

RISK REGULATION IN THE NORTH SEA: A COMMON LAW PERSPECTIVE ON NORWEGIAN LEGISLATION

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ABSTRACT

The paper include an assessment of the development of the Norwegian regulatory system based on legislative written text, but also compare the impact (efficiency/effectiveness) of the regulatory regime. The theoretical basis is a distinction between the concept of common law as opposed to statutory law. The current legislation related to safety in the petroleum sector in Britain (UK) as well as in Norway (NOR) has traits from both those two legislative concepts; though the British judicial and administrative traditions are relying much more upon the concept of common law than the Norwegian are. The assessment finds traits of the common law principle in the Norwegian legislation as well, partly because of the strong bilateral influence between the UK and Norway in the petroleum sector and possibly due to an increasing use of legal standards in the legislative texts used for safety regulation purposes..

1. INTRODUCTION

The concept of common law is closely connected traditionally to the Anglo-American judicial systems (Gardner, 1999). The notion may signify somewhat different meanings in different contexts. Here, we use the concept of common law as a notion for legal systems that relies heavily upon norms defined by previous decisions made by courts or even by governmental, administrative practice (e.g. by supervisory organisations dealing with judgment of real situations, not only normative interpretation of the regulation).

In Britain (England), which is a country that typically adheres to the concept of common law, there are written norms expressed as acts or statutes. Moreover, these written norms (e.g. made by Parliament or by any subordinate institution by authority), will have an overriding effect on any conflicting norms developed based on common law. However, the concept of common law is very important as it defines the legal space even when no explicit statutes, acts or regulations are directly applicable. Based on this concept, it is also possible to gain more substantial understanding of the extent and interpretation of generalized normative expressions in the written legislation.

The purpose of this paper is to conceptualise the robustness of the risk regulation regime in the petroleum industry based on the legal framework by making a distinction between the Anglo-American concepts of common law as opposed to statutory law. We believe that such a distinction may be of importance due to the strong bilateral influence between the UK and Norway in the North Sea.

2. THE INDUSTRIAL CONTEXT

During the last part of the 20th century, the petroleum industry transferred its operations to challenging deep-sea areas like the North Sea. British and Norwegian authorities had to develop regulatory practices that could face the transfer of new organisations and technology into new working operations (Olsen and Lindøe, 2008). The first drilling operation on the Norwegian side started in 1966 with technologies used by US oil companies in the Mexican Gulf. Production started in 1971, and in the following years, a number of major discoveries were made. In 2006, Norway was the third largest exporter of natural gas and the sixth largest gas producer in the world. Petroleum activities have contributed significantly to economic growth and financing of the Norwegian welfare state. It is currently the largest industry and in 2007, the sector accounted for 24 per-cent of value creation in the country and of 48 per cent of the export value (NPD, 2008)

From the Norwegian governmental administrative and supervisory agencies, the foreign companies with their US inspired risk regulatory practices were met with an immature mixture of legislative frames, partly derived from the maritime sector and partly from the current onshore working protection legislation. Both these regulatory regimes were characterised by heavily detailed norms formulated as written legislation through acts and regulations. During the first decade of petroleum activities on the Norwegian continental shelf, this approach to safety regulation showed partly to be irrelevant and partly ineffective.

From early in the 1970s, a strong and independent regulatory and supervisory authority, Norwegian Petroleum Directorate (NPD, Oljedirektoratet), was established, and soon came to play an important role in the development of a new safety regulation regime on the Norwegian continental shelf. This institution soon made close contacts with its British counterpart. The safety regulation functions of NPD were separated into a new organisation, Petroleum Safety Agency Norway (PSA) in 2004. This separation has not led to any significant changes in regulatory and supervisory policy.

Two major accidents on the Norwegian continental shelf, the blow-out on the Bravo platform in 1977 and the capsizing of the Alexander Kielland platform in 1980 (123 oil workers died) gave momentum to rethinking and redesign of the regulatory principles; a process where the relatively strong and autonomous NPD should play a major role. On the British side, the Piper Alpha disaster followed in 1988. These major accidents led to political processes starting the development of new regulations. In Norway, the government allocated resources for a research program, "Safety at the Shelf" (1978-1981) in which NPD, the industry and research institutions prepared for new principles of regulation.

Phase	Major offshore accident	Regulator and landmarks
Entrepreneurial 1970-1976	Fire on Ekofisk A platform (1975)	First Act (1963) Robens Committee in UK (1972) Regulations (Oct. 1975 and July 1976) relating to safe practices etc.
First consolidation 1977-1980	Blow out on Bravo platform (1977), Fire on Statfjord A platform (1978), Alexander Kielland disaster (1980)	Work Environment Act (1977)
Maturation 1981-1988	Piper Alpha disaster (1988)	Principles of internal control (1981), Petroleum Act (1985)
Re-organising 1989-1996		Petroleum Act (1996)
Second consolidation 1997-	Helicopter crash at Norne (1997)	Rules and regulations (2001)

Figure 1: Phases of offshore development, major development and regulations

From early 1970s until now, the regulatory regime has developed through different phases in a dynamic relationship between regulator and the regulated as summarised in figure 1 (Ryggvik, 2000; Hovden, 2002).

In the same period, a radical regulative shift took place regarding the OHS regulation in the two countries. In 1972, Robens Report from the UK recommended that, rather than specifying standards and procedures to ensure the safety of their workers, legislation should specify the OHS goals to reach and to require employers to ensure the safety of their workers.

Norway developed one of the world's most stringent labour legislations, materialised in the Work Environment Act of 1977, based on the tri-part participation with an unionized industry with complete collective bargaining rights and a comprehensive network of safety representatives recruited from the unions (Beck, Giddens *et al.*, 1994; Karlsen & Lindøe, 2006). This act, even though describing cooperation requirements between the different players on the work place, relied heavily upon Norwegian tradition in risk regulation emphasising specific, explicit norms provided through written legislation.

The Norwegian offshore petroleum industry and comparative research from the Norwegian continental shelf (NCS) have been explored and analysed for more than 20 years at the International Research Institute Stavanger and University of Stavanger. Major research programs have been funded by the state and the industry.

3. LEGAL PERSPECTIVE

The concept of common law is not so much a part of Norwegian legal practice as of the British tradition. A general principle in Norwegian legislation is that any decision by a court or any public authority must have its basis in written law (statutory law) to be binding for private persons or organisations. The great emphasis upon the written text is based on its heritage from the French-German legal tradition. Throughout the history of legal science in Norway, it has been discussed to which extent generalised expressions could be used when defining binding legal norms. To some extent, generalised expressions are known from criminal law (e.g. negligence) and in tort law (e.g. reasonable man standard). However, for many years, such expressions were avoided in safety regulations related to industry and transportation in Norway. Even today, the use of such generalised expressions is often regarded as bad legal craftsmanship as they may be claimed to diminish the legal safeguarding of companies and persons. This view is for example expressed in a letter dated 20 March 2007, from the Legal Department at the Ministry of Justice to Petroleum Safety Authority Norway commenting on a new set of regulations related to petroleum activities in Norway.

However, in the last part of the 20th century there has been an increase in the use of such formulations in safety regulations in different sectors in Norway, in legal theory, these are often described as legal standards, meaning standards signifying a very explicit norm, even though linguistically quite broadly formulated. According to legal science, a legal standard may be defined as a written norm seeking its content outside the legal writings, for example in what is regarded as sound professional practice or reasonable man standard in a specific field of activity. Already in the 1930s, it first was argued that such legal standards are traits of the common law concept in the traditionally statute-oriented Norwegian legislation (Doublet, 1995; Bernt, 1999).

A possible advantage to the use of legal standards, compared to explicit requirements, is that legal standards make the connection between the regulatory framework and the regulated activities obvious. In addition, they open up for more updated regulatory practices than what is possible when relying solely upon written statutes with detailed content. The last option will usually suffer from a lack of updated norms because of rapid technological and organisational development. The use of legal standards also supports the politically desired development in a direction of "multilateral" regulation, involving the companies and their employees as well as the regulating authorities. A possible disadvantage is that they may open up a multitude of possible interpretations if regulatory practice through court decisions, supervisory activities or sector involvement is at a minimum level.

4. TEXTUAL MATERIAL AND METHOD

Three different sets of Norwegian legislative texts are relevant. It is the legislation before 1985, dependent upon the act of 21 June 1963 nr. 12, related to exploitation and exploration of submarine natural resources. Then there is the legislation dependent upon the act of 22 March 1985 nr. 11, related to petroleum activities, and at last, the legislation dependent upon the act of 29 November 1996 nr. 72, related to petroleum activities.

The method used in this investigation was to analyse the legislation as written text. We aimed to isolate and interpret fragments of text in the Norwegian legislation related to petroleum activities for traits of legal standard expressions through close reading of sections of the regulatory texts chosen as described below. When reading the

legislative texts, we had access not only to the texts of the acts and regulations themselves, but also to the published preparatory material for the decisions on the acts by Parliament.

We will limit the analysis to the general statements on requirements related to governance of safety issues in the relevant acts, and further to look into specific statements on requirements for risk analyses and emergency preparedness in the underlying regulations. We will not here consider legislation with specific relevance *only* for the working environment.

Where we have had access to Norwegian legislative texts translated by the competent authorities, they have been used. Otherwise, the translation was done by us.

We expect to find an increasing use of textual elements containing expressions that are to be interpreted as legal standards in the newest set of legislation compared to the legislation from the early 1980s.

5. FINDINGS

The first set of analysed texts constituted the act of 21 June 1963 nr. 12, related to exploitation and exploration of submarine natural resources, Royal decree of 8 December 1972 (section 39), underlying regulations on safety of 3 October 1975 (section 4) and 9 July 1996 (section 5).

The act of 1963 has no explicit expressions related to safety issues. This is merely a text concerning the state's rights to develop the petroleum resources on the Norwegian continental shelf. Though the committee for foreign affairs in the Norwegian Parliament in their statement before passing the act acknowledged the need for further regulations, saying that *the Committee is aware that this is a legislative area where it is desirable to gain some further practical experience before entering legislation that is regulating all the situations that possibly can occur* (Innst. O. nr. 159: 1962-63).

This act was originally proposed as a provisional act, but Parliament decided to omit the word provisional from the name of the act. Perhaps this was a wise decision, as this act was not supplemented by specific requirements on safety matters through additional acts until 1985. However, the act was supplemented by a set of detailed regulations.

Among these regulations, the regulations of 3 October 1975 related to safe practices, etc. in exploration and drilling for submarine petroleum resources and the regulations of 9 July 1976 related to safe practice for the production of submarine petroleum resources are the most important regarding safety and emergency preparedness. These two sets of regulations are parallel in content. They describe requirements related to the design of safety systems and the content of different plans, but they do not set up any real requirements related to safety performance.

This may be illustrated by the following citations from the regulations of 3 October 1975. Section 37a deals with emergency preparedness: *The licensee shall maintain at all times a state of preparedness making it possible, in the event of an accident or dangerous situation, quickly to bring the situation under control and minimise the damage caused by such accident or dangerous situation. The licensee shall prepare an emergency plan for use in the event of accidents or dangerous situations. The plan shall cover the following main headings: a) Situations that have involved or may involve personal injury, serious illness, or loss of human life. b) Situations that have involved or may involve pollution. c) Situations, which have or may put a drilling platform partly or completely out of operation. The Ministry may decide that the emergency plan shall comprise other accidents and dangerous situations besides those mentioned above.* It is also interesting to note the degree of details specified in the following sections, e.g. as cited from section 39: *...and shall contain:...- Plan of action, describing precisely the alarm and communication systems, including the system for notifying the authorities, each person's duties, when and how the emergency equipment is to be employed and action carried out, rules for minimising the harmful effects of particular accident or dangerous situations, and rules for ceasing action.*

They also emphasise the role of the regulator to approve the plans made by the licensee, e.g. section 40: *All alterations shall be submitted to the Ministry or its authorised representative for approval by the public authorities concerned.*

Though the connection with updated technology is required, cfr. section 41: *The contingency plan shall always be based on the best known technology and equipment available.*

The second set of analysed texts is the act of 22 March 1985 nr. 11, related to petroleum activities with connected textual material in preparatory texts and subsequent regulations. The process before the Parliament

passed this act was heavily influenced by rapid technological development in the Norwegian petroleum sector, and not least by a number of small and some large accidents as described above. This is well reflected in the preparatory texts for Parliament (Ot. prp. nr. 72: 1982-83). In this act, there are specific requirements related to safety in several sections, especially sections 45 and 46. In section 45, it is explicitly stated that *activities pursuant to this Act shall be conducted in a prudent manner and shall take due account of the safety of personnel and environment*. And further in section 46, it is stated that *The licensee shall at all times maintain efficient contingency preparedness plans with a view to countering accidents and emergencies, which may lead to loss of lives or personal injuries, pollution or major damage to property*.

In the preparatory texts, these requirements are partly described as a continuation of the principles from the former regulations of 1975 and 1976 (Ot. prp. nr. 72: 1982-83) and partly as generalised expressions that formally should be unnecessary in an act (NOU 1979:43).

In addition, this act is supplemented by a set of regulations with detailed requirements, many of which concern safety issues. Here, the regulations of 18 March 1992 related to emergency preparedness in petroleum activities and the regulations of 28 June 1985 related to implementation and use of risk analyses in the petroleum activities shall be further commented. The latter one is of particular interest, as it explicitly requires the operator to define his or her own objectives, cfr. section 10: *In order to avoid or withstand accidental events, the operator shall define safety objectives to manage the activities*. Further, the authorities do not require any specific content, but let that come as a result of the analyses, cfr. section 12: *Risk analyses shall be carried out in order to identify the accidental events that may occur in the activities...* It is also required from the operator to define acceptance criteria (section 11). There is no requirement for the authorities to approve the plans, but interestingly, section 9 states this on documentation: *The type and extent of documentation as well as the time for its submission shall be stipulated by the Norwegian Petroleum Directorate in consultation with the operator*. The same requirement is given in regulations on emergency preparedness.

In the regulations on emergency preparedness, it is worth noting that the use of functional requirements becomes imminent. This may be illustrated by citing section 14 on communication: *The communication within the emergency preparedness organisation shall ensure effective administration and control of all emergency preparedness resources when situations of hazard and accident have occurred. The means of communication and their use shall ensure unambiguous and effective transmission of information by means of light, sound, writing, signs and symbols*.

In this way, functional requirements emerge as legal standards not only at the planning and strategic level, but also on an operational and tactical level.

The third set of analysed texts is the act of 29 November 1996 nr. 72, related to petroleum activities with connected textual material in preparatory texts and subsequent regulations. The principle of conduction of activities in a prudent manner is continued, but the most interesting observation in this act is that this principle is now formulated in relation to three different perspectives. First, it is applied to the use of petroleum resources in section 4-1: *Production of petroleum shall take place in such a manner that as much as possible of the petroleum in place in each individual petroleum deposit, or in several deposits in combination, will be produced. The production shall take place in accordance with prudent technical and sound economic principles and in such a manner, that waste of petroleum or reservoir energy is avoided. The licensee shall carry out continuous evaluation of production strategy and technical solutions and shall take the necessary measures in order to achieve this*.

Then, it is related to the safety issues. This is explicitly formulated in section 9-1 in this way: *The petroleum activities shall be conducted in such manner as to enable a high level of safety to be maintained and further developed in accordance with the technological development*. In section 9-2, there are similar requirements as in section 46 of the former act.

Lastly, it is expressed related to the total activity, not just the safety issues in section 10-1, in this way: *Petroleum activities according to this Act shall be conducted in a prudent manner and in accordance with applicable legislation for such petroleum activities. The petroleum activities shall take due account of the safety of personnel, the environment and of the financial values, which the facilities and vessels represent, including also operational availability*. Here, it is followed by requirements related to management of the activities in section 10-2: *The licensee shall, unless otherwise decided by the Ministry, have an organisation, which is capable of managing independently the petroleum activities from Norway. To achieve this, the Ministry may stipulate specific requirements in respect of the organisation and the capital of the company. The licensee shall see to it that the circumstances permit trade union activities to take place among his own employees and the personnel of*

contractors and sub-contractors in accordance with Norwegian practice. The petroleum activities shall be conducted from a base in Norway. The licensee may be ordered to use bases designated by the Ministry.

Parallel to this enhancement of the principle of prudent activities in the act, the degree of details in the subsequent regulations is reduced. In the newest set of regulations, requirements related to safety and emergency preparedness are not separate, but included with the total set of requirements related to petroleum operations. In the regulations of 31 August 2001 related to health, environment and safety in the petroleum activities (framework HSE), the requirement on prudent activities from the act is further specified as this in section 8: *Petroleum activities shall be safe and prudent, both in relation to an individual and an overall consideration of all the factors of importance to planning and implementation of petroleum activities as regards health, environment and safety. The distinctive character of the individual enterprises together with local and operational conditions shall also be taken into account. A high level of health, environment and safety shall be established, maintained and further developed.* In this way, the safety requirements are connected with the ordinary operational requirements.

It is further noteworthy that in the framework, HSE specifies principles for risk reduction in section 9: *Harm or danger of harm to people, the environment or to financial assets shall be prevented or limited in accordance with the legislation relating to health, the environment and safety, including internal requirements and acceptance criteria. Over and above this level, the risk shall be further reduced to the extent possible. Assessments on the basis of this provision shall be made in all phases of the petroleum activities.*

In effectuating risk reduction, the party responsible shall choose the technical, operational or organisational solutions, which according to an individual as well as an overall evaluation of the potential harm and present and future use offer the best results, provided the associated costs are not significantly disproportionate to the risk reduction achieved.

If there is insufficient knowledge about the effects that use of the technical, operational or organisational solutions may have on health, environment and safety, solutions that will reduce this uncertainty shall be chosen.

Factors, which may cause harm or nuisance to people, the environment or to financial assets in the petroleum activities, shall be replaced by factors, which in an overall evaluation have less potential for harm, or nuisance.

The tasks for the responsible company are further specified in section 4 in regulations of 3 September 2001 related to management in the petroleum activities in this way: *The party responsible shall stipulate and further develop objectives and strategies in order to improve health, environment and safety.*

The operator shall ensure that there is accordance between short term and long term objectives within different areas, at different levels and between different participants in the petroleum activities.

The objectives shall be expressed in such way as to make it possible to assess to what degree objectives have been achieved. Further in section 5: The party responsible shall set internal requirements, which put the regulatory requirements in concrete terms, and which contribute to achieving the objectives in relation to health, environment and safety, cf. [Section 4](#) on objectives and strategies. If the internal requirements are expressed functionally, criteria of fulfilment shall be established.

The operator shall ensure that there is accordance between his own requirements, as well as between own requirements and the requirements of other participants.

It is also of interest that the specific requirements related to emergency preparedness as stated in the regulations of 3 September 2001 on conduct of activities in the petroleum activities are held at a minimum, focusing on the principles, cfr. sections 64-68. However, the regulatory requirements are further enlightened by advice that is more detailed given as a supplement to the legal binding text.

6. DISCUSSION

Through close reading of relevant acts and regulations related to risk analysis and emergency preparedness, it is obvious that there has been a development in the direction of increased use of functional requirements through reference to legal standards. Parallel to this, there has been a decrease in the use of specific requirements in the legislative texts.

This development is not only detectable in the acts at a superior level, but also in the operational and technical regulations underlying the acts.

Legal standards may be regarded as traits of the common law principle in Norwegian legislation (Bernt, 1999). The increasing use of such standards in Norwegian petroleum legislation may be interpreted because of close contact between the regulators in Norway and Britain and the closeness of operations on the continental shelf. However, one also has to consider that legal standards have been increasingly used in other legislative texts related to safety in the same period. For example, the principle of sound professional practice was introduced in health care through the act of medical practitioners in 1980.

Using legal standards, it is possible to regulate activities of a very complex organisational and technical nature. They also open up for the regulator to keep updated with rapid developments due to scientific and industrial progress in a much better way than through specific requirements that almost always will tend to become outdated quickly. The use of legal standards in regulatory practice requires a high level of trust and confidence between the regulator and the regulated activity. It also requires mature actors with a high competence and broad willingness to keep professionally updated continuously.

However, the pattern of actors is now changing. A few years ago, there were 14-15 oil companies operating on the NCS, all of them large, competent and well-organised companies. Today, this number has increased to 70, and many of these are small companies without much experience. Including the supply industry and shipping companies, the PSA currently has supervisory responsibility for 110 companies onshore and offshore. The pressure in the industry is intense; there is stiff competition for the needed competence and capacity. *Handling such a situation is quite demanding*, says the CEO of PSA, Magne Ognedal. *We have to look into whether we have the optimal regulatory requirements for the world we live in and make sure we have the right tools* (www.ptill.no/news.23.06.2008).

The safety regulation on the NCS has been built on the principles embedded in concepts coined as “internal control” or “enforced self-regulation”, implying that part of the regulatory process is delegated to the stakeholders, but under condition given by the authority (Sinclair, 1997; Baldwin & Cave, 1999). Within this framework, PSA has balanced its role as reactive controlling inspectors with facilitating dialogues with industry and unions based on educative methods and principles (Bruhn, 2006). Developing and practicing the regulation has been based on the tripartite cooperation of regulator, enterprise and unions, following the rules of organising safety in workplaces and referred to as the “Nordic model” (Kettunen, 1998; Karlsen & Lindøe, 2006). This practice is specified in the Petroleum Act of 1996, sec. 10-2: *The licensee shall see to it that the circumstances permit trade union activities to take place among his own employees and the personnel of contractors and sub-contractors in accordance with Norwegian practice.*

The legal practice of “self-regulation” on NCS has been developed over two decades as a mutual effort within the tripartite relationship of actors with the last version of regulation from 2001. A process of revision has been taking place, and the new regulation was planned to be in place in 2007. By submitting the new text to the legal Department of the Ministry of Justice, they gave critical comments to many paragraphs in the proposed regulation. They made objections to a form of regulation that implies that legal obligations be determined by direct contact between the civil servant and the enterprise. The critique was further related to structure, substance and form. The implication is that leading Norwegian legal experts in the Ministry oppose the principles already embedded in the current regulation.

7. CONCLUSION

In the coming years, a new risk-regulation regime was developed on the NCS, quite different from the US, where the safety authorities based their control strategy on suspicion toward the industry and prescriptive regulations with a rewards and punishment approach (Baram, 2006).

The new regime put high emphasis on functional requirements given through legal standards. This demands actors in the petroleum sector with high competence and willingness to improve continuously. Under this assumption, it may be expected that this form of regulation leads to a continuously updated and effective regulatory regime.

The new attitude from legal authorities may be interpreted as an expression of the statutory law tradition, requiring as explicit legislative texts as possible. It may be disputed though if this approach will lead to increased safety, especially when compared with the experiences in the 1970s. The dispute between a common law versus statutory law principles is therefore an interesting legal case in an industry declared by the authorities as a world leader regarding safety.

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