be carried out to delimitate, what is CSR and what is legal compliance. Finally, the aim of this dissertation is to establish if the shipping industry nowadays has adopted an innovative approach towards CSR practices or, if on the contrary, a more conservative one can be found. It is also an important objective to analyze the fact that some corporations disclose some practices as CSR activities when, in fact, they are mere compliance with the law and, therefore, its CSR practices are mere *window dressing*.

## **1.3 Structure**

This dissertation will start with a Chapter dedicated to define CSR, as it will be pointed out this is not an easy task and therefore a conceptual delimitation needs to be made before delving into the peculiarities of the field. Secondly, a brief description of the state of the law will be made in a subsequent Chapter. The aim is to show how the legal framework is established in connection with the selected issues, human rights and the environment, and the connection between the mandatory legislation and CSR. In Chapter four a case study will be conducted in order to provide with practical examples as to how CSR fits into a particular company and with the aim to analyze trend followed by the industry.

## **1.4 Method**

For the delimitation and definition of CSR both descriptive and analytical approaches have been adopted. In order to offer a descriptive overview of the available definitions the traditional legal approach has been used and

through this method appropriate literature, such as articles and textbooks have been revised.

To provide an overview of the current status of the law a descriptive approach has been chosen and the primary materials used have been the legal texts, as a primary source, and reference textbooks and articles to clarify the pertinent areas.

Subsequently a case study has been conducted with a descriptive and analytical approach. For the descriptive part the material that the company has made available on their website or in print has been used. These materials are in the form of Annual Reports which they have been combined together in order to offer a global overview of its CSR activities. In order to offer a combined analytical approach to the case study the author has used the findings on previous Chapters to introduce questions and to reflect on the findings of the study.

## **1.5 Delimitation**

To delimitate the scope of this thesis two main issues have been chosen, namely human rights and the environment. As it will be pointed out subsequently CSR entails a numerous amount of fields or areas of focus but since the main concerns that the shipping industry faces nowadays are focused on the protection of the environment and human rights these will be analyzed in detail.

## 2. Corporate Social Responsibility

### 2.1 In the quest for a definition

Defining CSR can prove to be a very challenging task. Numerous definitions have been presented through the years, each of them with its own peculiarities and scope. As some authors have claimed, corporate social responsibility “means something, but not always the same thing to everybody”<sup>1</sup>.

The field of CSR is both old and new in complexity at the same time. In other words, it is “a field that is vibrant and developing”<sup>2</sup>. It is old because the concept is not a new or recent development, as it may seem at first. Indeed, the first definition of CSR was formulated in 1953 by Bowen, in his book “Social responsibilities of the businessman” and was defined as “the obligations of businessmen to pursue those policies, to make those decisions, or to follow those lines of action, which are desirable in terms of the objectives and values of our society”. The concept has evolved and shifted focus as time has passed, but as of today no clear or unanimous definition has yet been established. As some authors point out “it is unusual to discover that researchers don’t share a common definition or a set of core principles”<sup>3</sup>.

On the other hand it is a new field because it constantly incorporates new ideas and the purposes of its implementation change over time. The reasons why an enterprise decides to design a CSR policy are numerous and diverse,

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<sup>1</sup> VOTAW, D. AND S.P. SETHI, “*The Corporate Dilemma: Traditional Values versus Contemporary Problems*”, Prentice Hall, 1973, New York, as quoted in Marrewijk, Marcel, *Concepts and Definitions of CSR and corporate sustainability: Between Agency and Communion*”, *Journal of Business Ethics* 44, May 2003, page 95.

<sup>2</sup> DE BAKKER, G. A., *A Bibliometric Analysis of 30 years of Research and Theory on Corporate Social Responsibility and Corporate Social Performance*. *Business & Society*, 2005 44:283.

<sup>3</sup> CRANE ANDREW, et. al, *The Corporate Social Responsibility Agenda*, The Oxford Handbook of Corporate Social Responsibility, Oxford University Press, 2009, USA.

ranging from pure philanthropy to more business-oriented purposes, such as earning the consumers' or stakeholders' trust which will ultimately lead to an increased consumption of its products and therefore it is business as usual. These reasons are of less interest in the development of the field. It can be said that it does not matter why a company engages in CSR activities but instead what matters is that it effectively implements its own policy and achieves results.

For illustrative purposes in this Chapter a handful of internationally accepted definitions will be presented, both to delimitate what exactly CSR is and to see what a diverse concept it can be.

A good starting point is the definition provided by the European Union Commission, according to which CSR is “a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis”<sup>4</sup>.

Nevertheless a new concept has been introduced by the Commission itself which defines CSR as “the responsibility of enterprises for their impacts on society”<sup>5</sup> a responsibility that implies “respect for applicable legislation and for collective agreements”<sup>6</sup> as a starting point. It is obvious that respect for the current applicable law it is implicitly included within the concept of CSR because, as we will see, CSR is a framework of measures designed to go beyond the law and is not an instrument of legal compliance nor a statement or an evaluation that a certain company is not in breach of any current legislation. Furthermore, the Commission states that CSR, instead, requires enterprises to;

have in place a process to **integrate social, environmental, ethical, human rights and consumer concerns into their business operations** and core strategy in close collaboration with their stakeholders with the aim of:

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<sup>4</sup> COM(2001)366.

<sup>5</sup> COM (2011) 681.

<sup>6</sup> *Vid.* 5.

- Maximizing the **creation of shared value** for their owners/shareholders and for their other stakeholders and society at large;
- identifying, **preventing and mitigating** their possible **adverse impacts**<sup>7</sup>

On the other hand, the ISO 26000 Guidance Standards on Social Responsibility define CSR as:

the **responsibility** of an organization for **the impacts of its decision and activities on society and the environment**, through transparency and ethical behavior that is consistent to sustainable development, including health and welfare of society; Takes into account the expectation of stakeholders; is in compliance with applicable law and consistent with international norms of behavior and Is integrated throughout the organization and practices in its relationship.

The International Chamber of Commerce has also expressed its view as to what CSR entails. The definition is very basic, but on our view its simpleness fits very well in this introductory approximation. For the ICC, CSR is “the voluntary commitment by businesses to manage their roles in society in a responsible way”. It is certain that the definition is very vague and raises many questions, such as what constitutes “responsible way” and to which areas should this voluntary commitment apply<sup>8</sup>. But this definition captures the essence of CSR which is **voluntariness** and its aim to “regulate” or guide the way in which enterprises affect the society as a whole, how they contribute, or not, to economic growth, etc. The definition provided by the World Business Council for Sustainable Development delves a little bit more into all this multiple facets of CSR, as it says, that it is “the commitment of business to behave ethically and contribute to

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<sup>7</sup> *Vid 5.*

<sup>8</sup> The traditional areas where CSR applies are the environment, human rights, labour and anti-corruption. This is not an exhaustive list as every business can include as many areas as they wish in their own CSR policy.

sustainable development **while improving the quality of life of the workforce and their families, local communities and society at large to improve their quality of life**". As it can be observed a new element is introduced by this definition, namely that the objective of CSR practices is "improving the quality of life". This might sound broad and vague but it lines up with the objectives that other areas aim at, such as environmental standards or the all the work done in terms of human rights. Taking the environment in consideration not only it contributes to sustainable development and tries to guarantee the enjoyment of a clean environment for future generations, but also aims at improving the quality of life of the society as a whole, through clean air, waters, better health conditions, and so on.

All this imprecision in terms of defining CSR can lead to the question as to what exactly is CSR and what are its implications. For instance, regarding the definition offered by the European Commission harsh criticisms have been raised including the argument that "it is not clear what the Commission is seeking to protect"<sup>9</sup>.

This ambiguity and uncertainty has its advantages and its inconveniences. On the one hand, the fact that the definition of CSR is open and can include multiple things gives enterprises great flexibility to incorporate whatever they see fit in their policies and construct them on their own interest or even re-shape the concept of CSR to benefit their own interest. As Marrweijk<sup>10</sup> has stated, the lack of a uniform definition has as a consequence that each and every definition will be biased towards specific interests. But this fact should not be seen as something prejudicial; on the contrary, if the definition fits the purposes and meets their needs, should be welcome. On the other hand, the existence of such uncertainty can be overwhelming to a corporation wanting to implement CSR, as it may be faced with the dilemma of what exactly is CSR and what is not. Partly for this reason a

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<sup>9</sup> MACLEOD SORCHA, *Corporate Social Responsibility Within the European Union Framework*, Wisconsin International Law Journal n° 23, 2005, page 541.

<sup>10</sup> MARREWIJK, MARCEL, *Concepts and Definitions of CSR and corporate sustainability: Between Agency and Communion*", Journal of Business Ethics 44, May 2003, page 95.

handful of internationally recognized principles and guidelines have emerged which will be discussed in this thesis<sup>11</sup>.

To get started, it is important to highlight that defining CSR is an objective that cannot be accomplished nor it is the purpose of this dissertation; therefore, it is necessary to extract a few common characteristics of all the available definitions and reach our own conclusions. Therefore, briefly, we could say that the main attributes of CSR are its voluntariness, that are measures that go beyond the law and that traditionally it covers certain areas such as human rights, the environment, labour conditions and so on. But it is also a very innovative and evolving concept which is open and subject to change to fit everyone's purposes. Nevertheless there is a common characteristic that cannot be ignored, namely the fact that CSR has to serve as a tool to contribute in improving the quality of life of the population and to protect the environment, a purely business oriented goal would with the highest likelihood not be accepted as CSR if it did not have as a consequence a positive contribution in the society as a whole. What this positive contribution might be is open to debate and also raises the question that what can be a positive contribution for a society can result in a negative effect on another.

To avoid this possible incompatibility of CSR concepts, policies and conceptions, international movements have emerged in order to align its views towards what CSR should constitute and also to offer guidance to corporations with the purpose of creating international –or universal– cohesion of CSR practices.

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<sup>11</sup> *Vid* 2.2.



## **2.2 Internationally recognised principles and guidelines.**

### **2.2.1 The European Union strategy 2011-2014 for Corporate Social Responsibility<sup>12</sup>**

This strategy is in line with the European CSR Policy<sup>13</sup> and offers a renewed approach containing both a new definition<sup>14</sup> as well as an agenda of measures and commitments from the Commission in order to obtain a balance between the negative and positive impacts. This strategy for the period 2011-2014 covers 8 main points<sup>15</sup> of action that can be summarized as follows;

- To make CSR practices more visible through several mechanisms such as the creation of a European award or the establishment of platforms for each industry where stakeholders can discuss and commit to initiatives and monitor the progress together.
- Improve the level of trust in businesses. For this purpose the Commission aims at encouraging public debate on the role of certain enterprises or organizing surveys to monitor citizen trust in business.
- Improving and encouraging self-regulation practices through the creation of a protocol in order to guide its development.
- Rewarding CSR practices for example through conducting public procurement only with enterprises that have aligned good CSR practices.
- Improving the disclosure of social and environmental information. The Commission aims at conducting a new legislative proposal on this matter.
- Integrating CSR into education, training and research.

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<sup>12</sup> COM (2011) 681 final.

<sup>13</sup> COM(2001) 366 final.

<sup>14</sup> *Vid. 12.*

<sup>15</sup> [http://ec.europa.eu/enterprise/policies/sustainable-business/corporate-social-responsibility/index\\_en.htm](http://ec.europa.eu/enterprise/policies/sustainable-business/corporate-social-responsibility/index_en.htm). Last accessed 07-05-2013.

- Inviting Member States to present their own plans for the promotion of CSR practices.
- Aligning the European approaches to CSR with: and global approaches to CSR:
  - the OECD Guidelines for Multinational Enterprises,
  - the 10 principles of the UN Global Compact,
  - the UN Guiding Principles on Business and Human Rights,
  - the ILO Tri-partite Declaration of Principles on Multinational Enterprises and Social Policy,
  - the ISO 26000 Guidance Standard on Social Responsibility.

### **2.2.2 The ten principles of the United Nations Global Compact<sup>16</sup>.**

The Global Compact is an initiative led by the United Nations which aims to offer guidance to those enterprises who wish to develop a strategy in the fields covered by the 10 principles of the Compact. The principles are not chosen randomly since they refer to issues that have been challenged or influenced as a consequence of globalization and that have seen an increase of violations hand in hand with the proliferation of multinational enterprises. The main area of focus are human rights, labour, environment and anti-corruption and they are ideas which align with universally accepted principles contained in international conventions such as The Universal Declaration of Human Rights, The International Labour Organization's Declaration on Fundamental Principles and Rights at Work, the Rio

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<sup>16</sup> *Corporate Sustainability in the World Economy: The UN Global Compact*, the UN Global Compact Office, New York, 2011. Available at [http://www.unglobalcompact.org/docs/news\\_events/8.1/GC\\_brochure\\_FINAL.pdf](http://www.unglobalcompact.org/docs/news_events/8.1/GC_brochure_FINAL.pdf). Last accessed 22-05-2013.

Declaration on Environment and Development and the UN Convention Against Corruption. The principles can be outlined as follows;

### **Human Rights**

- Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and
- Principle 2: make sure that they are not complicit in human rights abuses.

### **Labour**

- Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
- Principle 4: the elimination of all forms of forced and compulsory labour;
- Principle 5: the effective abolition of child labour; and
- Principle 6: the elimination of discrimination in respect of employment and occupation.

### **Environment**

- Principle 7: Businesses should support a precautionary approach to environmental challenges;
- Principle 8: undertake initiatives to promote greater environmental responsibility; and
- Principle 9: encourage the development and diffusion of environmentally friendly technologies.

### **Anti-Corruption**

- Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery

By joining the UNGC a corporation is offered guidance in terms of measures and steps to be taken regarding the abovementioned principles. It is also a platform of exchange of ideas and research on how corporations can minimize their impacts in all concerning the 10 Principles. For this purpose UNGC also aims at offering guidance and conducts extensive publishing efforts in order to assist those corporations who wish to engage in initiatives covered by their principles.

### **2.2.3 The Global Reporting Initiative<sup>17</sup>.**

The Global Reporting Initiative (GRI) offers guidance in a manner that differs greatly of that offered by the UN Global Compact. The former one focuses on the topics or key areas that should or could be covered by a CSR policy whereas the GRI offers guidance when a company wishes to engage in reporting activities of their CSR initiatives. Their aim is, therefore, to offer a “reporting framework” that is used by as much corporations as possible and that can be acknowledge as a standard.

Their reporting system is focused on four key areas, namely the economic, environmental, social and governance performance. The Guidelines provide with advice on how to report and also on what should be an object of reporting. The latest version of the Guidelines is the G3.1 which was released in 2011, a most sophisticated version, the G4 is expected for May 2013.

The Guidelines use the so called application level which is divided into three levels, - A, B and C- each one refers to the number of parts of the guidelines that have been assessed in the CSR report.

Embracing a widely acknowledged reporting system has its advantages as it allows more transparency –as the GRI establishes which parameters should be reported- which increases consumer’s trust in the business which always leads to profits.

In order to assess the particular needs of certain sectors the GRI’s Sector Supplements have been published and in the case of shipping the relevant supplement is the one that covers “Logistics and Transportation” which is still under a pilot version.

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<sup>17</sup> <https://www.globalreporting.org/>.

## **2.2.4 The OECD Guidelines for Multinational Enterprises<sup>18</sup>.**

These Guidelines are another set of recommendations that companies can use when developing responsible practices or codes of conduct. The Guidelines are designed by the OECD and are formulated by governments with the aim to be followed by multinational corporations that are connected in any way with the territory of one of the adhering countries.

The character of the Guidelines is completely voluntary as emphasis is made on the fact that no corporation can escape to comply with the laws of the country or countries in which they operate. Embracing the Guidelines will never be a substitute of complying with the law.

## **2.2.5 The ISO 26000 Guidance Standard on Social Responsibility<sup>19</sup>.**

The International Organization for Standardization is a widely recognized organization that develops International Standards that are applied on a voluntary basis. These standards can refer to an immense variety of products and services helping the industry at the same time that they ensure quality towards the consumers. When a corporation obtains an ISO certification it serves as a public and well recognized acknowledgement of the quality of its products at the same time that ensures that standardization is offered in a uniform matter around the world. As of today, ISO has published and developed more than 19500 International Standards<sup>20</sup>

In the case of CSR the relevant standards are those contained in the “*ISO 26000 – Social Responsibility*” which provides guidance on how corporations can conduct its business in a sustainable or responsible manner. The peculiarity of these standards is that, in comparison with other ISO standards, does not provide certification. Instead they offer advice and

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<sup>18</sup> *OECD Guidelines for Multinational Enterprises*, OECD Publishing. OECD, 2011. Available at <http://dx.doi.org/10.1787/9789264115415-en>. Last accessed: 22-05-2013

<sup>19</sup> *Discovering ISO 26000*, ISO Publications, Geneva, 201. Available at: [http://www.iso.org/iso/discovering\\_iso\\_26000.pdf](http://www.iso.org/iso/discovering_iso_26000.pdf). Last accessed 17.04.2013.

<sup>20</sup> <http://www.iso.org/iso/home/standards.htm>. Last accessed 17.04.2013.

recommendations; they contain suggestions and actions that can be embraced by corporations.

As the ISO 26000 describes it, it provides guidance relative to concepts, terms and definitions, information about trends and characteristics of social responsibility, principles and practices relating to social responsibility, etc.<sup>21</sup> The main areas covered by the ISO 26000 are; organizational governance, human rights, labour practices, the environment, fair operating practices, consumer issues and community involvement and development.

### **2.2.6 The UN Guiding Principles on Business and Human Rights<sup>22</sup>.**

These principles address corporations as well as governments. Regarding the former they emphasize the role that a State has to play regarding businesses and human rights violations and it provides with recommendations of actions to be taken by States, such as the State duty to protect against human rights abuses caused by third parties. On the other hand it provides guidance to business as to how to protect and respect human rights as well as how to reduce the risk of incurring in such violations, such as the duty to act with due diligence. It is also important, as it is highlighted by the principles, the need to provided better access to remedy, as it is an issue of an extreme complexity when it comes to violations of human rights caused by a corporation.

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<sup>21</sup>*Vid. 19.*

<sup>22</sup>*Guiding Principles on Business and Human Rights. Implementing the United Nations "Protect, Respect and Remedy" framework*, United Nations Human Rights, Office of the High Commissioner, New York and Geneva, 2011.

### **3. Corporate Social Responsibility and the law.**

One of the main characteristics of CSR, as it has been discussed previously, is its voluntariness. On the other hand, and as opposed to this voluntary character, there exists numerous regulations, at the international, regional or national levels, that are of a mandatory nature. No corporation can escape the fact that these regulations, which in the shipping context, are presented mostly as international standards, have to be applied. Therefore when designing a CSR strategy an innovative effort needs to be made to go beyond what it has already been regulated and present measures that introduce an *added value* to the current standards. For instance, a company reporting that they are complying with the law cannot be said to have a CSR strategy in place because it is not implementing anything new nor making any extra effort.

The fact that CSR has to go beyond the law is only one way of conceiving it, as it has been discussed above one of the principal aims of CSR is to conduct a business in a sustainable manner, and if the current state of the law would allow that, it can be discussed that in that particular case, CSR activities will consist only in implementing the legal framework effectively.

The connection between CSR and the law has not been widely researched and more efforts need to be done in that direction. It is not either the purpose of this thesis to go into a deep analysis of the possible relationship between CSR activities and legal frameworks but in order to analyze the current state of affairs in the shipping business a standpoint needs to be taken.

The author of this thesis is of the view that CSR has to constitute a series of measures that are voluntary in character and therefore need to carry an extra effort that goes beyond the current legal framework. The voluntary character, within the shipping industry, could also be brought up for

discussion as in this context institutions like the IMO or the ILO are establishing stringent requirements that pose a great challenge in the industry and which do not leave much room for extra measures<sup>23</sup>.

In the context of shipping further questions arise, for instance, as it has been mentioned, institutions like the IMO are conducting a great effort in establishing regulations that are specific for the shipping industry and which aim at improving the current state of affairs in connection with the environment labour issues, etc. and it could be argued if this measures *per se* can constitute CSR or not. If we strictly consider CSR's voluntary character the answer would be negative, but if we take into consideration the fact that no mandatory definition of the concept exists, CSR can be re-shaped at convenience. On the other hand the question as to who has to be the *creator* or the designer of the CSR measures is a controverted fact, the word corporate suggests that it refers to businesses, enterprises or corporations, but as it has been said, since no definition is provided, it could be argued that CSR can be created by someone else, in this case, international institutions, *for* the corporations within that industry.

Since this idea could be subject of further development and it falls out of the scope of this thesis, the position taken is that the relationship between CSR and the law is of independence, namely that regulatory bodies cannot enact law that can constitute CSR on itself. The question if those regulations can constitute CSR when they are effectively implemented by a specific company will also be disregarded as negative and thus CSR will be considered as any measure, implemented on a voluntary basis and created by the particular corporation who wishes to implement it.

With this idea in mind, the objective of this Chapter is to briefly present the current status of the law concerning shipping, firstly in that regarding the environment and secondly those regulations that refer to human rights.

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<sup>23</sup> For instance the fact that in January 2015 the maximum sulphur content allowed on all ECAs will be of 0.1%. This poses a great challenge on the industry since there are doubts that enough fuel oil with that sulphur content will be available in 2015.



### 3.1 Shipping and the environment.

The impact that shipping places on the environment has been an ongoing concern for decades<sup>24</sup>. The approach to its regulation, however, has shifted from an open and permissible one, where pollution was tolerable and considered a sort of side-effect of sea-borne trade, to a much more restricted one which aims at completely prohibiting all uses of the seas that would result in “pollution of the marine environment”<sup>25</sup>. This shift is evidenced as well by the proliferation of regulations included both in treaties and soft-law instruments that aim at regulating into the detail all technical, operational aspects as well as those related with human performance that improve the effect that shipping has on the environment.

Pollution of the marine environment, means, as provided in UNCLOS,

the introduction by man, directly or indirectly, of substances or energy into the marine environment [...] which results or is likely to result in such deleterious effects as harm to living resources and marine life, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for use of sea water and reduction of amenities.

Before delving into the Conventions that address pollution and environmental matters in detail, it is necessary to establish how the legal framework is structured. On the one hand there is UNCLOS which serves as a regulatory framework, or as an “umbrella” regulation<sup>26</sup>, whose provisions are generally accepted and applied, even by non-parties to it, and are

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<sup>24</sup> ROTHWELL, DONALD & STEPHENS, TIM, *The international law of the sea*, Hart, Oxford, 2010, p. 338.

<sup>25</sup> REDGWELL CATHERINE, *From Permission to Prohibition: The 1982 Convention on the Law of the Sea and Protection of the Marine Environment* in David Freestone, et. al, *The Law of the Sea: Progress and Prospects*, Oxford University press, 2006, Oxford, p. 180.

<sup>26</sup> BLANCO-BAZÁN, AGUSTIN, *IMO interface with the Law of the Sea Convention*, 23<sup>rd</sup> Annual Seminar of the Center for Ocean Law and Policy, University of Virginia School of Law, 2000. Available at: [http://www.imo.org/blast/mainframe.asp?topic\\_id=406&doc\\_id=1077](http://www.imo.org/blast/mainframe.asp?topic_id=406&doc_id=1077) Last accessed 17-04-2013.

considered as customary international law<sup>27</sup>. On the other hand, UNCLOS itself contains a mandate addressed to States to cooperate on a global and regional basis, when appropriate, be it directly or through competent international organizations in formulating international rules, standards and recommended practices and procedures<sup>28</sup>. This translates in to the existence of regional agreements<sup>29</sup> as well as a regulatory regime contained mostly in instruments adopted by the IMO<sup>30</sup>.

The increasing number of regulations, most of which include strict time frames in which they have to be successfully implemented, pose a great challenge in nowadays shipping industry, and as DNV points out, the implementation of this regulations does not come at a low cost, instead the industry as a whole has to struggle to find the most suitable options that would provide results at the same time that they would be cost-effective.<sup>31</sup> The Danish Shipowners' Association has emphasized on this matter that these challenges have to be faced by the industry as a whole as well as by all the parties involved. They have also called upon the fact that when designing environmental policies, the legislators need to take into consideration the possible negative financial effects of their decisions. As an example, the Ballast Water Convention has proved to be an extremely costly regulation to implement and the effects that it has had on the environment have been minimal.<sup>32</sup>

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<sup>27</sup> Case C-286/90 *Anklagemyndigheden v. Peter Michael Poulsen Diva Navigation Corp. "Poulsen"*.

<sup>28</sup> Art. 197 UNCLOS.

<sup>29</sup> This regional agreements are concluded through the United Nations Environment Programme's (UNEP) Regional Seas Programme (RSP) as well as treaties between States aimed at protecting a particular area, such as the 1992 Convention for the Protection of the Marine Environment and Coastal Region of the Baltic Sea Area (Helsinki Convention).

<sup>30</sup> NIJHOFF, MARTINUS, *United Nations Convention on the Law of the Sea 1982: A Commentary*, The Hague, 1990, vol 4, p 201. Article 211 UNCLOS calls States to act through a "competent international organization to establish international rules and standards to prevent, reduce and control pollution [...] from vessels". This competent international organization is IMO.

<sup>31</sup> The Danish Shipowners' Association, *Green Transport of Global Trade*, 2012.

<sup>32</sup> *Vid. 31.*

Needless to say that if embracing the mandatory regulations is a considerably difficult challenge for the shipping, implementing a voluntary CSR framework that goes beyond the law is a commendable effort.

### **3.1.1 Marine pollution.**

With the highest probability, accidental pollution is the one that gets more attention because its effects are more immediate and more patently visible for the population and because the media coverage tends to sensationalize the facts not often offering contrasting information. The truth is that, as devastating as they may seem, oil spills or accidental pollution, do not constitute the major source of oil pollution at sea. According to a study conducted by GESAMP<sup>33</sup> in 2007, of 1,245,200 metric tons of oil that was introduced to the sea, 457,000 came from vessels and only 163,200 of those originated as a consequence of an accidental release. This is evidence of the fact that oil-spills pose a relatively small threat to the waters as compared with the amount of pollutants that are introduced from other sources.

It is also true that marine pollution does not originate solely as a consequence of shipping activities, instead, land-based sources<sup>34</sup> and seabed activities<sup>35</sup> are responsible for the introduction of a great number of pollutants into the water and as P.K. Mukherjee<sup>36</sup> words it, ship-source pollution “is the lesser of the two main pollution generating evils”.

On the other hand, for explanatory purposes ship-source pollution can be classified as voluntary and accidental. The later arises as a consequence of a fortuitous incident whereas the former is also known as operational vessel-source pollution and comes from the normal working operations of ships or from seafaring practices. As opposed to a big oil-spill, it is done in a more progressive manner which makes it often go unnoticed but not less

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<sup>33</sup> GESAMP, *Estimates of Oil Entering the Marine Environment from Sea-Based Activities* (London, IMO, 2007).

<sup>34</sup> Art. 207 UNCLOS.

<sup>35</sup> Art. 208 UNCLOS.

<sup>36</sup> MUKHERJEE, P.K., *The Penal law of ship-source marine pollution: selected issues in perspective* at Ndiaye, T. M., Wolfrum, R., *Law of the Sea, Environmental Law and Settlement of Disputes*, 2007, Leiden, pages. 463-496.

dangerous. For delimitative purposes only operational vessel-source pollution will be discussed.

A remarkable achievement related to operational vessel-source pollution is the 1973 International Convention for the Prevention of Pollution from Ships, as modified by the Protocols of 1978 and 1997, commonly referred to as MARPOL which will be discussed below.

### **3.1.1.1 1973 International Convention for the Prevention of Pollution from Ships (MARPOL)**

MARPOL's principal objective is "to achieve the complete elimination of intentional pollution of the marine environment by oil and other harmful substances and the minimization of accidental discharge of such substances"<sup>37</sup>. This objective, ambitious as it seems, has made the convention successful, as, according to the IMO<sup>38</sup>, "MARPOL has greatly contributed to a significant decrease in pollution from international shipping", and it has been accomplished by implementing measures of different character and by the introduction of technical and operational requirements which aim at reducing the pollution generated by ships. On the other hand it can be said that MARPOL constitutes a broad Convention as it covers many different types of pollutants, namely pollution from ships by oil, by noxious liquid substances carried in bulk, harmful substances carried by sea in packaged form; sewage; garbage; and the prevention of air pollution from ships.

#### **3.1.1.1.1 Pollution from ships by oil (Annex I)**

Non-accidental pollution by oil, namely the one that is not produced as a consequence of a fortuitous incident, is regulated by Annex I of MARPOL. This Annex, which originally was very long and technical, was revised and

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<sup>37</sup> MARPOL Preamble.

<sup>38</sup> IMO and the Environment, London, IMO. Available at <http://www.imo.org/ourwork/environment/documents/imo%20and%20the%20environment%202011.pdf> Last accessed 23-05-2013.

a new version, more readable and easy to navigate<sup>39</sup>, was adopted in October 2004<sup>40</sup>, which entered into force on 1<sup>st</sup> of January 2007<sup>41</sup>.

Briefly described, the aim of MARPOL is the complete prohibition of discharges of oil from vessels. Nevertheless there are a few exceptions which depend on the type of vessel and its tonnage<sup>42</sup>. On the other hand Annex I recognizes the existence of the so called “special areas”<sup>43</sup> where no discharges are permitted under any circumstances<sup>44</sup>.

The alternative provided by MARPOL is that instead of discharging the oil into the sea, vessels have to use the reception facilities which States parties to the Convention are obliged to provide at oil loading terminals, repair ports, etc. Not all the regulations pertain to operational matters; some relate to technical requirements, regarding for example the construction of oil tankers, including the requirement for double hulls for all new and most of existing tankers.

#### **3.1.1.1.2 Pollution by noxious liquid substances carried in bulk (Annex II)**

This Annex was revised in 2007<sup>45</sup>. It sets out four categories of substances, the most hazardous (X)<sup>46</sup> are totally prohibited and the less hazardous (Y and Z)<sup>47</sup> can be discharged in limited amounts. Additionally there exists a category of “other substances”<sup>48</sup> which are “considered to present no harm to marine resources [and] human health [...] when discharged” and its discharges are allowed.

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<sup>39</sup> *MARPOL Annex I: Regulations for the prevention of pollution by oil*, Gard AS, 2011. Available at <http://www.gard.no/ikbViewer/Content/72338/Marpol%20June%202011.pdf>. Last accessed 22-05-2013.

<sup>40</sup> Resolution MEPC.117(52).

<sup>41</sup> *Vid. 40.*

<sup>42</sup> For example Regulation 34.A Annex I MARPOL. *Vid. Appendix A.*

<sup>43</sup> Special area is defined in Regulation 1(11) Annex I MARPOL.

<sup>44</sup> Regulation 34 B Annex I MARPOL.

<sup>45</sup> Resolution MEPC.118(52).

<sup>46</sup> Regulation 6.1.1 Annex II MARPOL. *Vid. Appendix A.*

<sup>47</sup> Regulation 6.1.2 and 6.1.3 Annex II MARPOL. *Vid. Appendix A.*

<sup>48</sup> Regulation 6.1.4 Annex II MARPOL. *Vid. Appendix A.*

Furthermore the ships certified to carry such substances must comply with the International Bulk Chemical Code (if constructed on or after 1 July 1986) or the Bulk Chemical Code for tankers constructed before that date.<sup>49</sup>

### **3.1.1.1.3 Pollution by harmful substances in packaged form (Annex III)**

Harmful substances are understood to be those “which are identified as marine pollutants in the International Maritime Dangerous Goods Code (IMDG Code) or “which meet the criteria in the Appendix of this Annex [Annex III]”<sup>50</sup> and “packaged form” means the forms of containment specified for harmful substances in the IMDG Code<sup>51</sup>. This Annex therefore contains regulations in order to prevent pollution caused by such substances. This is made by setting standards regarding packaging<sup>52</sup>, marking and labeling<sup>53</sup>, documentation<sup>54</sup>, stowage<sup>55</sup> and quantitative limits<sup>56</sup>.

These substances are not allowed to be jettisoned under any circumstance except when it is permitted by Annex III, which means when it is necessary for securing the safety of the ship or saving life at sea<sup>57</sup>.

### **3.1.1.1.4 Sewage (Annex IV)**

Sewage is defined as “drainage and other wastes from any form of toilets and urinals; drainage from medical premises (dispensary, sick bay, etc.) via wash basins, wash tubs and scuppers located in such premises; drainage from spaces containing living animals; or other waste waters when mixed with the drainages defined above”<sup>58</sup>. Regulation 11<sup>59</sup> establishes that these activities are prohibited as a general rule except when they fall within the following exceptions;

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<sup>49</sup> Regulation 11 Annex II MARPOL.

<sup>50</sup> Regulation 1.1 Annex III MARPOL.

<sup>51</sup> Regulation 1.2 Annex III MARPOL.

<sup>52</sup> Regulation 2 Annex III MARPOL.

<sup>53</sup> Regulation 3 Annex III MARPOL.

<sup>54</sup> Regulation 4 Annex III MARPOL.

<sup>55</sup> Regulation 5 Annex III MARPOL.

<sup>56</sup> Regulation 6 Annex III MARPOL.

<sup>57</sup> Regulation 7 Annex III MARPOL.

<sup>58</sup> Regulation 1(3) Annex IV MARPOL.

<sup>59</sup> Regulation 11 Annex IV MARPOL. *Vid. Appendix A.*

1. the ship is discharging comminuted and disinfected sewage using a system approved by the Administration in accordance with regulation 9.1.2 of this Annex at a distance of more than 3 nautical miles from the nearest land, or sewage which is not comminuted or disinfected at a distance of more than 12 nautical miles from the nearest land, provided that in any case, the sewage that has been stored in holding tanks shall not be discharged instantaneously but at a moderate rate when the ship is en route and proceeding at not less than 4 knots; the rate of discharge shall be approved by the Administration based upon standards developed by the Organization; or
2. the ship has in operation an approved sewage treatment plant which has been certified by the Administration to meet the operational requirements referred to in regulation 9.1.1 of this Annex, and
  1. the test results of the plant are laid down in the ship's International Sewage Pollution Prevention Certificate; and
  2. additionally, the effluent shall not produce visible floating solids nor cause discoloration of the surrounding water.

Furthermore, parties to the Convention are obliged to have reception facilities available for the ships to dispose of their sewage wastes.<sup>60</sup>

On the other hand this Annex does not apply to all kinds of ships; it only applies to those engaged in international voyages and which are of 400 gross tonnage or above. The tonnage requirement will not apply when the vessels are certified to carry more than 15 persons<sup>61</sup>. In any case, ships are required to be equipped with at least one of the following sewage systems that are mentioned in Regulation 9<sup>62</sup>;

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<sup>60</sup> Regulation 12 Annex IV MARPOL.

<sup>61</sup> Regulation 2 Annex IV MARPOL.

<sup>62</sup> Regulation 9 Annex IV MARPOL.

1. a sewage treatment plant which shall be of a type approved by the Administration, taking into account the standards and test methods developed by the Organization, or
2. a sewage comminuting and disinfecting system approved by the Administration. Such system shall be fitted with facilities to the satisfaction of the Administration, for the temporary storage of sewage when the ship is less than 3 nautical miles from the nearest land, or
3. a holding tank of the capacity to the satisfaction of the Administration for the retention of all sewage, having regard to the operation of the ship, the number of persons on board and other relevant factors. The holding tank shall be constructed to the satisfaction of the Administration and shall have a means to indicate visually the amount of its contents.”

#### **3.1.1.1.5 Garbage (Annex V)**

For the purposes of the Convention, garbage is “all kinds of food wastes, domestic wastes and operational wastes, all plastics, cargo residues, cooking oil, fishing gear, and animal carcasses generated during the normal operation of the ship and liable to be disposed of continuously or periodically”<sup>63</sup> The discharge of garbage into the sea is prohibited<sup>64</sup>, as a general rule, but there are exceptions as usual, which are contained in Regulations 4, 5, 6 and 7<sup>65</sup>.

The existence of special areas is recognized where, due to its peculiar characteristics, “the adoption of special mandatory methods for the prevention of sea pollution by garbage is required”.<sup>66</sup> Regarding this point IMO acknowledges its insufficiency and the lack of availability of reception facilities in some ports; it is for this reason that an Action Plan<sup>67</sup> with the

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<sup>63</sup>Regulation 1.9 Annex V MARPOL.

<sup>64</sup> Regulation 3 Annex V MARPOL.

<sup>65</sup> *Vid Appendix A.*

<sup>66</sup> Regulation 1.14 Annex V MARPOL.

<sup>67</sup> IMO’s Action Plan on tackling the inadequacy of port reception facilities (2010), [www.imo.org](http://www.imo.org), Last accessed 11-04-29.



objective of “tackling the inadequacy of port reception facilities” was developed.

As well as other kinds of pollutants, for the purposes of handling garbage properly, States that are part of the Convention must make sure that there are adequate reception facilities at ports and terminals that will suit the needs of the ships that are expected to use them and without causing undue delay to them.<sup>68</sup>

#### **3.1.1.1.6 Air pollution from ships (Annex VI)**

When referring to pollution caused by seaborne trade, not only water pollution is important, as the exhaust gases from ships are one of the main contributors to air pollution as well as to the infamous greenhouse effect.

MARPOL is aware of the need to regulate, control and limit which air pollutants enter the atmosphere as a consequence of shipping. In Annex VI, which was first adopted in 1997, a limitation on pollutants, such as sulphur oxides (SO<sub>x</sub>) and nitrous oxides (NO<sub>x</sub>) was introduced and the prohibition of emitting ozone depleting substances was established. In 2008, this Annex went through a series of changes which aim at progressively reducing the emissions of SO<sub>x</sub> and NO<sub>x</sub>.<sup>69</sup>

##### **3.1.1.1.1 SO<sub>x</sub>**

Sulphur oxides are present in the bunkers used by vessels in their navigation and can pose a threat both to human health and the environment. For this reason the aim established by the IMO in MARPOL is to progressively reduce the content of SO<sub>x</sub> in the bunkers purchased by the shipping companies.

The reductions in SO<sub>x</sub> are established within different time-frames after which compliance is mandatory. The limit allowed for SO<sub>x</sub> went from the previous 4.50% m/m to a maximum of 3.50% m/m, a measure that would

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<sup>68</sup> Regulation 8 Annex V MARPOL.

<sup>69</sup> MEPC.176(58).

take effect on 1 January 2012. This amount has to be progressively reduced to 0.50% until 1 January 2020<sup>70</sup>.

#### **3.1.1.1.2 NO<sub>x</sub>**

Nitrogen oxides are gases generated by diesel engines and can cause a significantly harmful effect both on the environment as well as on human health. NO<sub>x</sub> regulations are even more stringent than those established for SO<sub>x</sub> but in the same manner they are established through different time frames and limits that apply to different types of engines. The controls belonging to the “Tier II” which applies to diesel engines installed on or after 1 January 2011 and the “Tier III” establishes more stringent controls that will apply to the marine diesel engines installed on or after 1 January 2016. Those engines installed on or after 1 January 1990 but prior to January 2000 will be required to comply with the “Tier I” emission limits<sup>71</sup>.

#### **3.1.1.1.3 CO<sub>2</sub>**

Another concern that has been in vogue during the last years is GHG emissions. All industries have to a much greater or lesser extent adapted themselves in order to cut such emissions. Shipping is not an exception and the IMO has been engaged in an ongoing effort. From a global perspective shipping cannot be said to be one of the biggest contributors to the existence of greenhouse gases in the atmosphere, as the Second IMO GHG Study<sup>72</sup> conducted in 2009 it was estimated that shipping only represented 2,7% of the global emissions of carbon dioxide (CO<sub>2</sub>) in 2007. This study contains an estimation of the evolution of such emissions and the conclusion was that by year 2050 the GHG emissions by ships could grow between 2 and 3%. This rapid growth is evidence of the fact that more needs to be done and more measures must be taken to mitigate the effects that shipping will cause on global warming in the years to come. The 2009 Study<sup>73</sup> takes up this task

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<sup>70</sup> Regulation 14 MARPOL Annex VI.

<sup>71</sup> Regulation 13 MARPOL Annex VI. *Vid. Appendix A.*

<sup>72</sup> Available at: [http://www.imo.org/blast/blastDataHelper.asp?data\\_id=26046&filename=4-7.pdf](http://www.imo.org/blast/blastDataHelper.asp?data_id=26046&filename=4-7.pdf). Last accessed 19-04-2013.

<sup>73</sup> *Vid. 71.*

and contains a series of suggestions for measures that would reduce the emissions of CO<sub>2</sub> up to 75% in a cost-effective manner.

In 2011 a new set of technical measures was added to MARPOL<sup>74</sup> which would enter into force on 1 January 2013 and that established a mandatory Energy Efficiency Design Index (EEDI) and the Ship Energy Efficiency Management plan (SEEMP). These new measures constituted the first set of mandatory provisions addressed at reducing greenhouse effect gases and it requires new ships to demonstrate a minimum efficiency. The EEDI establishes the so called energy efficiency level which is constituted by the amount of CO<sub>2</sub> that can be released in every mile, or what is the same, how far a ship can sail with one liter of fuel. Starting in 2015 this level will become stricter in an additional 10% every five years, therefore by 2025, as the Danish Shipowners' Association points out "ships will be required to sail 30% further per liter than the average of similar ships built today"<sup>75</sup>.

These measures open the door for innovation since it only establishes which objectives have to be met but the means to achieve them are completely in the hands of the industry.

Nevertheless, IMO emphasizes<sup>76</sup> that these measures are not enough to achieve the expected amount of GHG and therefore further research and developments are of extreme necessity in order to meet the expected challenges.

#### **3.1.1.1.4 The ECAs**

In this regard a peculiarity introduced by MARPOL is the establishment of the Emission Control Areas or ECAs, in which requirements regarding SO<sub>x</sub> and NO<sub>x</sub> are even stricter than in other spaces<sup>77</sup>. The ECAs are defined as "a sea area where for recognized technical reasons in relation to its

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<sup>74</sup> Chapter 4 "Regulations on energy efficiency for Ships" Annex VI MARPOL.

<sup>75</sup> *Vid. 31.*

<sup>76</sup> <http://www.imo.org/OurWork/Environment/PollutionPrevention/AirPollution/Documents/GHG%20Flyer%20WEB.pdf>. Last accessed 24-4-2013.

<sup>77</sup> The limits applicable in ECAs for SO<sub>x</sub> and particulate matter were reduced to 1.00%, beginning on 1 July 2010 (from the original 1.50%); being further reduced to 0.10 %, effective from 1 January 2015.

oceanographical and ecological condition and to the particular character of its traffic the adoption of special mandatory methods [...] is required”<sup>78</sup>

### **3.1.1.2 2004 Ballast Water Convention**

Ballast water plays an essential role in modern shipping. When a ship arrives at a port and unloads its cargo before proceeding on its voyage unladen, its stability might be compromised by the lack of sufficient weight in its ballast tanks. For this reason the tanks are filled with water before departure and emptied again on the next port of call where she is expected to load cargo again. If the area where the water is discharged belongs to the same ecosystem as the one where water was taken no further problems will arise. But the discharge of ballast can happen in a port that is in a completely different part of the world and where the flora and the fauna are of different characteristics. Then, a problem arises, when foreign species, belonging to where the ballast water was taken, are introduced in the new environment. If this is the case the consequences can be devastating and ranging from economic losses, such as what happened with the introduction of the zebra mussel in the Great Lakes which have reduced the population of native mussels at an estimated loss of around \$5 billion<sup>79</sup>, to environmental consequences, such as destroying an entire ecosystem or even posing a threat to human life, as it happened in Peru as a consequence of the introduction of a new form of cholera which was suspected to have arrived from Bangladesh in 1991 and which resulted in the death of 10.000 people within a period of 3 years.<sup>80</sup>

As a result of this emerging concern and due to the work of IMO the International Convention for the Control and Management of Ships’ Ballast Water and Sediments was adopted in 2004. Its objective is “to prevent,

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<sup>78</sup> Annex I, IV and V MARPOL. For the purposes of Annex II MARPOL the Antarctic area is the only recognized special area.

<sup>79</sup> *Living beyond our means: natural assets and human well-being: statement from the Board*, Millennium Ecosystem Assessment, [s.l.], 2005. p 13. Available at <http://www.millenniumassessment.org/documents/document.429.aspx.pdf> Last accessed 03-05-2013.

<sup>80</sup> *Vid* 79.

minimize and ultimately eliminate the risks to the environment, human health, property and resources arising from the transfer of Harmful Aquatic Organisms and Pathogens through the control and management of ships' Ballast Water and Sediments, as well as to avoid unwanted side-effects from that control and to encourage developments in related knowledge and technology”<sup>81</sup>

The Convention sets out on its Annex a series of requirements, or standards, with which each ship must comply. One requirement is that each ship must have on board and implement a Ballast Water and Sediments Management Plan<sup>82</sup> and a Ballast Water Record Book<sup>83</sup>. The ballast water management systems must be approved by the Administration which will take into account the Guidelines for approval of ballast water management systems<sup>84</sup>. The two ballast water management systems<sup>85</sup> are the ballast water exchange standard<sup>86</sup> which requires that ships shall exchange the ballast water with an efficiency of 95% volumetric exchange and the other method is the ballast water performance standard<sup>87</sup> that requires that the ships shall meet a performance standard based on agreed numbers of organisms per unit of volume.

### **3.1.1.3 2001 International Convention on the Control of Harmful Anti-fouling Systems on Ships**

As the ship navigates through the waters, organisms such as algae and molluscs become attached to its hulls. This hinders the vessel's performance and also can affect its durability. One of these organisms also, can release eggs somewhere else and found new populations of a species that does not belong there. This problem was address early in the 1960s by covering the hulls with anti-fouling paints which would prevent the attachment of such organisms and solve the problem.

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<sup>81</sup> 2004 Ballast Water Convention Preamble.

<sup>82</sup> 2004 Ballast Water Convention Annex, Section B, Regulation B-1.

<sup>83</sup> 2004 Ballast Water Convention Annex, Section B, Regulation B-2.

<sup>84</sup> Regulation D-3 2004 Ballast Water Convention.

<sup>85</sup> 2004 Ballast Water Convention Annex, Section D.

<sup>86</sup> 2004 Ballast Water Convention Annex, Section D, Regulation D-1.

<sup>87</sup> 2004 Ballast Water Convention Annex, Section D, Regulation D-2.

The most popular anti-fouling paint was one containing organotin tributyltin (TBT). This solution, though, created a new problem, which is the fact that the components of such paints can persist in the water and destroy sea-life, cause a great damage to the environment and ultimately enter the food chain<sup>88</sup>. As a result of this concern the 2001 International Convention on the Control of Harmful Anti-fouling Systems on Ships was adopted, and entered into force in 2008.

This Convention requires states parties to prohibit and/or restrict the application of such paints both on ships flying their flag as well as in ships not flying their flag but operate under their authority and all ship that enter one of their ports, shipyards or offshore terminal.<sup>89</sup>

### **3.1.2 Dumping.**

The vastness of the seas has always invited ingenious minds to regard it as a good place for disposing of certain substances or materials that are costly or difficult to dispose on land. This phenomenon has not been isolated, instead it has been an ongoing practice which started in the late 1960s, and its consequences were not late envisioned as it was already discussed in the 1972 Stockholm Conference on the Human Environment<sup>90</sup>.

The first Convention on this matter was the 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, also known as the London Convention which was superseded by the 1996 Protocol, or the London Protocol which was adopted in November 1996 and entered into force in March 2006.

For the purposes of the Convention dumping is defined<sup>91</sup> as;

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<sup>88</sup> [http://www.imo.org/About/Conventions/listofconventions/pages/international-convention-on-the-control-of-harmful-anti-fouling-systems-on-ships-\(afs\).aspx](http://www.imo.org/About/Conventions/listofconventions/pages/international-convention-on-the-control-of-harmful-anti-fouling-systems-on-ships-(afs).aspx).

<sup>89</sup> Article 4, 2001 Convention on the Control of Harmful Anti-fouling Systems on Ships

<sup>90</sup> ROTHWELL, DONALD & STEPHENS, TIM, *The international law of the sea*, Hart, Oxford, 2010.

<sup>91</sup> Article 1.4 1996 London Protocol.

1. any deliberate disposal into the sea of wastes or other matter from vessels, aircraft, platforms or other man-made structures at sea;
2. any deliberate disposal into the sea of vessels, aircraft, platforms or other man-made structures at sea;
3. any storage of wastes or other matter in the seabed and the subsoil thereof from vessels, aircraft, platforms or other man-made structures at sea; and
4. any abandonment or toppling at site of platforms or other man-made structures at sea, for the sole purpose of deliberate disposal.

The dumping of wastes and its incineration at is prohibited<sup>92</sup> as a general rule. Nevertheless dumping will be permitted if the wastes fall within those established in Annex I, which establishes a series of and therefore it allowed disposing those wastes after obtaining the appropriate permit.

Needless to say, any dumping will be permitted<sup>93</sup> when it is carried out with the purpose of;

secure the safety of human life or of vessels, aircraft, platforms or other man-made structures at sea in cases of *force majeure* caused by stress of weather, or in any case which constitutes a danger to human life or a real threat to vessels, aircraft, platforms or other man-made structures at sea, if dumping appears to be the only way of averting the threat and if there is every probability that the damage consequent upon such dumping will be less than would otherwise occur. Such dumping shall be conducted so as to minimize the likelihood of damage to human or marine life and shall be reported forthwith to the Organization.

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<sup>92</sup> Article 4 and 5 1996 London Protocol.

<sup>93</sup> Article 8 1996 London Protocol.

## **3.2 Shipping and Human Rights.**

Globalization and the proliferation of global supply chains have brought numerous benefits to the world economy in general. At the same time it has contributed to giving opportunities and improving the quality of life of many people. It has also boosted some local markets in developing countries due to the fact that a vast amount of natural resources are found there, by giving local people jobs as well as increasing their GDP. From the “first world” perspective it has brought endless possibilities from the availability of raw materials that are not found locally to the reduction of manufacturing costs of many products. Nevertheless this phenomenon has not come without a cost, and this is, among others, the violation of people’s human rights.

For the purpose of examining the connection between shipping and human rights it will be considered that “shipping activities” are those that take place exclusively at sea or directly connected with the loading or unloading operations of the vessels. This delimitation is necessary due to time and space limitations but also because of the fact that shipping is rarely an independent activity and normally is a part of a much larger supply-chain process that includes a great variety of independent players which the shipping industry for itself cannot account for nor it can be held responsible for the activities that they decide to engage in. Take for example the possibility of a corporation that manufactures goods in South-East Asia using slave labour. Those goods will most likely need to be transported by sea and the fact that the shipping company is aware or not of the dubious practices of its clients and therefore could be indirectly held responsible for that is a controverted issue and will not be discussed.

The matters that concern the shipping industry directly are those related with seafarers and their working conditions. Working at sea has always been characterized for its harsh conditions and often stigmatized, or not, as a



sector which is regarded as substandard<sup>94</sup>. The need to work in vessels that do not meet the standard requirements of safety, dealing with low wages and poor working conditions are only a few of the inconveniences that seafarers have to face.

On the other hand the proliferation of the use of flags of convenience gave rise to numerous possibilities for those shipping companies willing to cut crew costs. This mechanism allowed them to register their ships in a country where ship safety and on-board working conditions' requirements were less stringent. It also allowed the shipping industry to see endless possibilities with recruiting seafarers from less developed countries and offer them a lower wage.

All this has caught the attention in the international arena and few legislative initiatives have been implemented. One of the most relevant is the ILO's Maritime Labour Convention 2006 which aims at protecting the rights of the seafarers in connection with their employment situation and contains provisions related to the minimum requirements for seafarers to work at sea<sup>95</sup>, conditions of employment<sup>96</sup>, etc.

### **3.2.1 Business and Human Rights**

The connection between the shipping industry –or any other industry- and the field of human rights might seem difficult to draw at first. Basically, because of the traditional reigning idea that human rights are designed only to be observed by States against individuals. Unfortunately, this mindset is still predominantly popular and even though evidence of change is slowly occurring, more work needs to be done in promoting and developing a more sophisticated legal framework to connect business and human rights.

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<sup>94</sup> COUPER, A.D *et. al.*, *Voyages of abuse: Seafarers, Human Rights and International Shipping*, Pluto Press, USA, 1999.

<sup>95</sup> Title 1 MLC 2006 Convention.

<sup>96</sup> Title 2 MLC 2006 Convention.

Despite the reigning state-centrism in the field of Human Rights, A. Reinisch<sup>97</sup> has identified an emerging change in how Human Rights are used and conceived which is evidenced by the increased use of codes of conduct and the use of extraterritorial regulation by States of the behavior of non-state actors. This change in conception has created awareness of the need to expand the scheme of human rights protection from the traditional state-individual relationship to a broader category that would include other non-state actors-individuals.

### **3.2.2 The ILO Maritime Labour Convention ( MLC 2006)**

The MLC 2006 is a convention established by the International Labour Organization that will enter into force in August 2013. This Convention, as it has been previously mentioned, aims at establishing an international and globally accepted framework concerning working conditions at sea. It is structured into five titles and each of them covers a different aspect worth of protection. Each title contains, at the same time, Standards and Guidelines, the first ones of mandatory character while the later are non-mandatory and they aim at offering a *suggestion* of how to implement the Regulation but each State party is free to implement the measures in the manner that they see fit.<sup>98</sup>

In Title 1 the minimum requirements that seafarers have to meet in order to work on a ship are established. The most relevant are the minimum age requirements set at 16 years of age except for night work or work in hazardous areas which is set at 18<sup>99</sup>. Workers should also be physically and medically fit to perform the work that has been assigned to them and must undergo a medical certification process<sup>100</sup>. Regarding training it should also be appropriate for their duties<sup>101</sup>.

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<sup>97</sup> REINISCH, AUGUST, *The Changing International Legal Framework for Dealing with Non-State Actors*, Non-State Actors and Human Rights, Oxford University Press.

<sup>98</sup> MLC 2006, *Explanatory note to the Regulations and Code of the Maritime Labour Convention*.

<sup>99</sup> Regulation 1.1 MLC 2006.

<sup>100</sup> Regulation 1.2 MLC 2006.

<sup>101</sup> Regulation 1.3 MLC 2006.

Title 2 contains those regulations pertaining to employment conditions; it states that the terms and conditions for employment must be clearly contained in the contract and that they should be legally enforceable and incorporate possible collective bargaining agreements if they exist<sup>102</sup>. Wages are payable every month<sup>103</sup> and seafarers have the right to paid annual leave<sup>104</sup> while returning to their home country should be free of charge<sup>105</sup>. An important aspect in this Title is the rest hours and hours of work<sup>106</sup>, the Convention refers to the national legislation to implement the rest hours but it establishes a maximum that cannot be reached under any circumstance, therefore the maximum hours of work per 24-hour period should not exceed 14 and the maximum of hours worked in a seven-day period should not be more than 72, on the other hand the minimum hours of rest shall not be less than ten hours in any 24-hour period and 77 hours in a seven-day period. Everyday at least six hours of consecutive rest should be given.

Title 3 refers to accommodation and recreational facilities on board and states that it should be provided with the aim of “promoting the seafarers’ health and well-being” and it contains provisions as to the conditions of the facilities<sup>107</sup>. Regarding food<sup>108</sup> served on board it has to comply with a minimum standard of quality and quantity and cooks should undergo proper training.

Finally Title 4 refers to “health protection, medical care, welfare and social security protection” and establishes that seafarers should have access to medical care on board, free of cost and of high quality<sup>109</sup>. In case of “sickness, injury or death occurring in connection with their employment”<sup>110</sup> seafarers should be protected of the financial consequences

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<sup>102</sup> Regulation 2.1 MLC 2006.

<sup>103</sup> Regulation 2.2 MLC 2006.

<sup>104</sup> Regulation 4.1 MLC 2006.

<sup>105</sup> Regulation 2.5 MLC 2006.

<sup>106</sup> Regulation 2.3 MLC 2006.

<sup>107</sup> Regulation 3.1 MLC 2006.

<sup>108</sup> Regulation 3.2 MLC 2006.

<sup>109</sup> Regulation 4.1 MLC 2006.

<sup>110</sup> Regulation 4.2 MLC 2006.

of such occurrences. It is also of high importance that the work place is a safe and hygienic environment and that reasonable safety measures are taken at all times<sup>111</sup>. When ashore seafarers must have access to “shore-based welfare facilities”<sup>112</sup> and also social security must be available to them in the manner that it is customary in the respective flag state<sup>113</sup>.

Enforcement and compliance of the MLC 2006 must be observed by flag states, port states and labour-supplying entities<sup>114</sup>. Flag states<sup>115</sup> are responsible for ensuring that the ships flying its flag implement the Convention effectively and as a result of this responsibility inspections must occur after which a “Certificate of Maritime Compliance” will be issued and shall be carried on board at all times. Port States<sup>116</sup> are allowed to inspect a vessel if the abovementioned certificate is not present and it aims at ensuring that the particular ship complies with the Convention. This last provision means that the Convention is applied *de facto* to every flag State regardless if it is a party to it or not because its standards will be applied whenever a vessel calls to a port of a State party of the MLC 2006.

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<sup>111</sup> Regulation 4.3 MLC 2006.

<sup>112</sup> Regulation 4.4 MLC 2006.

<sup>113</sup> Regulation 4.5 MLC 2006.

<sup>114</sup> Regulation 5.3 MLC 2006.

<sup>115</sup> Regulation 5.1 MLC 2006.

<sup>116</sup> Regulation 5.2 MLC 2006.

## 4. A case study: Dampskibsselskabet Norden A/S

### 4.1 Company profile<sup>117</sup>.

Dampskibsselskabet Norden A/S was founded in 1871 in Denmark, its headquarters are located in Copenhagen but its presence is spread all over the world with offices in more than five countries. Its main operations are focused on the dry cargo and tankers market. In the dry cargo segment it is one of the world's largest operators of *Handymax* and *Panamax* and it possesses a fleet of a total of 158 dry cargo vessels. The tankers segment is operated through *Norient Product Pool* and the fleet constitutes of 40 active vessels.

### 4.2 CSR Policy

NORDEN began designing its CSR activities back in 2007 with a general approach to draw up a framework for what it would be their future, and current, CSR Policy even though a report was not published until 2009<sup>118</sup>.

In that same year, NORDEN joined the UN Global Compact and published its first report in line with it, reflecting the position of the company in relation to diverse matters and offered an overview of the position and views of the company aligned with the 10 principles of the UN Global Compact. In 2010<sup>119</sup> a shift of the reporting method was made and CSR activities were reported in accordance to the Global Reporting Initiative (GRI). Reporting according to this system implies that the company identifies the performance indicators of the GRI Sustainability and Reporting Guidelines and the GRI Logistics and Transportation Supplement which are relevant for them and report the company's efforts and achievements in connection

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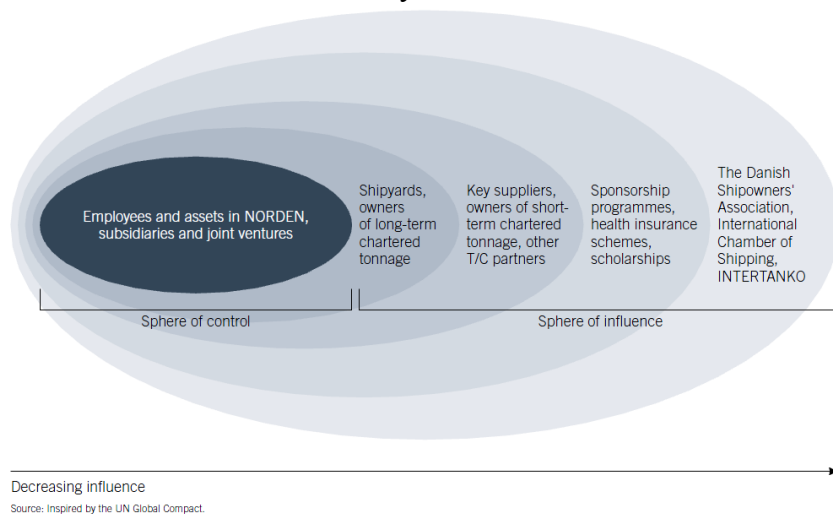
<sup>117</sup> Information extracted from the corporate website: <http://www.ds-norden.com/>.

<sup>118</sup> NORDEN CSR Report 2009.

<sup>119</sup> NORDEN CSR Report 2010.

with them. For this purpose a survey was conducted which identified 22 relevant performance indicators<sup>120</sup>. In 2011<sup>121</sup> a new reporting system was established which was based both on the UNGC and the GRI and was described as being a reporting model created specifically for NORDEN.

In order to assess the Policy's best direction the company decided to conduct an analysis of its spheres of influence to determine exactly what was under their direct control, and therefore could be modified by its own initiative, and what fell outside their influence. Nevertheless, NORDEN's concern was not only to control what they could control but to try to reach also to those parties that were outside their sphere of influence but who could be influenced into engaging in socially responsible practices. An overview of the results of such analysis can be seen below:



Graphic source: NORDEN CSR Report 2009

The Policy is conceived as an overall policy which is formulated through a general statement worded as follows: “based on our core values, we strive on a voluntary basis to improve our corporate social efforts by integrating social, environmental, climate, health and safety concerns in our activities. We will establish appropriate reporting systems to help us meet our targets while at the same time focusing on continuous improvements. We will

<sup>120</sup> Available at: <https://www.ds-norden.com/public/dokumenter/reports/GlobalReportingInitiativeapr2011.pdf>. Last accessed 21-05-2013.

<sup>121</sup> NORDEN CSR Report 2011.

communicate openly with our stakeholders on these matters”<sup>122</sup>. This could be considered as its own definition for CSR or the objective that they are willing to achieve with its policy. Furthermore, the Policy is expanded by identifying several areas of focus, namely Human Rights, Labour Rights, Environmental and Climate Issues and Anti-corruption<sup>123</sup>.

NORDEN’s approach to CSR is clearly business-driven, as it is stated from the very first report and in subsequent ones<sup>124</sup>. In contraposition with this approach, we can find a more philanthropic oriented way of conceiving CSR which focuses on promoting social aspects instead of economic ones. This does not imply that social aspects are not taken into consideration, as the company is focused both in benefiting the community and its stakeholders, but it means that it is also focused on making the company more competitive, stronger and to increase their profits.

The company’s argument<sup>125</sup> for adopting this approach is that it allows it to still be profitable, cost-efficient and competitive even in times of crisis. Something that a more philanthropic approach would not allow. Whereas if the focus is on initiatives that have business in mind, the costs of operations would be reduced at the same time that they adopt CSR initiatives, and therefore will be possible to maintain even in times of crisis because it will also be the right thing to do.

CSR activities are considered a part of the business and not something extra, therefore they go in line with the business needs and they focus on areas where more competitiveness is needed, such as the environment – and the subsequent need to adapt to constant changing regulations- and the working conditions of the employees –since it is in the company’s best interest to attract talent and have high employee retention<sup>126</sup>.

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<sup>122</sup> NORDEN CSR Report 2009.

<sup>123</sup> NORDEN CSR Report 2009.

<sup>124</sup> NORDEN CSR Reports 2009-2012.

<sup>125</sup> NORDEN CSR Report 2010.

<sup>126</sup> NORDEN CSR Report 2010.

Emphasis on the importance of engaging stakeholders is also made. Therefore an analysis of the possible stakeholders engaged in their business has been carried out and includes not only those who have an impact on the business directly, such as brokers, suppliers, customers, etc., but also those who can have an indirect impact because they are concerned with CSR issues and are very keen to point out shortcomings, such as the media or NGOs. The stakeholders who have been identified<sup>127</sup> are: employees at sea and ashore, customers and brokers, suppliers, authorities and regulators, investors and analysts, external organizations and local communities.

This analysis is important because of the need to engage in a constant dialogue with them in order to assess whether the CSR practices are in line with the concerns of the stakeholders and whether other areas should be included. This dialogue is crucial as it allows NORDEN to assess how others see their business<sup>128</sup>.

Furthermore, besides identifying and choosing relevant stakeholder groups, an identification of 17 relevant CSR issues<sup>129</sup> was conducted with the objective of establishing a broader CSR strategy that would cover the period 2013-2015. These issues were discussed in a series of workshops and were consolidated into seven focus areas which were classified under the slogans, *differentiate and comply*<sup>130</sup>. “Differentiating” implies that the company wants to direct its efforts towards those areas in order to make significant improvements and allow the company to stand out because of them, whereas “comply” means that their objective is to act within the law in those matters. As a result, differentiation efforts will be made towards increasing transparency, CO<sub>2</sub> efficiency, vessel safety and employee conditions while at the same time comply with environmental management, anti-corruption legislation and responsible supply chain management.

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<sup>127</sup> NORDEN CSR Report 2011.

<sup>128</sup> NORDEN CSR Report 2010.

<sup>129</sup> NORDEN CSR Report 2012 .

<sup>130</sup> NORDEN CSR Report 2012.



All CSR activities are designed and controlled by an Executive Board which reports to the Board of Directors in an attempt to accommodate CSR practices in all areas of the business<sup>131</sup>.

## 4.2.1 Human Rights

*“NORDEN supports and respects the protection of human rights and refrains from any actions that may encourage to contribute to infringement of these rights”<sup>132</sup>*

After an analysis of their possible implications on Human Rights’ infringements, the company has concluded that their impact is non-existent<sup>133</sup>. This means that through their activities they do not engage in any sort of Human Rights’ violations, understanding Human Rights as the ones contained in internationally recognized and widely accepted instruments.<sup>134</sup>

Nevertheless they have identified possible clashes with their activities and those rights relating to employment conditions, which are considered Human Rights, strictly speaking, but which are developed and examined under their area of focus “Labour Rights”<sup>135</sup>.

Besides this, NORDEN contributes in the protection and strengthening of human rights through a series of donations to “maritime related initiatives” such as a sponsorship programme with the Shanghai Maritime University, the Nanyang Technological University of Singapore and the Holy Cross of Davao College in the Philippines, and also to other institutions such as the Philippine Union AMOSUP’s Hospital in Manila. The objective of these activities is to provide quality education in developing countries and thus

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<sup>131</sup> NORDEN CSR Report 2010.

<sup>132</sup> NORDEN CSR Report 2009.

<sup>133</sup> NORDEN CSR Report 2009.

<sup>134</sup> The 1948 Universal Declaration of Human Rights, the 1966 International Covenant on Civil and Political Rights and the 1966 International Covenant on Economic, Social and Cultural Rights.

<sup>135</sup> NORDEN CSR Report 2009.

guaranteeing the right to education of peoples from all over the world. Locally, in Denmark, a large contribution to “Danmarks Insamling” has been constantly carried out<sup>136</sup>.

In 2011<sup>137</sup> a partnership between Save the Children, NORDEN, the Danish Shipowners’ Association, and other four shipping companies was established with its focus on Somalia. The aim was to enhance the education of Somali young people in order to provide them with greater opportunities at the same time that this eventually will lead to a stronger economy and therefore a decrease in piracy activities. This partnership will offer Somalis with access to education in different fields, such as the occupation of hairdresser, electrician, etc. As of April 2011<sup>138</sup>, 3,579 Somalis completed their training and the aim is to educate 10,000 more over the next 3 years.

## 4.2.2 Labour Rights

*“NORDEN strives to ensure a safe and healthy working environment for its employees. Safety and working environment conditions must at all times meet current legislation as a minimum. NORDEN seeks to prevent and avoid occupational injuries and accidents as well as other work-related suffering and to limit absence due to illness among the employees”<sup>139</sup>*

The goal established within this area is to improve the overall safety and health of the employees, specially at sea, and aimed at reducing the risk of groundings, spills and accidents of all types to achieve a zero accident policy. For this a computer based training programme for seafarers has been developed in order to improve their skills, manage their responses and at the

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<sup>136</sup> NORDEN CSR Report 2009.

<sup>137</sup> NORDEN CSR Report 2011.

<sup>138</sup> NORDEN CSR Report 2011.

<sup>139</sup> NORDEN CSR Report 2009.

same time that funds have been invested in developing procedures, campaigns, inspections, etc<sup>140</sup>.

In this direction a near-miss<sup>141</sup> reporting system has been designed<sup>142</sup> and encouraged through a campaign in order to improve the crew's response when facing near-misses and establishing tools through which employees can learn from them and increase carefulness when it comes to avoiding personal injuries and accidents. In 2012 there was an average of 1.44 near-misses reported per owned vessel which meets the target set of a minimum of 1 near-miss reporting per vessel per week, and it meets the target set for 2013-2015 of a minimum of 1 near-miss reporting per vessel per week<sup>143</sup>.

Regarding personal injury, an incident with fatal consequences took place in 2012 on board the NORD GOODWILL where the chief engineer drowned after falling from the pilot ladder. The annual report emphasizes that all safety measures were met and procedures observed. Nevertheless it states that because of this incident a new measure has been added to their internal safety procedures but it is not mentioned which one<sup>144</sup>.

On the other hand, a problem that greatly affects the shipping industry in all its facets is piracy. Therefore, since 2008 NORDEN has been using the protection of coalition forces to minimize the risk of attacks while using safe corridors or equipping the vessels with tools such as NATO razor wires, electric fencing, dummies, fog nozzles, sailing at high speed and with high freeboard, etc<sup>145</sup>.

Nevertheless, it is a fact that piracy is a global problem that cannot be solved by one shipping company alone, and it is for this reason that NORDEN admits<sup>146</sup> that international cooperation needs to be reinforced and they do so by cooperating with the Danish Shipowners' Association and

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<sup>140</sup> NORDEN CSR Report 2009.

<sup>141</sup> A near-miss is defined in the NORDEN CSR Report 2012 as those "situations, which could have led to an accident if they had further developed".

<sup>142</sup> NORDEN CSR Report 2009.

<sup>143</sup> NORDEN CSR Report 2012.

<sup>144</sup> NORDEN CSR Report 2012.

<sup>145</sup> NORDEN CSR Report 2009.

<sup>146</sup> NORDEN CSR Report 2009.

the International Chamber of Shipping. Two organizations that have voice in the international arena and which allow the shipping industry to exercise pressure on the society.

Employees' welfare is of great concern. NORDEN participated by donating funds to support the survey "The good working life at sea", targeting a total of 1700 seafarers which concerned their psychological and working environment. The results proved that 80% of them were satisfied by their current employment<sup>147</sup>. Nevertheless two key issues were detected regarding which NORDEN decided to take action, namely, the isolation seafarers were exposed to when at home and non-compliance with statutory rest hours. As a response, a chat function for employers was habilitated, through which they could easily communicate with each other, and an increased frequency of seminars up to 3 times per year, and regarding the compliance with rest hours it aimed at 100% compliance.

In 2011 the compliance with rest hours was 0,40 violations per crew member per month whereas in 2012 there was 0,46 rest hour non-conformity. The goal for 2013 is to obtain less than 0.4 rest hour non-conformity per full-time equivalent<sup>148</sup>.

For this purpose, SAFELine was implemented<sup>149</sup>, a whistleblowing system that allows seafarers to immediately report any failure when it comes to meeting the requirements concerning safety, welfare, regulations, etc. Even though numerous efforts have been done by designing this mechanism no report has been done since it was established<sup>150</sup>.

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<sup>147</sup> NORDEN CSR Report 2009.

<sup>148</sup> NORDEN CSR Report 2011.

<sup>149</sup> NORDEN CSR Report 2009.

<sup>150</sup> NORDEN CSR Reports 2009-2012.

### 4.2.3 Environment

*“NORDEN wishes to help improve maritime safety and limit pollution from vessels. The continuous improvement of NORDEN’s environmental performance is not only best for the environment, but also the best solution for NORDEN’s stakeholders. NORDEN is aware that its activities may contribute to climate change, and NORDEN has therefore established numerous initiatives to reduce air emissions – both off and on shore”<sup>151</sup>.*

Since a shipping company uses the sea as its main area of operations it is therefore obvious that it will be there where the biggest environmental impact will take place, in comparison with the impacts that shipping activities will have on the land. Nevertheless it is not only the waters that are most affected by the constant traffic of vessels, the air and the atmosphere also suffer from the negative effects of shipping and it can be said that air pollution affects the land and the sea equally.

The major challenges that the shipping industry faces, nowadays, both by social pressure as well as due to the need to adapt to high standards set by international mandatory regulations, are the reduction of CO<sub>2</sub>, NO<sub>x</sub> and SO<sub>x</sub> emissions. These, as it has been discussed in the previous Chapter<sup>152</sup> are strictly regulated by international conventions adopted by international bodies such as the IMO. In Denmark additional regulations apply as well, as the Danish Shipowners’ Association has set a special target aimed at reducing CO<sub>2</sub> emissions a 25% by 2020, a 15% of which has to be achieved

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<sup>151</sup> NORDEN CSR Report 2009.

<sup>152</sup> *Vid Chapter 3.*

through technical improvements and a 10% by reducing the speed in which vessels navigate<sup>153</sup>.

#### **4.2.3.1 CO<sub>2</sub>**

The first reduction target was set in 2009's Report where the aim was to reduce CO<sub>2</sub> emissions by 3.5% in 2010 at the same time that the company was complying with the target set by the Danish Shipowners' Association.

In order to achieve this objective a 14-point plan was established<sup>154</sup>. This plan was implemented on new vessels and containing several measures that would lead in a decreased level of CO<sub>2</sub> emissions.

The objective set for 2010 was achieved with success as the 2010 Report states that the reduction accomplished was up to 4.7% and further investigations showed it was, in reality, 6,2%<sup>155</sup>. A new objective of reducing CO<sub>2</sub> emissions a further 3.5% during 2011 was set<sup>156</sup>. Nevertheless this reduction achieved in 2010 was calculated without taking into consideration the effect of slow steaming and the MOEPS system which serves the purpose of optimizing the voyage and therefore reducing the consumption of fuel which reduces CO<sub>2</sub> and SO<sub>x</sub> by 16%.<sup>157</sup>

NORDEN supports the disclosure of CO<sub>2</sub> emissions and it has adhered to the Carbon Disclosure Project (CDP) and as a result the company was included in the Carbon Disclosure Leadership Index in 2010 and earned a position within the 20 best reporting companies in the Nordic countries and the best reporting shipping company<sup>158</sup>.

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<sup>153</sup> *Green transport of global trade. The Danish shipping industry's initiatives and positions on climate and environmental issues.* Danish Shipowners' Association, 2012. Last accessed 25-04-2013.

<sup>154</sup> NORDEN CSR Report 2009.

<sup>155</sup> NORDEN CSR Report 2011.

<sup>156</sup> NORDEN CSR Report 2010.

<sup>157</sup> NORDEN CSR Report 2010.

<sup>158</sup> NORDEN CSR Report 2010.

#### 4.2.3.1.1 The 14-point plan<sup>159</sup>

This plan aims at an overall reduction of emission. Regarding CO<sub>2</sub> its reduction can be achieved by reducing the amount of fuel that is consumed. For this purpose the 14-point plan aims at establishing a series of measures in order to improve fuel efficiency on the vessels. As a result of its application a reduction of a 2.4% by 2008 and a 3.3% by 2009 was expected<sup>160</sup>.

Nevertheless, the successes achieved by this plan were insufficient and it did not provide sufficient reduction at a reasonable cost. For this reason the decision of cancelling the plan was made and a new approach and a set of initiatives were suggested<sup>161</sup>.

These initiatives were further reduced to ten in 2011<sup>162</sup>. The reasons for this action are not outlined in the report but it can be inferred that for the company, cost-efficiency is paramount, and therefore if the initiatives didn't offer enough emission reductions at a profitable cost, and they had to be substituted<sup>163</sup>.

As a result of investing in these initiatives the emissions were reduced a 5,4% in 2011 and the biggest success was achieved by propeller cleaning measures<sup>164</sup>.

In order to reach the target set by the Danish Shipowners' Association, the company's focus has been in three key areas; namely technical improvements, speed optimization and by maintaining a young and fuel efficient fleet<sup>165</sup>. The 10 climate action plan initiatives helped reduce CO<sub>2</sub>

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<sup>159</sup> *Vid. Appendix C A.*

<sup>160</sup> NORDEN CSR Report 2009.

<sup>161</sup> *Vid. Appendix C B.*

<sup>162</sup> *Vid. Appendix C C.*

<sup>163</sup> NORDEN CSR Report 2011.

<sup>164</sup> NORDEN CSR Report 2011.

<sup>165</sup> NORDEN CSR Report 2012.

emissions by 7.7% in 2012<sup>166</sup> while the target was set at a 3.5%. The objective set for 2013 is a 4% reduction<sup>167</sup>.

#### **4.2.3.1.2 Other measures**

An important step in reducing fuel consumption and therefore an overall emissions reduction is to improve the resistance that the vessel poses in the water. The less resistant it is the more less fuel it will consume, therefore a new paint has been applied to the bottom of the vessel that aims at reducing its resistance in water considerably and as a consequence CO<sub>2</sub> and SO<sub>x</sub> emissions will be reduced by 2%<sup>168</sup>.

As NORDEN is a company in constant expansion the purchase of new vessels or the long-term charter contracts are a usual operation. Since environmental and energy efficiency is a value of high importance it is key that the new incorporations to the fleet are “environmentally friendly”<sup>169</sup>. For example in 2010 the company entered into two long-term agreements in order to charter two *Panamax* vessels, known as eco-ships, which will reduce CO<sub>2</sub> and SO<sub>x</sub> by 15 to 20%<sup>170</sup>.

#### **4.2.3.2 SO<sub>x</sub>**

The limits and aims are set by the IMO through the MARPOL Convention as described in the previous Chapter<sup>171</sup>. The maximum sulphur content allowed was 4.5% until 2010 which had to be lowered in 2012 to a 3.5% with the final aim of reducing it to a maximum of 0,5% by 2020<sup>172</sup>. In 2009 NORDEN was already complying with these limitations, as it can be appreciated in the graphic below;

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<sup>166</sup> NORDEN CSR Report 2012.

<sup>167</sup> NORDEN CSR Report 2012.

<sup>168</sup> NORDEN CSR Report 2010.

<sup>169</sup> NORDEN CSR Report 2011.

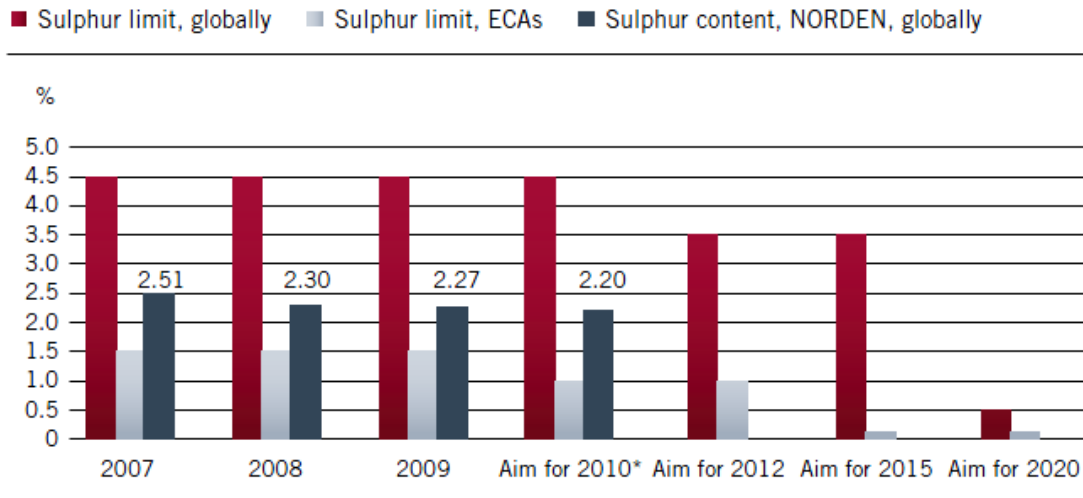
<sup>170</sup> NORDEN CSR Report 2011.

<sup>171</sup> *Vid.* 3.1.1.1.6.

<sup>172</sup> *Vid.* 70.



## Sulphur content in bunker



\* Sulphur limit of 1.0% for ECAs apply from July 2010.

Graphic source: NORDEN 2009 CSR Report

As it can also be observed, in 2009, a target for reducing the sulphur content in bunker during 2010 was set to a maximum of 2.20% which was successfully met by a reduction of SO<sub>x</sub> of 2.09%<sup>173</sup>

The effort to reduce SO<sub>x</sub> content in fuel is of great importance for NORDEN and it is achieved, partly, by the purchase of fuel which contains low sulphur<sup>174</sup>. The goal for 2011 was a maximum of sulphur content of 2% which was almost achieved by a 2.06%<sup>175</sup>. This achievement was made thanks to the fact that their vessels sailed less in the ECAs – an area where the sulphur limits are lower- and more in the Far East and India<sup>176</sup>.

In 2012 two regulations<sup>177</sup> regarding SO<sub>x</sub> came into force. The first one introduced a global limitation of SO<sub>x</sub> to a maximum of 3,5% and the second one created the North American ECA which comprises Canada and the USA and where the sulphur content limit was set to 1%. The impact of the first regulation had little effect on NORDEN's operations, since the average

<sup>173</sup> NORDEN CSR Report 2011.

<sup>174</sup> NORDEN CSR Report 2011.

<sup>175</sup> NORDEN CSR Report 2011.

<sup>176</sup> NORDEN CSR Report 2011.

<sup>177</sup> Regulation 14 Annex VI MARPOL and the North American ECA is introduced by the RESOLUTION MEPC.190(60) which amends Regulation 13 and 14 Annex VI MARPOL.

content of sulphur in 2012 was of 2.31%<sup>178</sup> but the North American ECA implied a raise in the cost of purchased bunkers since the one that is used there is more expensive.

The limits of SO<sub>x</sub> set for the future are extremely stringent, as in January 2015 all ECAs will require a maximum sulphur limit of 0.1% which will pose a great challenge in the industry and there are doubts that it will be available in 2015<sup>179</sup>.

#### **4.2.3.3 NO<sub>x</sub>**

The information provided regarding reductions in NO<sub>x</sub> is deficient. The fact that compliance with IMO is achieved through all the reports does not raise any concern as whether NORDEN is implementing the mandatory regulations but more information should be provided to determine if its practices are limited to mere compliance with the law or if extra efforts are made. As far as the information that has been made available we can establish that all NORDEN's vessels are Tier I compliant<sup>180</sup>

#### **4.2.3.4 Waste**

Compliance with IMO rules is emphasized through all the reports. The information available states that between 2007 and 2009 a remarkable reduction in disposal of waste was achieved, from cubic meters in 2007 to almost 20 in 2009<sup>181</sup>. The target set for 2011 was to reduce waste by a 5%<sup>182</sup> in comparison with the amount produced in 2010 but no information is provided for 2010. The amount of waste increased in 2011<sup>183</sup>, they do not know the reason. The target set for 2012 to reduce waste by a 5% was achieved by a 8%.<sup>184</sup>

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<sup>178</sup> NORDEN CSR Report 2012.

<sup>179</sup> NORDEN CSR Report 2012.

<sup>180</sup> NORDEN CSR Report 2011.

<sup>181</sup> NORDEN CSR Report 2009.

<sup>182</sup> NORDEN CSR Report 2010.

<sup>183</sup> NORDEN CSR Report 2011.

<sup>184</sup> NORDEN CSR Report 2012.

#### **4.2.3.5 Ballast water**

Compliance with IMO rules is emphasized through all the Reports but no innovative measures have been implemented in this field.

#### **4.2.3.6 Other projects and measures**

##### **4.2.3.6.1 The Eco-Vessel<sup>185</sup>**

The project named “NORDEN eco-vessel of the future” aims at investigating and developing new energy efficiency measures that could be implemented in the future. The purpose is to test and select several emission reduction technologies with the goal to reduce emissions up to 25% by reducing fuel consumption.

As it has been mentioned in previous occasions, cost-efficiency is of key importance for NORDEN and all the measures developed need to be viable at a reasonable cost in correspondence with the benefits they will provide. Therefore, the objective of this project is also to test the effectiveness of the measures in terms of costs. As a result of this initiative, experience and empirical data will be collected and decisions will be made on its viability in order to implement the findings to other vessels.

##### **4.2.3.6.2 The Green Ship of the Future<sup>186</sup>.**

This project is a partnership between the Danish government and the Danish shipping industry. Through this agreement different technologies will be implemented in a newly built 38.500 dwt tanker with the aim of developing strategies that will lead to the reduction of CO<sub>2</sub> emissions in a 30% and NO<sub>x</sub> and SO<sub>x</sub> in a 90% and as a consequence will help meeting the future IMO requirements.

##### **4.2.3.6.3 Slow steaming.**

Slow steaming is a method that entails sailing at a relatively low speed in order to consume less fuel and therefore reducing both emissions and costs.

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<sup>185</sup> NORDEN CSR Report 2012.

<sup>186</sup> NORDEN CSR Report 2012.

This initiative has proven very effective when other companies such as MAERSK have implemented it. For example with the purchase of Triple-E ships which are designed for very low steaming, a reduction of 50% emissions can be achieved compared to the industry average at the same time that one Triple-E vessel can carry more containers.

From NORDEN's perspective the term "right steaming"<sup>187</sup> is preferred. This means that the aim is not to sail at the lowest possible speed but instead sail at the optimal speed that will optimize the voyage and as a consequence the vessel should arrive at the right time and depart at the right time. With this initiative there has been a slight increase of sailed miles per metric tonne of fuel.<sup>188</sup>

#### **4.2.3.6.4 Virtual arrival<sup>189</sup>.**

This project is a partnership between NORDEN, the customer and a weather routing company to reduce bunker costs which will eventually lead to a reduction in CO<sub>2</sub> emissions. Its purpose is to anticipate those circumstances that could cause the vessel's impossibility to arrive at the scheduled date and to reach an agreement with the customer about rescheduling a new arrival time and adjusting the speed to the new circumstances. The weather company plays a key role as it allows to choose the optimal speed taking into consideration the weather forecast. The gains obtained through the application of this measure are shared between the customer and NORDEN. Since the implementation of this initiative is new no results about its effectiveness have been published.

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<sup>187</sup> NORDEN CSR Report 2012.

<sup>188</sup> NORDEN CSR Report 2011.

<sup>189</sup> NORDEN CSR Report 2012.

# 5. Analysis and conclusion.

## 5.1 Conclusion

Firstly, defining CSR is not a task that can be achieved. This fact, far from being an inconvenience, presents certain advantages for the industry, meaning that each and every corporation can incorporate its own views into their CSR policy and tailor it to fit their needs. Nevertheless, CSR is not a concept so flexible that can be defined with complete freedom by those who are to implement it. If this was the case, CSR would be an extremely diverse concept that would lose its focus and purpose. Instead we can say that each CSR definition has in common the following elements:

- Voluntariness
- Focus on social, environmental, ethical concerns, etc.
- Is not an instrument of legal compliance, instead it aims at going beyond what the law establishes
- It serves to palliate the possible negative impacts of globalization
- Focus on sustainable development

To avoid this high uncertainty a corporation can choose to embrace one or several of the internationally recognized principles and guidelines<sup>190</sup>, which provide guidance and serve as a starting point to design a CSR policy that aligns with them. In the case of shipping this has proved to be the most common feature, as CSR practices in the shipping industry tend to align with common recognized principles instead of providing innovative policies and principles designed by a particular corporation<sup>191</sup>.

Secondly, the mandatory regulations that the shipping industry has to apply can be said to be of a very strict nature. This means that mandatory regulations itself pose a challenge on the industry which has to conduct great efforts in order to implement them. This has lead to the discussion as

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<sup>190</sup> *Vid.* 2.2.

<sup>191</sup> For instance, companies such as NORDEN, MAERSK, J.Lauritzen A/S, the Grieg Star Group AS, NYK Line, etc, are members of the UN Global Compact.

to who has to be the designer, or the *creator*, of CSR practices. The word *corporate* suggests businesses but since it has been established that no mandatory definition is in place it could be defended that CSR does not necessarily has to be designed by the industry itself and it could be argued that, in the case of shipping, the regulations established by the IMO could be considered as CSR. The author is of the view that CSR practices and legal instruments are independent in nature and that standards that have to be applied mandatorily cannot be considered CSR and even when they are effectively implemented by a specific corporation cannot be considered part of the CSR policy. This view aligns with the fact that CSR has to be a set of **voluntary** practices that requires an **innovative** effort and that go **beyond the law**.

Due to the abovementioned challenge that stringent regulations pose to the industry the result in implementing CSR practices can be said to be satisfactory. Innovation is of key importance as evidenced by project such as the Eco-Vessel or the Green Ship of the Future that aim at finding and testing new technologies that will make the vessels more environmentally friendly. Nevertheless, as it is evidenced from the findings of the case-study<sup>192</sup> the majority of the efforts are directed at reducing the emissions from ships and few efforts have been made - or at least they have gone unreported- to address other kinds of pollutants.

The developing of initiatives in the field of Human Rights and labour rights is extremely weak. Even though commendable efforts have been made in the direction of promoting education –maritime or not- in developing countries more efforts need to be done in terms of reporting compliance with labour law standards on board. The fact that the MLC 2006 will enter into force in August 2013 will surely effect the way NORDEN, or any other shipping company, reports its CSR activities and compliance in line with it, but as of today more efforts need to be made when it comes to offer transparency about the real working conditions at sea, the terms and conditions of the employment of seafarers and what is more important, if

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<sup>192</sup> Vid Appendix B.

there are any salary differences between seafarers employed in different countries.

# Appendix A

## Regulation 34A, Annex I MARPOL

### **Regulation 34**

#### *Control of discharge of oil*

##### **A. Discharges outside special areas**

1. Subject to the provisions of regulation 4 of this Annex and paragraph 2 of this regulation, any discharge into the sea of oil or oily mixtures from the cargo area of an oil tanker, shall be prohibited except when all the following conditions are satisfied:

1. the tanker is not within a special area;
2. the tanker is more than 50 nautical miles from the nearest land;
3. the tanker is proceeding en route;
4. the instantaneous rate of discharge of oil content does not exceed 30 litres per nautical mile;
5. the total quantity of oil discharged into the sea does not exceed for tankers delivered on or before 31 December 1979, as defined in regulation 1.28.1, 1/15,000 of the total quantity of the particular cargo of which the residue formed a part, and for tankers delivered after 31 December 1979, as defined in regulation 1.28.2, 1/30,000 of the total quantity of the particular cargo of which the residue formed a part; and
6. the tanker has in operation an oil discharge monitoring and control system and a slop tank arrangement as required by regulations 29 and 31 of this Annex.

2. The provisions of paragraph 1 of this regulation shall not apply to the discharge of clean or segregated ballast.

## Regulation 6, Annex II MARPOL

### **Regulation 6**

#### *Categorization and listing of Noxious Liquid Substances and other substances*

1. For the purpose of the regulations of this Annex, Noxious Liquid Substances shall be divided into four categories as follows:

1. Category X: Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a major hazard to either marine resources or human health and, therefore, justify the prohibition of the discharge into the marine environment;



2. Category Y: Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify a limitation on the quality and quantity of the discharge into the marine environment;
3. Category Z: Noxious Liquid Substances which, if discharged into the sea from tank cleaning or deballasting operations, are deemed to present a minor hazard to either marine resources or human health and therefore justify less stringent restrictions on the quality and quantity of the discharge into the marine environment;
4. Other Substances: substances indicated as OS (Other Substances) in the pollution category column of chapter 18 of the International Bulk Chemical Code which have been evaluated and found to fall outside Category X, Y or Z as defined in regulation 6.1 of this Annex because they are, at present, considered to present no harm to marine resources, human health, amenities or other legitimate uses of the sea when discharged into the sea from tank cleaning or deballasting operations. The discharge of bilge or ballast water or other residues or mixtures containing only substances referred to as (Other Substances) shall not be subject to any requirements of the Annex

#### Regulation 7. Annex III MARPOL

##### **Regulation 7**

###### *Exceptions*

1. Jettisoning of harmful substances carried in packaged form shall be prohibited, except where necessary for the purpose of securing the safety of the ship or saving life at sea.
2. Subject to the provisions of the present Convention, appropriate measures based on the physical, chemical and biological properties of harmful substances shall be taken to regulate the washing of leakages overboard, provided that compliance with such measures would not impair the safety of the ship and persons on board.

#### Regulation 11, Annex IV MARPOL

##### **Regulation 11**

###### *Discharge of Sewage*

1. Subject to the provisions of regulation 3 of this Annex, the discharge of sewage into the sea is prohibited, except when:
  1. the ship is discharging comminuted and disinfected sewage using a system approved by the Administration in accordance

with regulation 9.1.2 of this Annex at a distance of more than 3 nautical miles from the nearest land, or sewage which is not comminuted or disinfected, at a distance of more than 12 nautical miles from the nearest land, provided that, in any case, the sewage that has been stored in holding tanks, or sewage originating from spaces containing living animals, shall not be discharged instantaneously but at a moderate rate when the ship is en route and proceeding at not less than 4 knots; the rate of discharge shall be approved by the Administration based upon standards developed by the Organization; or.

2. the ship has in operation an approved sewage treatment plant which has been certified by the Administration to meet the operational requirements referred to in regulation 9.1.1 of this Annex, and
  1. the test results of the plant are laid down in the ship's International Sewage Pollution Prevention Certificate; and
  2. additionally, the effluent shall not produce visible floating solids nor cause discoloration of the surrounding water.

2. The provisions of paragraph 1 shall not apply to ships operating in the waters under the jurisdiction of a State and visiting ships from other States while they are in these waters and are discharging sewage in accordance with such less stringent requirements as may be imposed by such State.

3.

4. When the sewage is mixed with wastes or waste water covered by other Annexes of MARPOL 73/78, the requirements of those Annexes shall be complied with in addition to the requirements of this Annex.

#### Regulations 4, 5, 6 and 7 Annex V MARPOL

#### **Regulation 4**

##### *Discharge of garbage outside special areas*

1. Subject to the provisions of regulations 5, 6, and 7 of this Annex, discharge of the following garbage into the sea outside special areas shall only be permitted while the ship is en route and as far as practicable from the nearest land, but in any case not less than:

1. 3 nautical miles from the nearest land for food wastes which have been passed through a comminuter or grinder. Such comminuted or ground food wastes shall be capable of passing through a screen with openings no greater than 25 mm.

2. 12 nautical miles from the nearest land for food wastes that have not been treated in accordance with subparagraph .1 above.
3. 12 nautical miles from the nearest land for cargo residues that cannot be recovered using commonly available methods for unloading. These cargo residues shall not contain any substances classified as harmful to the marine environment, taking into account guidelines developed by the Organization.
4. For animal carcasses, discharge shall occur as far from the nearest land as possible, taking into account the guidelines developed by the Organization.

2. Cleaning agents or additives contained in cargo hold, deck and external surfaces wash water may be discharged into the sea, but these substances must not be harmful to the marine environment, taking into account guidelines developed by the Organization.

3. When garbage is mixed with or contaminated by other substances prohibited from discharge or having different discharge requirements, the more stringent requirements shall apply.

#### **Regulation 5**

##### *Special requirements for discharge of garbage from fixed or floating platforms*

1 Subject to the provisions of paragraph 2 of this regulation, the discharge into the sea of any garbage is prohibited from fixed or floating platforms and from all other ships when alongside or within 500 m of such platforms.

2. Food wastes may be discharged into the sea from fixed or floating platforms located more than 12 nautical miles from the nearest land and from all other ships when alongside or within 500 m of such platforms, but only when the wastes have been passed through a comminuter or grinder. Such comminuted or ground food wastes shall be capable of passing through a screen with openings no greater than 25 mm.

#### **Regulation 6**

##### *Discharge of garbage within special areas*

1. Discharge of the following garbage into the sea within special areas shall only be permitted while the ship is en route and as follows:

1. Discharge into the sea of food wastes as far as practicable from the nearest land, but not less than 12 nautical miles from the nearest land or the nearest ice shelf. Food wastes shall be comminuted or ground and shall be capable of passing through a screen with openings no greater than 25 mm. Food wastes shall not be contaminated by any other garbage type. Discharge of introduced avian products, including

poultry and poultry parts, is not permitted in the Antarctic area unless it has been treated to be made sterile.

2. Discharge of cargo residues that cannot be recovered using commonly available methods for unloading, where all the following conditions are satisfied:

5. Cargo residues, cleaning agents or additives, contained in hold washing water do not include any substances classified as harmful to the marine environment, taking into account guidelines developed by the Organization;
6. Both the port of departure and the next port of destination are within the special area and the ship will not transit outside the special area between those ports;
7. No adequate reception facilities are available at those ports taking into account guidelines developed by the Organization; and
8. Where the conditions of subparagraphs 2.1, 2.2 and 2.3 of this paragraph have been fulfilled, discharge of cargo hold washing water containing residues shall be made as far as practicable from the nearest land or the nearest ice shelf and not less than 12 nautical miles from the nearest land or the nearest ice shelf.

2. Cleaning agents or additives contained in deck and external surfaces wash water may be discharged into the sea, but only if these substances are not harmful to the marine environment, taking into account guidelines developed by the Organization.

3. The following rules (in addition to the rules in paragraph 1 of this regulation) apply with respect to the Antarctic area:

1. Each Party at whose ports ships depart en route to or arrive from the Antarctic area undertakes to ensure that as soon as practicable adequate facilities are provided for the reception of all garbage from all ships, without causing undue delay, and according to the needs of the ships using them.

2. Each Party shall ensure that all ships entitled to fly its flag, before entering the Antarctic area, have sufficient capacity on board for the retention of all garbage, while operating in the area and have concluded arrangements to discharge such garbage at a reception facility after leaving the area.

4. When garbage is mixed with or contaminated by other substances prohibited from discharge or having different discharge requirements, the more stringent requirements shall apply.

## **Regulation 7**

### *Exceptions*

1. Regulations 3, 4, 5 and 6 of this Annex shall not apply to:

1. The discharge of garbage from a ship necessary for the purpose of securing the safety of a ship and those on board or saving life at sea; or
2. The accidental loss of garbage resulting from damage to a ship or its equipment, provided that all reasonable precautions have been taken before and after the occurrence of the damage, to prevent or minimize the accidental loss; or
3. The accidental loss of fishing gear from a ship provided that all reasonable precautions have been taken to prevent such loss; or
4. The discharge of fishing gear from a ship for the protection of the marine environment or for the safety of that ship or its crew.

2. Exception of *en route*:

1. The *en route* requirements of regulations 4 and 6 shall not apply to the discharge of food wastes where it is clear the retention on board of these food wastes presents an imminent health risk to the people on board.

## Regulation 13, Annex VI MARPOL

### **Regulation 13**

#### *Nitrogen Oxides (NO<sub>x</sub>)*

#### **Tier I**

3. Subject to regulation 3 of this Annex, the operation of a marine diesel engine which is installed on a ship constructed on or after 1 January 2000 and prior to 1 January 2011 is prohibited, except when the emission of nitrogen oxides (calculated as the total weighted emission of NO<sub>2</sub>) from the engine is within the following limits, where n = rated engine speed (crankshaft revolutions per minute):

1. 17.0 g/kWh when n is less than 130 rpm;
2.  $45 \cdot n^{(-0.2)}$  g/kWh when n is 130 or more but less than 2,000 rpm;
3. 9.8 g/kWh when n is 2,000 rpm or more.

#### **Tier II**

4. Subject to regulation 3 of this Annex, the operation of a marine diesel engine which is installed on a ship constructed on or after 1 January 2011 is prohibited, except when the emission of nitrogen oxides (calculated as the

total weighted emission of NO<sub>2</sub>) from the engine is within the following limits, where n = rated engine speed (crankshaft revolutions per minute):

1. 14.4 g/kWh when n is less than 130 rpm;
2.  $44 \cdot n^{(-0.23)}$  g/kWh when n is 130 or more but less than 2,000 rpm;
3. 7.7 g/kWh when n is 2,000 rpm or more.

### **Tier III**

5.1 Subject to regulation 3 of this Annex, the operation of a marine diesel engine which is installed on a ship constructed on or after 1 January 2016:

1. is prohibited except when the emission of nitrogen oxides (calculated as the total weighted emission of NO<sub>2</sub>) from the engine is within the following limits, where n = rated engine speed (crankshaft revolutions per minute):

- 1.1 3.4 g/kWh when n is less than 130 rpm;
- 1.2  $9 \cdot n^{(-0.2)}$  g/kWh when n is 130 or more but less than 2,000 rpm; and
- 1.3 2.0 g/kWh when n is 2,000 rpm or more;

2. is subject to the standards set forth in subparagraph 5.1.1 of this paragraph when the ship is operating in an Emission Control Area designated under paragraph 6 of this regulation; and is subject to the standards set forth in paragraph 4 of this regulation when the ship is operating outside of an Emission Control Area designated under paragraph 6 of this regulation.

5.2 Subject to the review set forth in paragraph 10 of this regulation, the standards set forth in paragraph 5.1.1 of this regulation shall not apply to:

1. a marine diesel engine installed on a ship with a length (L), as defined in regulation 1.19 of Annex I to the present Convention, less than 24 metres when it has been specifically designed, and is used solely, for recreational purposes; or
2. a marine diesel engine installed on a ship with a combined nameplate diesel engine propulsion power of less than 750 kW if it is demonstrated, to the satisfaction of the Administration, that the ship cannot comply with the standards set forth in paragraph 5.1.1 of this regulation because of design or construction limitations of the ship.

# Appendix B

## SUMMARY OF THE LEGISLATIVE FRAMEWORK

<b>MARPOL</b>		
Pollutant	<b>PROHIBITED</b>	<b>PERMITTED</b>
<u>Oil</u>	In the ECAs	Outside the ECAs when: <ul style="list-style-type: none"> <li>• The vessel is more than 50 nm from the nearest land</li> <li>• is proceeding en route</li> <li>• the rate of discharge is not more than 30 liters per nm</li> <li>• the tanker is monitoring the discharge</li> </ul>
<u>Noxious liquid substances carried in bulk</u> <i>See Regulation 6 Annex II MARPOL. Appendix A</i>	Substances X	Substances Y and Z with limitations. "Other substances" always.
<u>Harmful substances in packaged form</u>	Always	When necessary for securing the safety of the ship or saving life at sea
<u>Sewage</u>	Always	Regulation 11 Annex IV <i>See Appendix A</i>
<u>Garbage</u>	Always	Regulation 4, 5, 6, 7 Annex V <i>See Appendix A</i>
<u>Air pollution</u>		

SO <sub>x</sub>	Always	<ul style="list-style-type: none"> <li>• Before 1 January 2012: 4,50% m/m</li> <li>• 1 January 2012: 3,5 % m/m</li> <li>• 1 January 2020: 0,50 % m/m</li> </ul> <p>In the ECAs:</p> <ul style="list-style-type: none"> <li>• Prior to 1 July 2010: 1,50 % m/m</li> <li>• On and after 1 July 2010: 1,00% m/m</li> <li>• On and after 1 January 2015: 0,10 % m/m</li> </ul>
NO <sub>x</sub>	Always	<p>TIER I: engines installed on a ship constructed 1 January 2000 - 1 January 2011</p> <p>TIER II: engines installed on a ship on or after 1 January 2011</p> <p>TIER III: engines installed on a ship constructed on or after 1 January 2016</p> <p><i>See Regulation 13 Annex VI MARPOL. Appendix A</i></p>
CO <sub>2</sub>	Always	Depending on EEDI

<p align="center"><b>LONDON CONVENTION AND PROTOCOL</b>  <i>Convention on the Prevention of Marine Pollution  by Dumping of Wastes and Other Matter  1972 and 1996 Protocol Thereto</i></p>		
Pollutant	PROHIBITED	PERMITTED
<u>Dumping</u>	Always	<p>If it falls into the categories listed in Annex I  See Appendix B</p> <p>When it is necessary to secure the safety of human life or of vessels at sea or when it constitutes a danger to human life or to vessels.</p>



SUMMARY OF THE CASE-STUDY FINDINGS

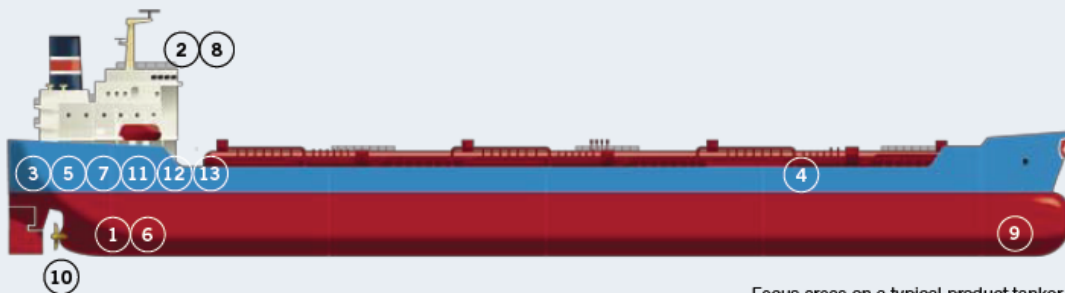
<b>NORDEN</b>						
<b>Pollutant</b>	<b><u>ACHIEVEMENTS</u></b>					<b><u>MEASURES</u></b>
<u>Oil</u>	Not reported					
<u>Noxious liquid substances carried in bulk</u>	Not reported					
<u>Harmful substances in packaged form</u>	Not reported					
<u>Sewage</u>	Not reported					
<u>Garbage</u>	Not reported					
<u>Air pollution</u>						
	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<ul style="list-style-type: none"> <li>• 14-point plan</li> <li>• 10 initiatives in 2011: propeller cleaning measures</li> <li>• Use of eco-ships</li> <li>• New paint that reduces water resistance</li> <li>• Slow steaming</li> </ul>
<b>SO<sub>x</sub></b> <i>Maximum sulphur content in fuel</i>	—	2,27%	2,09%	2,06%	2.31%	
<b>NO<sub>x</sub></b>				Reduction of emissions per tonne: 12-14%		
<b>CO<sub>2</sub></b> <i>Percentage of reduction</i>	2,80%	3,30%	6,20%	5,40%	7,70%	
<b>Dumping</b>	29 m <sup>3</sup>	21 m <sup>3</sup>	No information	No data but slight increase reported	5% reduction	
<b><u>TBT</u></b>	Compliance					
<b><u>Ballast Water</u></b>	Compliance with IMO					

# Appendix C

## A: THE 14-POINT PLAN

### NORDEN's 14-point plan

1. Latest design of slide valves – ensures clean combustion in the ship's engine and thus reduces CO<sub>2</sub>, SOx and NOx emissions.
2. CASPER system – Computer Analysis of Ship PERFORMANCE monitors and makes it possible to achieve optimal speed in relation to fuel consumption. Reduces CO<sub>2</sub> and SOx emissions.
3. FLAME system – gives a precise picture of the engine's combustion. Reduces NOx emissions.
4. Non-oscillating pressure/vacuum valves for tankers – ensures that the cargo vapours are not emitted into the atmosphere.
5. ExxonMobil scrape down analysis system – optimal lubrication and better combustion. Reduces NOx emissions.
6. Alpha Lubrication system – minimises the combustion of lubricating oil thus reducing NOx emissions.
7. Torque measuring system – best possible calibration of the engine. Reduces CO<sub>2</sub> and SOx emissions.
8. Waste monitoring and reporting system – knowledge of precise emitting.
9. Full blasting of underwater hulls. Reduces CO<sub>2</sub> and SOx emissions.
10. Propeller polishing. Reduces CO<sub>2</sub> and SOx emissions.
11. Increased frequency of overhauls of the vessel's turbo chargers.
12. Increased frequency of overhauls of the vessel's scavenger air coolers.
13. Increased frequency of overhauls of the vessel's fuel oil pumps and injectors.
14. Funding of environmental research development programmes, e.g. GreenSteam™



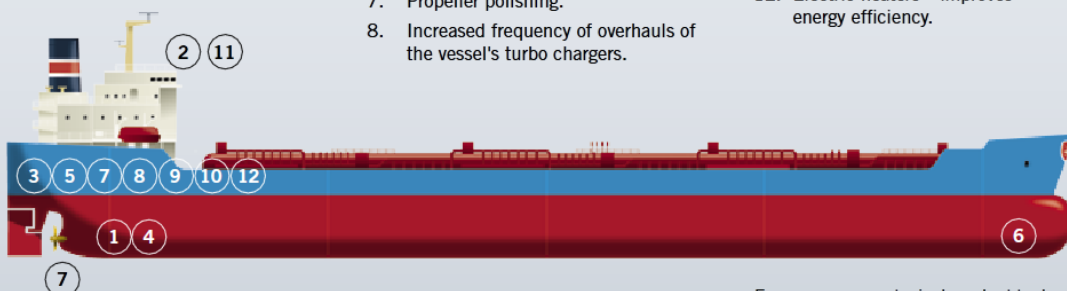
Focus areas on a typical product tanker.

Table source: NORDEN CSR Report 2009

## B: INITIATIVES FOR 2010

### Initiatives to reduce emissions to air

1. Latest design of main engine slide valves – ensures clean combustion in the ship's engine.
2. CASPER system – Computer Analysis of Ship PERFORMANCE monitors and makes it possible to achieve optimal speed in relation to fuel consumption.
3. Main engine cylinder oil scrape down analysis system – optimal lubrication and better combustion.
4. Alpha-lubrication system – minimises the combustion of lubricating oil.
5. Torque measuring system – best possible calibration of the engine.
6. Full blasting of underwater hulls.
7. Propeller polishing.
8. Increased frequency of overhauls of the vessel's turbo chargers.
9. Increased frequency of overhauls of the vessel's scavenge air coolers.
10. Increased frequency of overhauls of the vessel's fuel oil pumps and injectors.
11. GreenSteam™ – a system for trim optimisation.
12. Electric heaters – improves energy efficiency.



Focus areas on a typical product tanker.

Table source: NORDEN CSR Report 2010

## C: INITIATIVES FOR 2011

**Table 2: Climate action plan**

1. **Slide fuel valves for main engines:** improves the combustion of main engine and ensures a cleaner engine.
2. **CASPER- Vessel performance monitoring:** ensures an overview of the development of the fuel efficiency for each individual vessel in the fleet.
3. **Alpha lubricator system** for the main engines: ensures an effective dosage of cylinder lubrication oil and a reduction of the cylinder oil consumption can be obtained.
4. **M/E cylinder oil scrape down analysis** for the main engines: ensures an effective dosage of cylinder lubrication oil via the Alpha Lubricating System and a reduction of the cylinder oil consumption can be obtained.
5. **Shaft torque monitoring system:** ensures an on-line real-time monitoring of the propulsion power delivered to the propeller.
6. **Electrical heater:** Instead of using the large capacity oil fired boiler to “top up” steam at low engine loads and/or in cold weather a small electrical heating system can be installed and efficiently generate the required “top up” steam.
7. **Advanced hull coating:** reduce marine growth on the underwater hull.
8. **Propeller cleaning:** adoption of propeller cleaning on an average 6 months basis.
9. **Increased service and check of main engine performance.** More frequent check and service intervals of:
  - the turbo charger
  - fuel oil pump
  - air cooler
10. **Funding of environmental research, for instance Green steam:** on board decision making system that can guide the master to achieve the best possible trim for the actual condition of the vessel, as the trim can have significant effect on the resistance of a vessel.

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Table source: NORDEN CSR Report 2011

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