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ABSTRACT

The review traces the development of EU law in the area of Offshore Safety, through the elaboration of the Directive at stake, where the EU authorities claim their ambition for preventing major accidents and limiting their consequences. The author highlights the practical questions that arise in this regard beyond the EU boundaries and suggests possible solutions.

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1. Introduction

The European Commission, when launching the initiative for introducing a “Regulation on safety of offshore oil and gas prospecting, exploration and production activities” back in 2011, clearly displayed the ambition of further harmonizing European law in the offshore industry sector.

Given that a high share of oil and gas production in Europe takes place offshore, these operations are of a crucial interest for attaining European energy security and at the same time present the urging need for environmental protection of Community’s waters. The European Union’s main challenge is the continual improvement of national law enforced by Member States and the enhancement of international regulatory framework. The 2013 Directive’s approval on safety of offshore oil and gas operations endorsed the key achievements of the negotiations that have taken place at the EU level.

This Paper shall provide for a close insight of the reflection carried on this topic, where thoughts on Safety standards were shared by Offshore Industry’s representatives and competent authorities by EU member States and the European Economic Area. The European Industry, Research and Energy Committee, as well as the Environment, Public Health and Food Safety Social and Economic and Social Committee joined the decision making process and the new legislative proposal was examined by the Council of the European Union under its Transport, Telecommunications and Energy configuration.

The outcome of this legislative procedure, which held on for two years, has been delivered by the adoption of the 2013 Offshore Safety Directive, which takes effect on

July 2015. The general objectives of the EU Directive as flagged under the 2011 Assessment focus on the prevention of a major incident from occurring and on dealing with major emergency through preventive measures. At the same time, however, the objectives of this legal instrument fall beyond the announced assessment.

The new Directive shall allow those EU Member States, active on the Industry Offshore Sector, for adopting high safety standards and best practices as enforced in the North Sea. More, other Member States, prospecting to develop an offshore oil and gas industry are required to transpose the Directive norms into national legislation before granting licensing for hydrocarbons exploration as well. This shall not be all. Currently, many Member States, not having developed offshore oil and gas industry and granted no licensing for that purpose, have not been involved with this issue. Against this background, the new legislation binds all Member States, called to collaborate for addressing questions of coordination between Member States and Third Countries where needed and provide appropriate measures for facing major incidents. Yet, the main impact of this legislation derives from its territorial scope. The Directive covers those operations, carried on by European undertakings, beyond EU waters. Hence, its enforcement is ensured by European oil and gas industry where operating in the European Economic Area space and more broadly where operating around the globe.

This thesis' scope is to address the main developments after the introduction of the new legislative instrument in the general normative background. The Paper is divided in five parts, with the first one dealing with the Proposal's background. Chapter two sheds some light on the principal issues that need to be addressed and the aims of the legislation pursued. The efforts employed for achieving a compromise on the nature of

the legal norm to adopt, so as a Directive instead of a Regulation and the substantial normative provisions embedded are detailed in the subsequent development. In Chapter 3, the shows how the disparity of legislative instruments in this area of law failed providing for a strength response to the risk correlated to accidents incurred in the EU waters.

In terms of understanding the 2013 safety and environmental regime, Chapter 5 stresses the importance of theoretical framework, risk perspective and decision theories under uncertainty, in a joint lecture with an overview of the way the appropriate policy option to be adopted at the EU has been prevailed. The identification of the risk, its conceptualization encompassing the knowledge dimension and surprises (black swan) and the correlation to the EU legislative act are revealed.

In the Chapter that follows, the author tackles the subject of the liability sharing issue, placing emphasis on the new allocation of responsibilities between Member States, competent authorities and offshore industry.

Finally, Chapter 6 concentrates on a Case Study on the Directive's enforcement, where our attention is turned to the identification of those specific aspects of its impact to the industry. The last chapter focuses on the practical aspects related to the monitoring of legislative changes by a British Corporation for explaining the UK objections to the European initial approach and the consequences of the final act to British Offshore industry's operating model.

2. Background

In the following lines, our development describes the needs that justified the Commission's initiative for further harmonizing the EU legislation. The European Commission has been criticized, for excess of competence, as the biggest share of offshore activity to regulate takes place outside its territorial waters. Hence, in this Section we assess the main reasons having justified its intervention and provide for the key events that led to the adoption of the 2013 Directive.

2.1. Principal issues that need to be addressed and the objectives of the new legislation

In October 2011, the European Commission proposed the introduction of a regulation on safety of offshore oil and gas prospecting, exploration and production activities.

The grounds for the proposal were the increasing number of offshore oil and gas exploration in complex and geological environments. The Deep Water Horizon Accident in 2010 and near misses both within and outside EU territory have exposed inadequacies in the current risk-management practices and wide disparities in safety performance and attitudes. Additionally, the accidents have shown an absence of transparency and data sharing regarding safety performance and have highlighted the challenges that regulators face in ensuring sufficient oversight of offshore activities.

Therefore, the need to reduce the probability of a major accident is needed in an effort to protect the environment, local communities, the society, the life and health of workers and to prevent material losses. The principal issues as defined in the EU Impact Assessment (I.A) [3] that needed to be addressed are:

- the significantly high risk of a major offshore accident
- the inability of legislation, regulatory and industry practices to provide effective emergency response to accidents and the lack of clarity for liabilities for clean-up and conventional damages

Consequently, the EU set as general objectives for this initiative to reduce the risks of major accident in EU waters and to limit the consequences in the unfortunate event that such an accident takes place.

The above can be developed in four specific objectives:

- to ensure a consistent use of *best practices* for major hazards control by offshore operations in EU waters
- to implement *best regulatory practices* in all European jurisdictions
- to improve and clarify the existing EU *liability* and *compensation* provisions
- to strengthen EU *preparedness* and *response* capacity [I.A. 3.2]

2.2. A brief introductory chronological summary of the main events; from inception to implementation of the new legislation

Following the Montara blowout in Australia in 2009 and the Deep Water Horizon incident in April 2010, the European Union became aware of the lack of a legislation specifically targeting offshore oil and gas operations. Later that year, the EU

commission recommended several changes to the current regime such as the reinforcement of exploration licensing regimes and a review of regulatory approaches and the improvement of EU oil spill response. The commission moved on to investigate its own role in offshore safety, to stress the need of reviewing the certification regime for offshore equipment and to strengthen the role for regulatory and verification bodies.

Therefore, in October 2011 the European commission proposed a new legislation to deal with offshore oil and gas safety. The initial proposal was that the legislation would take the form of a regulation, meaning that would have direct applications in EU member states. This was objected by the UK authorities since it raised concern for a potential unnecessary change to the UK regime to the extent there were inconsistencies between the Regulation and UK legislation. An alternative option, would be the form of a Directive, which set out general rules to be transferred into national law by each country as they deem appropriate. A Directive gives member states more flexibility on how the new requirements are implemented. [4]

A year later, having taken the UK suggestion under consideration, the EU Parliament decided to draft a Directive whose objectives are to achieve consistent use of Best Practices for major Hazards control, implement best regulatory practices in all European jurisdictions, strengthen EU's preparedness and response for offshore emergencies and clarify EU liability and compensation provisions. [5]

On the 18th of July 2013, the directive is officially approved as a European Union law, to which member states have to transpose to by July 2015. There exist however, some transitional provisions. For existing installations the transition can be postponed until

July 2018. In planned production installations and operators planning or executing well operations, the transitional period extends to July 2016.

The new directive is not applicable to onshore installations, but is set to cover all types of offshore installations. Onshore installations will be covered by 92/91/EEC directive.

Having said that, we have gained some more understanding on the reasons, which motivated the EU Commission to proceed with this project, the difficulties faced and the core elements of its way, the Commission has approached this issue

3. Existing Legislation

In the subsequent paragraph, our interest zooms on the existing legal framework at the time the Commission has launched its legislative initiative. This section asserts the reasons for legitimizing the introduction of a specific legal instrument in respect of the principle of necessity that attributes competence to the EU for proceeding with new legislation. Under the Treaties, the Commission must justify for which reasons further legislation is needed and shall abstain from legislating where this is not absolutely necessary, proportionate to the needs identified and appropriate. Hence, this Section's goal is to discuss on the disparity of legal instruments in this area and the missing nexus, so as, the introduction of a conceptualized theory that embraces the diverse normative instruments for obtaining an overall coherent legal frame.

3.1. Disparity of legal instruments

The European Union has already established several legislations aiming to accomplish those objectives, but there is no legislation targeting specifically the offshore sector. In addition, existing legislations can be subjected to improvements. Member states' laws are inconsistent and there is a lack of clarity on laws regarding licensing, public transparency, and information sharing and liability provisions. The new legislation aims to compliment the already in effect legislations such as: [34]

Environmental Liability Directive (ELD) 2004/35/EC

This directive aims to protect from damages to the environment, protected species, natural habitats or water and dictates that the operator is responsible for preventing and

remedying any damage and to cover the full costs of it. However, this Directive is limited to coastal strips and does not cover all waters under EU jurisdiction.

Environmental Impact Assessment: Directive 85/337/EEC

This directive aims to assess the effects of operations on the environment by setting general minimum requirements.

Waste law: Directive 2008/98/EC

This directive applies fully to oil spills, and imposes the obligation on the polluter to bear the responsibility and cost for cleaning the polluted area.

Health and safety of workers at work: - Directive 92/91/EEC

This Directive concerns the protection and working environment of offshore workers.

The new legislation improves the provisions of Directive 92/91/EEC by introducing an environmental assessment, by establishing a notification scheme for well operations and by the introduction of independent verification requirements.

Major hazards: The Seveso Directive 96/82/EC

The Seveso Directive does not apply on offshore projects. It also fails to include important aspects that are covered by the new Directive such as requiring the regulators consent for risk assessment and provisions for evacuation escape and rescue personnel. The Member State will require verification of the technical competence of the operator which the licensee chooses to run the operations. Both the competence and the financial capability to cover liability costs should be assessed early during licensing stages.

The Major Accident Prevention Policy (MAPP) and Safety Management System (SMS), both elements of the Seveso Directive are also included in the provisions of the new Offshore Safety Directive (2013/30/EU).

A new Seveso Directive 2012/18/EU was adopted in 2012 which repeals the Seveso 96/82/EC.

Granting hydrocarbon prospection, exploration and production authorizations:
Directive 94/22/EC

This directive have direct relation with the provisions that are missing by the Seveso Directive 96/82/EC and it should be considered in order to further strengthen the obligations of the Member States' authorities and achieve the desired improvement in evaluating the competence of the applicants.

Emergency Response tools:

- i. EU Civil Protection Mechanism (Council Decision 2007/779/EC)

- ii. the Monitoring and Information Centre (MIC)
- iii. the European Maritime Safety Agency (EMSA)

The new Directive aims to utilize the above tools to improve emergency response. EMSA's primary focus was initially on maritime shipping; however its competence has already been expanded to cover accidents on offshore installations.

3.2. Seeking for the missing nexus

The introduction of a new legal instrument in the area of Offshore Safety has a multidimensional value. This holds true, since the new normative instrument shall be elaborated in consistency with other norms, regulating this area of law, which are already implemented. In such circumstances, the main objective of the establishment of a specific legal framework is to achieve a better visibility of the rules addressed to the offshore industry, while enforcing the regulatory frame and enhancing cooperation of the private actors with independent authorities.

In this sense, it is of a high interest to establish a global and understandable memorandum, which provides for a better overall view of duties, responsibilities and liabilities borne by the undertakings acting in this sector and the authorities involved. The main challenge for the EU services is the setting up of a coherent and consistent legal framework where the specificities of the provisions taken do not undermine the generality of the rules to apply.

Hence, for succeeding the drafting of such legislation, the European authorities need to rely on a solid theoretical background, which provides the ground for the elaboration of these norms.

In the following section our interest shifts to this theoretical background, which combines elements of the principle of competence attributed to the EU, of the objectives to pursue under the Treaties and of general axiom found in literature of risk management.

4. The 2013 EU Directive

In this Section, we depart from the concept of risks and the identification of the meaning to entail to the precautionary principle in order to trace the link between these prongs.

The main goal of this description is to assert the different methods of evaluating the risk and elaborate the preventive measures to tackle it, embedded in the meaning of the risk acceptance criteria.

4.1. Theoretical Background

With more than 10 major disasters in the industry the past 35 years [7] and many more near misses (Gullfaks C installation in Norway, BP Forties Alpha platform in the UK) the need to further reduce the risks posed by offshore operations in EU waters is distinguishable. Even in countries where robust legislation has been introduced following major accidents such as UK (Piper Alpha) and Norway (Alexander Kielland), the risk for a major accident is reduced but is it still considered high. The Norwegian Petroleum Safety Authority has published a study of trends in risk level in the Norwegian petroleum activity (RNNP) which shows a sharp rise in well control incidents and gas leaks back at a high level [8].

The past experiences have shown that the EU needs to address the following 3 major problem in the industry:

The increasing risk of major offshore oil and gas accidents

- The current regulatory framework and operating arrangements do not provide for the most effective response to all consequences of accidents in EU waters
- Under existing liability regimes, the responsible party may not always be clearly identifiable and/or may not be able, or liable, to pay all the costs of remedy of the damage caused by its action.

The majority of offshore installations in EU waters are in the North Sea, including Norway where many EU based operators are active. In the region the operations are run under the more successful goal setting regulatory approach. However, the increasing number of oil wells and oil installations indicates that even in this region some problems need to be addressed. [I.A. 2.1]

4.1.1. The “Precautionary” and “polluter pays” Principle: the environmental standard measure

For the new Directive to be consistent with other EU policies, it must amongst other be consistent with the *precautionary principle* and the “*polluter pays*” principle.

These two policies are two very basic principles of environmental protection which are accepted since April 2004 on a European level legal standard [9].

The precautionary principle as defined by the 1992 Rio Declaration states that:

“In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation“.

At this point, it is relevant to point out that “the implementation of the precautionary principle could result in increasing costs, delayed innovation and negatively affect the viability of innovative industries and those that depend on their products. A strong version of the precautionary principle justify or require precautionary measures and some also establish liability for the possible harm, which is effectively a strong form of polluter pays” [1]. According to Cameron (2006), “this may encourage these industries to change their activities or relocate to other jurisdictions with less stringent standards of proof, resulting in a loss in capability in the home country”. This cannot be argued, however, since the new Directive requires EU based companies to implement its provisions even when operating in waters outside EU jurisdiction and regularly report on accidents and near misses.

An essential theme of the Precautionary principle is that decision making under extreme uncertainty and ignorance is a matter of policy and political considerations. Science can inform the decision but cannot resolve difficult issuers over cause and effect. Thus, a decision for further study or not to do anything in the face of uncertainty is a policy decision not a scientific one just as taking preventive action would be. The legislation needs to include certain components in order to be in accordance to the principle: [10]

- Take precautionary action before scientific certainty of cause and effect

- Plan based on well-defined goals rather than on future scenarios and risk calculations
- Seek out and evaluate alternatives to reduce or eliminate the hazard and consider all possible means of achieving that goal
- Those who have the power, control, and resources to act and prevent harm should bear the responsibility of any harm to human nature or to the environment.
- Develop more democratic and thorough decision-making criteria and methods by a new way of thinking about decisions and weighing scientific and other evidence in the face of *uncertainty*.

4.1.2. Risk Perspectives and decision theories under uncertainty

In this context, Tickner (2004)[10] further explore what is meant by the term uncertainty. Uncertainty can take many forms. Some kinds can be addressed and reduced while others cannot. The most widely recognized types of uncertainty include:

- Parameter uncertainty

It refers to missing or ambiguous information in specific informational components of an analysis. The EU through the legislation intends to improve methods of collecting and analyzing information and takes measures to improve transparency and sharing of information (Article 23)

- Model uncertainty

Model uncertainty refers to information gaps that can compromise the validity of the model where not enough information are available to construct a complete model.

- Epistemic uncertainty

Can be defined as “the lack of knowledge about fundamental phenomena, that is, about the true outcome distribution” [11].

- Aleatory uncertainty

This can defined as the variation in outcomes or populations. It is often also referred to as “stochastic uncertainties” and “randomness” [11].

- Politically induced uncertainty

This can occur when the agencies intentionally refrains from studying a hazard, limit the scope of its analysis or hide uncertainty in quantitative models.

4.1.3. New Risk Perspectives

To compose an appropriate legislation concerning the safety of offshore oil and gas operations, a correct approach to the concept of risk is essential. The description of risk one of the fundamental steps in performing a risk analysis, along with cause and

consequence analysis and the identification of the sources of risk [**Error! Reference source not found.**].

Historically, risk has been considered as expected loss along with its probabilities. This probability based perspective is nowadays considered by many obsolete and it is argued they should be replaced by broader risk perspectives which are not confined to a specific measure of uncertainty, in this case probability. In other words, (Aven, 2004) “The (lack of) knowledge dimension captures for example that probability, used as a measure of uncertainty or degree of belief, is not able to reflect the strength of the knowledge that the probabilities are based on, and not that assumptions that the probabilistic analysis is built on could conceal important aspects of uncertainties”. These probability based risk perspectives have the need of supplementary characterizations which can offer further understanding about knowledge and lack of it, as well as potential surprises. The basic features of these new risk perspectives are [**Error! Reference source not found.**]:

- Probability-based thinking
- Knowledge dimension
- Surprises (black swan)

4.1.4. Assessing the Strength of knowledge

Strength of knowledge is hard to define which makes it difficult for the decision maker since the uncertainty interval he is given does not express the strength of knowledge. Aven [15] suggests two methods to assess the strength of knowledge.

The first method is based on grading the strength of knowledge of the probabilistic analysis. Flage and Aven [14] propose a scoring system where knowledge is described as low, medium or high.

The second method captures the basic features of the risk description of the new risk perspectives. It aims to produce a set of uncertainty factors by identifying all the main assumptions the analysis is based on. These factors represent to which degree historical data are representative for the future. This “assumption deviation risk” concept is considered to be more precise compared to previously used concepts such as “degree of uncertainty” and sensitivity [12].

4.1.5. Black Swans

Major accidents with severe consequences are rare, and in most cases unique and the result of a combination of highly unlikely to occur events. Since the EU policy aims to primarily prevent these sort of accidents from occurring, it is relevant to examine the nature of such events, also known as black swans.

The concept of black swans was first mentioned by Nassim Nichola Taleb in 2001 where he defines it as “a phenomenon which involves highly improbable events, thus almost impossible to anticipate, that inflict disproportionate influence” [16]. These events can be accidental or intentional.

According to Aven, black swans can be grouped in two categories:

- I. “Unknown unknowns in the strict sense, meaning that these events are not known to the scientific community”.
- II. “Surprises compared to the produced risk picture, i.e. surprises compared to the beliefs of the experts and analysts involved in the assessment” (15, p.140)”.

To assess black swans, a list of events which match the description of a black swan is produced, followed by a review of all possible arguments and evidence for the occurrence of such events.

4.1.6. Risk acceptance Criteria

The EU intention is to compose the legislation based on the example set by the North Sea Offshore Authorities. The Use of Risk Acceptance Criteria is a common practice for these states.

Risk Acceptance Criteria (RAC) are frequently used worldwide in many industries. These criteria allow the authorities or whoever adopts them to detect activities with high level of risk for the society or an individual. Their goal is to ensure that the level of risk is acceptable with respect to safety, cost and the environment and to balance and compare risk against the benefits. They are defined by NORSOK as “criteria that are used to express a risk level that is considered as the upper limit for the activity in question to be tolerable” [17, 3.1.52]

RAC can be defined by two different methods, implicitly and explicitly. These methods are adopted by international authorities such as the JCSS and reputable local

authorities such as the British Project Management Institute (PMI) and the Association for Project Management (APM). [18]

Implicit RAC was the first method that was used in the offshore industry. In the past, industries in an effort to introduce quantitative risk criteria sought guidance from industries which had already developed risk acceptance criteria, such as the nuclear sector. It was based on aiming for equal safety with the initial industry sector who developed these quantitative risk criteria that address on the general decisions that can affect the structure, scope, context and content of the project [18].

The common way of defining criteria in industries nowadays is the explicit method. Explicit risk management deals with individual project risks through the standard risk process. It can be defined as “a quantitative decision tool to the regulator or a comparable requirement for the industry when dealing with the certification / approval of a particular structure or system” [19].

After having spelled that, we shall exam the basic principles for establishing RAC.

Using absolute risk criteria:

These tools are used by the decision maker uses evaluate risk. They can take the form of individual risk, societal risk, fatal accident rate (FAR) etc. F-N curves represent the function between the number of fatalities and accidents and can prove a good indicator for evaluating societal risks. Risk can be expressed in risk acceptability matrices or based on hazard severity levels.

The ALARP principle:

Another widely used principle for determining criteria for acceptable risks is the ALARP principle (as low as reasonably practicable). The principle is commonly adopted by regimes in the North Sea region. According to the UK legal regime, “the ALARP evaluation implies that identified improvements (risk reducing measures) should be implemented as a base case, unless it can be demonstrated that the benefits are grossly disproportionate to the costs and operational restrictions. This principle is normally applied together with a limit for intolerable risk and a limit for negligible risk. The interval between these two limits is often called the ALARP region.” [20]

The new Directive requires that the operator uses to the ALARP Principle for reducing the risk of Major Accidents (Preamble 14):

“Operators should reduce the risk of a major accident as low as reasonably practicable, to the point where the cost of further risk reduction would be grossly disproportionate to the benefits of such reduction. The reasonable practicability of risk reduction measures should be kept under review in the light of new knowledge and technology developments. In assessing whether the time, cost and effort would be grossly disproportionate to the benefits of further reducing the risk, regard should be had to best practice risk levels compatible with the operations being conducted”.

Combining the ALARP method with tools mentioned earlier such as F-n or Risk Acceptability matrices the decision maker is able to weigh a risk against the effort, time and money needed to control it.

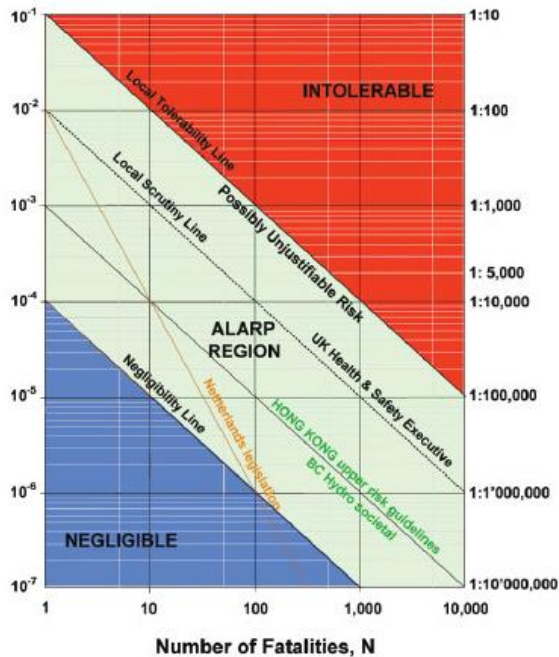


Figure 1: Use of ALARP in F-N Diagram [21]

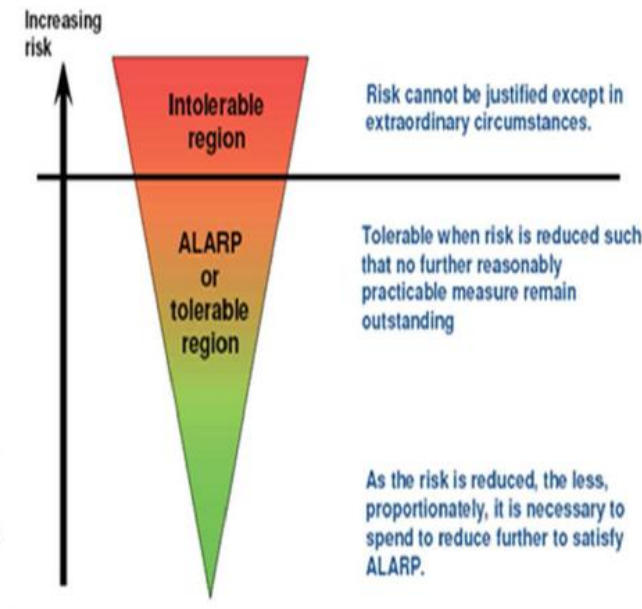


Figure 2: ALARP Principle according to NORSOK Z-013 [17]

The use of RAC provides many benefits to the industry. It allows the decision-maker to know when the risk is low enough to be acceptable and allows the companies to express their own criteria by concrete statement; making it easier for company personnel to comply therefore the management does not need to be involved very often. The quantitative risk assessment (QRA) takes into consideration multiple scenarios that involve all potential failures and provides a thorough evaluation of the system. On the other hand, the used of predefined RAC has some limitations. The focus can be on showing that the risk is below this criterion, and potential risk-reducing measures might be overlooked. The QRA relies heavily on historical data and the appropriate value of RAC is hard to be defined. Companies have the opportunity to manipulate these assumptions and premises in an unethical manner.

The use of RAC has also been proven to be inconsistent with expected utility theory and rank dependent utility theory [22].

Having said that, we shall dedicate some lines to the risk acceptance criteria set and the instance which shall be the author of the elaboration of the rules to apply, so as the Industry of the Authorities.

Risk Acceptance Criteria set by the Industry or the Authorities

Risk acceptance criteria are not used in the same way throughout the North Sea regimes. In Norway, it is not a common practice for the authorities to formulate risk acceptance criteria to be used by the industry; however the Petroleum Safety Authority (PSA) has influenced oil companies to the extent that risk acceptance criteria used are fairly similar [23]. The Norwegian regime, based on internal control relies on the industry to set the upper limits of what can be defined as acceptable risk. This contradicts the practice of other regimes in the region such as the UK and Netherlands. According to Abrahamsen and Aven [22], based on expected utility theory, in general risk acceptance criteria should, from a decision point of view, be set by the authorities. With a more practical point of view Vinnem [23] using a past case as example, argues that in practice it is difficult to get the operators to set the criteria themselves.

4.1.7. State-of-the-Art / Best Practice approach

Best practice:

This approach is not strictly a risk analysis method. The underlying philosophy is that the necessary safety measures must be in place to protect the population against the ‘worst case’ accident. This means that the establishment needs to have considered the consequences of these worst-case accidents, and taken the necessary preventative and accident-limiting steps, such that the risk outside the establishment’s fence is negligible (‘zero-risk principle’). However, it is recognised that it will not always be possible to limit accidents to the establishment’s own property, and therefore safety zones are laid out, based on an assessment of typical (not necessarily the worst credible) accident scenarios [24].

Best Practices

The following best practices are recommended for **Project Risk Management**:

- **Identify Early** – Identify potential project risks as early in the project life cycle as possible. Document these initially identified risks in the project charter and clearly communicate their potential consequences to project sponsors and stakeholders.
- **Identify Continuously** – Continually identify and reevaluate project risk. When new risk is identified communicate updates as needed.
- **Analyze** – Analyze the potential impact of identified project risk. Repeat this analysis process throughout the project life cycle, make updates, and communicate changes as needed.
- **Reprioritize** – As risks are continually analyzed throughout the project life cycle, reprioritize risks as potential project impact adjusts to changing project events.
- **Define and Plan** - Define risk thresholds and triggers, mitigation strategies, and contingency plans. The greater probability of occurrence and/or impact on project goals, the more detailed this information should be.
- **Communicate** – Communicate regularly regarding risk status and changes in the level or overall project risk. Solicit feedback from project team members and stakeholders regarding known risk and the prospects of unknown risk. Store the risk management log in a location accessible to the project team so that, if necessary, anyone can obtain updates at any time.
- **Update** – Update the risk management log on a regular basis, both informally and formally.
- **Educate** – Educate the entire project team and stakeholders on risk management and encourage them to actively identify, communicate, and mitigate risk.

Figure 3: Best practices that are recommended for Project Risk Management [26].

4.2. Selecting the appropriate Policy Option

In this Section our interest is focus on the ascertainment of the alternative options the EU had at its disposal, where a decision had to be made on resolving the issue at stake. The three-prong problem, related to the risk of a major offshore oil accident, the ineffectiveness of the responses provided to all consequences of accidents and the non-identification of responsibility and liability of the party having caused the accident, has brought the EU to act by new legislation.

In the following lines, the author describes, at a first page, the different policy options. Their description shall allow us to gain a better understanding of how these policies address, on the one hand, reducing the probability of an accident and mitigating the consequences where such an accident is produced. On the other hand, we assess the financial and administrative impact of each policy on the costs of offshore accidents in terms of protection of human life, of involvement of local society in decision-making, acknowledged as major stakeholder and environmental protection.

In this stage of elaboration of EU law, the discussion launched revealed a lot of controversy. That was the case, although the majority of stakeholders agreed on the need for introducing tighter measures for preventing and responding to major accidents. Against this background, non-governmental organizations were supporting changes at Union level, while authorities in the North Sea advised otherwise. The latter expressed

concerns, related to the setting of regulatory approaches, intended to be promoted by the new legislation, as they differentiate from their normative approach, based upon the building up of “goals to be achieved”.

Depending on the desired degree of change in offshore practices, the EU developed five possible policy options. Each policy option consists of a package of measures that will act upon the drivers of the problem. For doing so, the European Commission, based on industry performance analysis and on documented costs of past accidents, the estimated average annual economic losses and damage from offshore oil and gas accidents in EU range from €205 million to €915 million (I.A, 2.4.2). In the impact assessment, this scenario was used as the empirical baseline risk, for evaluating the different options. The outcome of this comparison permitted to conclude for the option to be retained.

The EU fixes as a main goal the achievement of a number of aims to be fulfilled by the implementation of a pledge of measures. In the subsequent development, our paper presents the measures identified. These measures shall be studied more exhaustively in other parts of the paper. At this stage of our analysis, our focus is restricted in the simple presentation of the measures, as they stand for a benchmark against which each of the policies is tested. The Commission’s reasoning consists into evaluating every policy option in accordance to the measures selected in order to assert the best policy option to be retained.

The measures go as following [12]:

- Detailed verification of the technical capacity of potential operator

- Establishing regular inspections and a penalties Regime
- Submission of formal safety assessments for acceptance by the regulator
- Extension of MHR into a comprehensive risk management model
- Extending EU practices to overseas operations
- Establishing a Competent Authority
- Establishing a platform for regulatory dialogue
- Comprehensive information sharing and Transparency
- Preparedness for effective emergency response to major offshore accidents
- Ensuring cross-border availability and compatibility of intervention assets
- Clarifying the scope of environmental liability

Having said that, we shall overview the five different options (0-3) provided under the Impact Assessment, provide for the description and the results of their evaluation against the measures prescribed.

The Option 0 reflects the actual status quo. As the Commission's experts underline, this *baseline scenario* does not satisfy any of the measures setting up the benchmark as overseen above. It goes without saying that the EU recognizes that the non-introduction of a new legal instrument does not allow to evolve towards the satisfaction of any of these criteria set down. Nevertheless, the Commission notes that "how measures may be progressively implemented to achieve higher levels of policy options"

[12]. Therefore, the baseline scenario figures the crucial need for moving on with the elaboration of a new public policy, rather than stands as a possibility of option itself.

The Option 1, labeled as the “*North Sea practice Basic*”, is modeled after what is known in the Nordic and British legislation, establishing a “risk based” approached. Although this scenario is recognized as “among the very best of the world” [12], transposing this scenario in the EU legislation does not allow to override insufficiencies of this legislation as reported from North Sea Member States. Consequently, it has been ascertained that, although regional disparities would no more persist, “a higher common denominator” in the EU” would not be obtained [12]. As far as concerning the measures satisfied under the implementation of Option 1, we shall retain that two of them are fulfilled, so as the Submission of formal safety assessments for acceptance by the regulator prior to operations with major hazards potential and the establishing of regular inspections and a penalties regime [12].

Moving on to “Option 1+”, “reported as “*North Sea model*”, recalls what has been described in the previous scenario. Two key issues are to be reported. The first core element on which the EU experts have contemplate is related to the improvement of the current legislation of North Sea countries, through the introduction of provisions already implemented in the EU, but dispersed in the various legal instruments overviewed in the previous section. Hence, it is admitted that the all over coherence and visibility of the EU legal framework shall not gained much under this scenario. Going through the measures satisfied, so as the “Detailed verification of the technical capacity of potential operator, the clarifying the applicability of waste legislation in the scope of environmental Liability, the preparedness for effective emergency response to major

offshore accidents, the ensuring cross-border availability and compatibility of intervention assets, the extending EU practices to overseas operations”, we shall reflect on the overall standard of regulation to be respected provided the EU has opted for this scenario. What it clearly comes out is the differentiation of standards applied to EU undertakings, acting beyond the EU boundaries, bound by the EU legislation and the third countries business actors, carrying on business outside the EU. These two categories of undertakings shall be in a differentiated situation, where EU business would have to comply with some more obligations compared to a third country business, due to the extension of EU legislation beyond its boundaries. More, we shall reflect whether these measures are similar to the ones reported by Nord Sea authorities as areas of improvement for national law [13]. These measures may to some extent satisfy concerns expressed from Norwegian authorities related to the major accident risk indicator, which is not improving, despite the organization efforts undertaken, for addressing technical issues. Three key figures that attract Norwegian authorities attention are hydrocarbon leaks; well control incidents and personal injuries. Since EU law covers the Norwegian industry, as far as concerning the activity of EU business actors within their jurisdiction.

Policy Option 2, named after as” EU best practice model”, is the one where the EU assumes the most the necessity of introducing new pieces of legislation in this area. It has the merit of having a broad scope of intervention, encompassing areas such as the industry culture, the reliability of systems and transparency. What distinguishes Option 2 from the previous scenario described is the methodological approach for setting up the legislation. Within this scenario, the “exemplary and proves practices” stand as a

model for producing rules to respect, where the legislator eschew the transposition of norms, preferring instead, working on “business models”. The measures satisfied under this scenario are the “*Extension of formal safety assessments in view of creating a comprehensive risk management model for EU offshore, establishing a Competent Authority in each jurisdiction, establishing a platform for regulatory dialogue and information sharing amongst jurisdictions, the preparedness for effective emergency response to major offshore accidents, ensuring cross-border availability and compatibility of intervention assets, clarifying fully the scope of environmental liability, the comprehensive information sharing and transparency*” [12]. What shall be retained is that Option 2 has the merit of promoting the “major hazard risk model”, associated with EU sensibilities to environmental aspects. The model was the more desirable for the European experts, since it allows gaining “transparency of performance of industry and regulators”, without introducing an unaffordable administrative burden on public authorities and industry players. What has been emphasized is that Option 2 does provide for reducing the risk of incidents considerably where enhances the legal framework for tacking probabilities of incidents to incur and mitigating its consequences. Shifting to Option 3, we briefly describe the “*EU Agency model*” that, as its name reveals, calls into for the necessity of the instauration of an EU body. Compared to other Options, the respect and fulfilled of measures described, is mostly satisfied under this scenario. The centralization of the action of the authorities and the harmonization of the implementing measures would allow gaining best results. As such, the measures satisfied and listed are verification of operators technical capacity, regular inspections and penalties regime, submission of formal safety assessments for acceptance by the

regulator, extending EU practices to overseas operations, establishing a competent authority, establishing a platform for regulatory dialogue, the preparedness for emergency response, the cross border availability of compatible assets and clarifying the scope of environmental liability [12].

At this stage of our development, we shall recall that the main objective of any policy action is the reduction risk of accidents and avoidance of human, environmental and economic losses. Keeping this in mind, we shall proceed with some final comments on each of the options, which have determinate the final option retained by the EU.

Hence, the Option O is disregarded, since it relies on EU Member States and industries good faith for enhancing innovation and upgrading national legislation, where the EU does not contribute to the achievement of this goal [12].

While EU discussed Option 1, they have recognized that a partial improvement of the safety cultural of the industry could be gained, where the institutionalization of groups of industry players, sharing knowledge on the topic, would permit national authorities to permit their selves imposing more inspection and penalties [12].

Option 1 + has been critically reviewed. This scenario does not improve technical aspects of the current legislation as much as it was wished. It has been admitted that it does clarify issues related to the liability where accidents occur, which influences the moral hazard risk. A second element of positive evaluation was the development of cross-border plans for common action in the offshore Safety area. The measures as described are in most cases not satisfied under this scenario. On the overall, this scenario, did gain the highest political support, where debated at the EU Council. It has the advantage of not intruding norms in national legislations which would affect the

clarity and comprehensiveness of rules implemented under the British legal frame. Consequently, the final text adopted is a Directive instead of a Regulation, adoption Option 1+, which does not intervene in matters of legal definitions and qualifications that would undermine the efficiency of the British legislation.

Option 2, although it figured as a good finalist candidate, was dismissed in the political arena. It called the ambition of “The enhanced sector culture renders an improvement in verifying technical capacity during licensing. The EU Offshore Authorities Group is established under EC auspices to the benefit of all MS, equally, and supported by obligatory standard reporting for the first time across any national borders” [12]. Yet, not all EU Member States were willing to proceed on this trend. Hence, the UK reticence for introducing reforms which would incur the risk of jeopardizing the application of the British legislation, in this area of law [14] “Whilst we support the drive/desire for continual improvement of national and international regulatory frameworks, our overriding concern is that the proposed Regulation will have an immediate detrimental impact on safety standards in the UK offshore oil and gas industry and, longer term, will provide no significant improvement in overall standards.”

Lastly, Option 3 was put aside, due to the high cost of its implementation. In any case, its adoption would only make sense, if Option 2 were opted. The introduction of an EU Agency was foreseeable for enhancing the implementation of common standards as described under Option 2. In accordance to what has been said previously, the discussion on Option 3 turns short. More, what has been underlined in respect of Option 3 is that “the introduction of an EU Agency has a destabilizing effect on existing mature regimes, especially in the North Sea and Italy, leading to a reduction in benefits

accruing to option 2 in respect of MS regulatory efficacy and though that on the safety culture of the industry” [12].

Option nr./ name	Industry additional costs (mil€/ year)	Resulting risk reduction (p.a.)	Risk reduction (% decrease baseline risk €205-915m)	Regulatory impacts	Comment
0, (no EU action)	0	0	0	Some improvements expected	In national legislations
Option 1 "North Sea basic"	36	7 – 30	3	MHR in EU law required by Directive 92/91/EC.	Reflects recognized good practice in several North Sea jurisdictions
Option 1+ "North Sea +"	52	25 - 109	12	Besides MHR a number of soft law measures. Better technical capability verification.	Clarifies the liability of operators for pollution; formal emergency assets and plans suitable for use across EU MS borders.
Option 2 "EU Best practice "	122 (add. 12-18 member state, add one off 18-44 S/U)	103 – 455 (avg 279)	50	Comprehensive package of reforms based on widely recognized global best practices in major hazard risk control.	Leads to further improvements also in the North Sea region and would create preconditions for EU-wide regulatory dialogue
Option 3 "EU Agency"	122 (add. 34 running costs , add one off 18-44 S/U, add 10 assets)	103 – 455 (avg 279)	50	Option 2 + EU agency to institutionalize and consolidate the reforms achieved.	Undertakes inspections, investigations, monitor and enforce consistency in performance, develop intervention capacity and assist capacity building in adjacent non EU countries.

Table 1: Risk Reduction, cost and Regulatory Impacts of Proposed Policies [2]

As the above table indicates, Option 2 can reduce the baseline risk (€ 205-915m) of offshore incidents in EU waters by (50%) expressed both in terms of likelihood and consequence of occurrence. Additionally, it introduces the major hazard risk model

enhanced with the environmental aspects – a priority element of the EU initiative [I.A. 7.1].

5. The liability sharing issue

One of the main achievements of the Directive at stake is the providing more clarity and legibility of the allocation and repartition of liabilities between the industry and the competent authorities, where it comes to the supervising of the risk and the consequences where an accident occurs.

This justifies why the European Union extends its competence to areas beyond its boundaries, taking into consideration that industry shall be kept liable for its operating model and provide information to European authorities of proven evidence of its capacity to operate in difficult conditions, such as those of the Artic areas.

Our development describes firstly, those obligations borne by the industry and the ones binding the States.

5.1. Obligations to the industry

The licensee is now required to demonstrate their technical and financial capacity beginning at licensing stage and throughout the lifecycle of operations. In case of environmental damage, the licensee bears the full liability, regardless if it was caused by the licensee or the operator (Article 7)

Major Hazards Reports must be accepted by the regulator before operations initiate and must now include major environmental consequences as well as safety.

In the event of a major accident, the operator or the owner must take all suitable measures to prevent its escalation and to limit its consequences and all installations

must have an emergency response plan for immediate response to major accidents. Companies are required to report on accidents on their installations even if the accident occurred outside the EU waters.

Following the lessons learned from the explosion on the Deepwater Horizon drilling rig, the EU takes a series of measures to improve safety in well operations. According to the principle laying down in article 15§3 of the Directive as adopted:

Member States shall ensure that the operator of a well prepares the notification to be submitted before starting well operations. Member States shall ensure that the operator of the well involves the independent verifier in planning and preparation of a material change to the submitted notification of well operations immediately informs the competent authority of any material change to the submitted notification of well operation [15].

The directive sets as minimum safety standards for all member states to require by the operator to bear responsibility to ensure that all suitable measures are taken to prevent any major accidents, including the escape of hydrocarbons to the environment. Member states are required by the Directive to impose specific requirements to the companies operating within their jurisdiction. These include the assessment of the technical and financial capabilities of the operators in order to ensure that they are able to cover potential liabilities that can arise by their operations. Furthermore, the operator must be approved by the licensing authority and submit to the competent authority a number of documents including: (Article 11)

- A corporate major accident prevention policy

- A safety and environmental management system applicable to relevant installation
- A report on major hazard and an emergency response plan

Operators and owners are required to inform their employees and contractors about the confidential reporting mechanism (article 22) and ensure this is included in relevant training and notices.

Major Accident Prevention Policy (MAPP) and Safety & Environmental Management System (SEMS)

Another important characteristic of this new directive is that it covers operations conducted by EU headquartered operators both within and outside EU waters, in accordance to Major Accident Prevention Policy (MAPP) and Safety & Environmental Management System (SEMS).

SEMS is a nontraditional, performance-focused tool for integrating and managing offshore operations. The purpose of SEMS is to enhance the safety of operations by reducing the frequency and severity of accidents [32]. It is part of the overall Management System and includes the organizational structure, responsibilities, practices, procedures, processes and resources for determining and implementing the MAPP [33].

The MAPP aims to achieve plant safety and ensure high Level of Protection for man and environment by setting the responsibility at corporate board level for ensuring on a continuous basis that the major accident prevention policy is suitable, implemented, and operating as intended. It is a formal document which applies for all establishments and

should include the operator's overall aims and principles of action with respect to the control of major accident hazards. [5] According to the new Seveso Directive (2012/18/EU), for the purpose of implementing the operator's safety management system, account shall be taken of the following elements [31]:

- The safety management system shall be proportionate to the hazards
- Organization structure and personnel roles and responsibilities;
- Identification and evaluation of major hazards
- Controls of the major hazards during normal operations;
- Management of change; adoption and implementation of procedures for planning - modifications to, or the design of new installations, processes or storage facilities - planning for emergencies and response
- Monitoring of performance
- Audit and review

We now shift to the obligations of the Member States.

5.2. Obligations to the Member States

Member states should examine the technical and financial liability of the licensee before permit is given to commence operations. When assessing the financial capability of entities applying for authorization, Member States should verify that entities have provided appropriate evidence that adequate provisions have been or will be made to cover liabilities deriving from major accidents [13].

Relevant authorities of the Member State ensured that early and effective public participation on the possible effects of planned offshore oil and gas operations on the environment. The public must be informed and the groups that are concerned should be identified. Relevant information about planned operations and the right to participate in decision-making must be made available to the public. Also, reasonable time-frames shall be provided allowing sufficient time for each of the different stages of public participation (Article 5).

Independent Competent Authority

The new directive defines clear and detailed responsibilities to the regulators. Member states need to establish a single National Competent Authority (CA), to ensure independent and objective administration of operations. According to article 8(1), these include the assessment and acceptance of reports on major hazards, overseeing compliance with the directive by the operators and owners, perform inspections, investigations and when needed, enforcement actions. It is the member state's obligation to take the necessary steps in ensuring that the CA is able to carry out its functions and duties and provide the resources necessary for its operations. Any kind of conflict of interest between regulatory functions of the CA and the regulatory functions related to the development and licensing of operations should be avoided to ensure objectivity and independence.

We shall address that the Competent Authority has a role in advising other authorities or bodies including the licensing authority and cooperate with other Competent Authorities and attempt to raise standards. Member States without offshore operations are still expected to cooperate in emergency response with nearby Member States.

More, In respect of article 22 of the Directive, Member States are required to create a mechanism that allows for confidential reporting of safety and environmental concerns and maintains the anonymity of the individuals concerned [6].

In addition to this, the Competent Authority has the power to require improvements by the operators and to prohibit the continuation of operations of an installation, in case the requirements of the Directive are not fulfilled or there is a reasonable concern about the safety of operations or installations. This can be concluded by the outcome of an inspection, by changes to notifications or by the review of major hazards report. In the case the CA is convinced that the operator can no longer comply with the directive's provisions, and then the licensee is called to propose a new operator as a replacement (Article 18).

After having overviewed the theoretical background, we shall dedicate a Section where, through a case study on the Directive, we explore the practical consequences of the Implementation of the new instrument for the industry actors, where called to bring their operational system in line with the new legislation.

6. Case study on Directive Implementation

In this Section, our interest is shifted to the exam of a Case study of implementation of the Offshore Safety Directive.

Our main goal is to assert the practical consequences of the introduction of the new legal frame in a specific fact pattern. This study shall enrich our ability to explore the new rules to apply, discuss on points where rules have evolved, underline positive

points and addressing difficulties that the industry or Competent authorities may have to overcome as well as the challenges to face.

Where choosing the fact pattern, which could stand as a test to evaluate the new legal instrument, we could confine to studying the introduction of the legislation in an area where no offshore activity has been launched yet, outside the provided legal frame. That would be the case for geographical areas such as Cyprus, where the EU law shall be enforced, in regard of the development of offshore industry; it is expected to apply even beyond EU boundaries and cover the activities of European undertakings involved into the exploration in North Africa, so as Egypt. Equal fact pattern is reproduced in the Baltic countries, where the development of offshoring activities is expected.

Nevertheless, we have privileged the study of a fact pattern where the offshore industry is already flowering. Such a fact pattern has the merits of proposing an existent legal framework where rectifications and adjustments shall be made on the rules to apply. Therefore, the reader's attention is drawn to those specific points where legislation is revised and practical consequences of this regulatory framework are pointed out. More, the new challenges for the industry sector are brought to our knowledge. In addition, the institutionalized organization of supervisory and monitoring authorities is not dismissed from our study. Having taken these elements into consideration, we have decided to assert the case study of a British undertaking operating in the North Sea. Therefore, we have to exam the impact of this legal instrument on the UK offshore oil and gas industry. Our case study is based upon a presentation made public by the British department of Energy and Climate Change (HSE) explored by the direction of Diving and pipelines Policy [15].

Consider a British controlled Oil Company is executing a contract of exploitation in the Norwegian Sea, which is applicable on the 20 of July 2015.

The first element to take into consideration is that the British corporation needs to monitor its compliance duties and share information on the current reform on EU law, with the competent authorities. Under the previous legal framework, the British corporation has as contact person, for the administrative monitoring, several authorities, quoting for the purposes of our case, principally the DECC and HSE, DfT, MCA, DEFRA.

After the introduction of the new Directive, the British competent authorities, which are entailed with the data and reporting monitoring, redesign their organizing structure. From now on, the DECC works in partnership with HSE, under a memorandum understanding, where the setting of common competent authorities arrangements is determined.

Consequently, the British Company needs to take knowledge of the new repartition of competences as defined under the Memorandum and readjust its own internal organizational structure, in order enhance an appropriate cooperation with its new counterparty. Under the new design of the British Competent authorities, DECC/HSE Competent Authority Management Board, designed after the organizational modeling of onshore COMAH Competent authority, delivers decision- making steaming.

Besides, the new repartition of competences between the two bodies has an impact on the security control inspection undertaken on the Company's platforms. Hence, the Corporation shall carefully study the new Memorandum to ensure that the controls operated are in line with the Memorandum. Under the new legal framework, a

presumption of joint DECCS/HSE visit whenever appropriate is valid. However, an early decision as to which regulatory partner leads the inspection is expected. Moreover, the Corporation shall ensure that the controller exercises no excess of competence specifically, for example, he has no competence on “personal safety issues” [15].

The British Corporation shall be expecting to have a more business friendly environment where it comes to administrative compliance rules. A new IT portal for all notifications and submissions related to the major hazard safety and environmental issues shall replace a disparity of portals. The same holds true for a unique CA website, holding all CA guidance and procedures, and also a single enforcement model. What shall be underlined is that from now on, processes and procedures for accepting and assessing safety cases and notification and so on are all codified under a single set of Competent Authorities assessment, instead of the two offshore Approved Codes of Practice [16].

A high importunacy revision of the current state of play for the British Corporation is related to its reporting obligations, as far as concerns the major hazards report and reporting major incidents. Where preparing the major hazards report, they shall keep in mind that the definition of “major hazard “under the Directive does not coincides identically with the one known under the British legislation [14]. Where it comes to the drafting of the report, only a short summary on environmental information is required. Moreover, a new reporting obligation is introduced, for reporting major incidents within a delay of 24 hours after taking the action. In addition to this, the reporting obligation of major accidents is extended to the worldwide operations of the Company [18].

The second element that attracts our interest is related to the revision of the licensing procedure. Under the new regime, the Company shall prepare one emergency response plan that covers, both environmental and safety arrangements, set up after two plans, one submitted to the HSE, as has been the case until now and an amended plan for DECC which takes into consideration the additional environmental requirements.

By additional environmental requirements, we basically refer to the amending of the Merchant Shipping Regulations of 1998, for extending its cover to new areas. As Ashurst London details [4], the amended text shall “cover the decommissioning of offshore installations, extend to the owners of non-production installations, who will be required to submit an Oil Pollution Emergency Plan (**OPEP**) for their installations, include a requirement to undertake a full review and resubmission of an OPEP every five years; and include powers to prohibit operations where no OPEP is in place” [4]. Besides, one major difference to be noticed is relevant to the amendment of the Environmental Liability Directive, where its territorial scope is extended to cover water damage to the marine waters of Member States, beyond the 12-mile zone.

Tracking back to the licensing procedure, we shall remark that the British Corporation shall need to phase some new challenges. The core issue is that licensees are liable for operations taking place in only licensed areas but still only the approved operator is liable for the operations conducted. Financial requirements are introduced, where the operator shall provide evidence for having the capacity to cover liabilities as defined by the Directive. Last but not least, the national Competent Authority has the right to initiate the revocation of operator’s approval if needed [17].

A last point to notify regards the condition of accident incurring and the cooperation of the British Corporation with competent authorities. The Company shall take into consideration that according to Preamble's point (60), where accidents during offshore an oil and gas operation affect a Member State's shores, no matter whether that State allows offshore oil and gas operations, still remains bound for providing prepared response and investigation to major accidents. Therefore, the Member State affected shall respond appropriately and cooperate through contact points with other Member States concerned with relevant third countries. Consequently, our Corporation shall expect the Member State having granted no license for its activity, to respond in case of accident and coordinate its communication with third countries if needed.

7. Conclusions

The European Commission, back in 2012, having taken knowledge of the available data on the past offshore accidents, as delivered by the pooling of information collected by its Research Institute, has arrived to the conclusion that offshore accidents are not as extremely rare as we may have assumed. “In particular, blowouts with severe consequences may not be as rare as initially thought. In depth investigation of these events is necessary” [26].

What the Commission attempts to achieve through its legislative proposal is summarized after its statement “to lower the risks of a major incident from occurring through best industry and regulatory practices. It also attempts to improve the response measures and liability provision to deal with a major emergency should the preventive measures fail; by improving and clarifying existing EU liability and compensation provision and implementing fully joint-up emergency response and preparedness in all EU offshore regions”. [30]

In the author’s view, it shall be admitted that the European Commission successfully identifies those main problems that the Oil and gas offshore industry is currently facing. Nevertheless, the approach adopted for tackling these issues, as it has been described in this Paper, may call the reader to contemplate on further eventual improvements

A first observation stems from the Directive’s impact. As it has been stated, “Together with the UK, the Netherlands and Denmark, Norway lobbied hard and what eventually

passed as Directive 2013/30/EU was amended strongly such that those North Sea states (which make up 90 per cent of the EEA's oil extraction) could essentially ignore it"[28]. This statement reveals the high skepticism the Directive's approach has cultivated among the main actors of offshore industry in the EU. The latter, based upon their enriched experience on this topic, demonstrate reticence in regard of this legal instrument.

As it has been demonstrated through the study of policy options explored by the Commission, the elaboration of a EU legal instrument where most of the objectives flagged would be obtained appeared as too much intrusive. The EU, that has made some thoughts on setting up an EU Agency for ensuring its control in this sector, rapidly realized that such a scenario would not be politically feasible.

The initial attempt of the EU, so as proceeding by regulation, which would applied to all Member States and Norway as well, could have ensure the centralizing control of offshore health and safety and environmental protection in Europe. Yet, by doing so, the "Commission recognised and applauded the extremely high safety standard of North Sea oil producing countries and in fact 'cherry picked' from the various regimes – particularly the UK – to produce the draft regulation. Its intent was to ensure that all of the other EU countries conducted offshore operations to the same standard"[29].

This approach was some how not convincing. The British adressed that the new legal instrument was dismissing the "goal-setting" framework, that attests the improvement of UK law after the Piper Alpha Disaster, as endorsed by Cullen Inquiry view on the topic. The second ground of criticism arises from the unjustified addition administrative burden to be borne by Member States ((the UK, Netherlands, Denmark and Norway) where the

latter already have an existing regulation, embedding “gold standard” safety regimes, to be re-drafted with costs, for no good reason.

A subsequent ground of discordance between the UK government/ Oil and Gas UK and the European Commission is linked to the timeframes of implementation of the new legal instrument. The British defeated this schedule as “unrealistic”. Since few countries have already implemented the Directive, this holds to some extent true.

The main ground of dispute remains the evaluation of the quality of the normative rules proposed, contested for “poor drafting and a lack of interpretative guidance” [29] arguing, as long as no more certainty is obtained, confusion may persist and on going operations would face problems.

On the overall, in my opinion, the adoption of the 2013 Directive is a positive step for the offshore safety. It shall quite improve the system of those countries such as Italy, Spain and the Baltic States, other than the Nordic countries.

Moreover, the Directive covers to a good extent the major hazards issue and deals with the major accident risk, providing for further improvement of the actual regime applied. The main contribution of this text is gaining greater transparency on the functional model of the industry and the operations accomplished by regulators. The MAAP is an illustration of that, so as “the best practises” concept introduced. The EU does not determine the rules the offshore industry shall respect but rather defines that the latters shall act according to the “best practices”. Yet, Commission specifies with high precision in which areas this shall be the case, for matters related to Safety, health at

work. We limit our drafting on quoting the reference of these points, so as Preamble points 14,18,25,26,29, 30,31,37,47 and articles 2§8, 19§7, 27§3 and Annex IV (2).

The Oil and Safety Directive is therefore, a decisive step for enhancing our understanding and practices in this area, despite punctual insufficiencies and luckiness addressed.

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31. Directive 2012/18/EU of the European Parliament and of the Council of 4 July 2012 on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32012L0018>.

32. Safety and Environmental Management Systems

<http://www.bsee.gov/Regulations-and-Guidance/Safety-and-Environmental-Management-Systems---SEMS/Safety-and-Environmental-Management-Systems---SEMS/>.

33. Major Accident Prevention Policy (MAPP) and Safety Management System (SMS) in the context of the Seveso II Directive http://web.rec.org/documents/ECENA/training_programmes/2008_03_bristol/seveso_presentations/04_seveso_mapp_sms.ppt.

34. Proposal for a regulation of the European parliament and of the council on safety of offshore oil and gas prospection, exploration and production activities Brussels, 27.10.2011.