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## Survival versus safety at sea. Regulators' portrayal of paralysis in safety regulation development



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### ABSTRACT

Safety regulation can decrease the frequent accidents in sea transportation, but aspects of the existing regulations are found to contribute *negatively* to safety. Earlier studies suggest other framework conditions to influence maritime safety more than regulation, without reviewing the relation between the maritime context and regulation. Therefore, this paper explores maritime regulators' safety-related decisions. The data consist of interviews with regulators and facts about other actors (i.e., politicians, shipping companies, interests groups, and the media) in the maritime transport arena. The findings, which are based on safety, decision-making, and arena theories, are not described by earlier research.

Primarily, I find that a paralysis constrains safety regulation. Despite wanting a safe industry, transport competition leads the maritime actors to disagree about the priority of safety or profit, which paralyzes safety regulation development and constrains the regulators and their discretionary space (where they enforce the right safety regulations for the right sectors). Many of the decision criteria with which regulators must comply are forced upon them by others, so that regulators see them as constraints. Safety regulation is further weakened when market forces influence both regulation-making and enforcement. The findings demonstrate that industrial or political actors do not prioritize safety in practice; however, safety priority could lift maritime transport above the choice between safety and survival.

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### 1. The regulator's lot

The safest form of transport is by sea, but the number of serious maritime incidents has risen over the last decade (IMO, 2012). Globally, there are several large-scale accidents every year, such as the disasters of the ferry *Sewol* and freighter *Grand Fortune I* in 2014. In 2013, at least 69 large vessels were declared total losses, with over 600 casualties (Maritime Bulletin, 2014) out of approximately 1,300,000 seafarers worldwide (IMO, 2012). This paper explores safety regulation from the viewpoint of the regulators.

Regulation can be an important defense against organizational accidents if one has resourceful regulators with discretionary space (Reason, 1997; Rasmussen, 1997; Walters et al., 2011). Regulation motivates maritime organizations to take safety precautions (Kongsvik et al., submitted for publication; Knapp and Van de Velden, 2011), but the trend toward auditability and accountability as safety measures can marginalize useful safety practices and improvisation abilities (Almklov et al., 2014; Dekker, 2014; Størkersen and Johansen, 2014; Bieder and Bourrier, 2013). In spite of such secondary effects, research shows this type of regulation

continues due to *lack of* resources: maritime deaths in poor sectors are not given public attention, let alone funding for regulatory development (Lindøe et al., 2011). Societies tend to be skeptical about expanding regulation in general, so regulators are often lagging compared to industry innovation (Walters et al., 2011; Johnson, 2014). Rather, multiple transnational actors in global industries come in, alongside the national regulators, with heavy means to influence standards and safety measures, thus adding complexity and uncertainty, and corrupting the regulators' work (Bratspies, 2009). At the same time, legislators and other governmental institutions with different objectives give the regulators responsibilities without authority (over legislation, insurance, market forces, etc.), and then tend to blame the regulator if a case gets negative attention (Baram and Lindøe, 2014). Reason (1997) labels it "the regulator's unhappy lot": regulators are to take care of societal interests, but with limited discretionary space, funding, or understanding. No wonder other framework conditions seem to influence maritime safety more than regulation (Kongsvik et al., submitted for publication; Knudsen and Hassler, 2011; Walters and Bailey, 2013). Earlier research does not explain further how the maritime context influences the regulators.

In this paper, I explore maritime regulations by asking Norwegian maritime regulators *what affects the regulators' decisions when*

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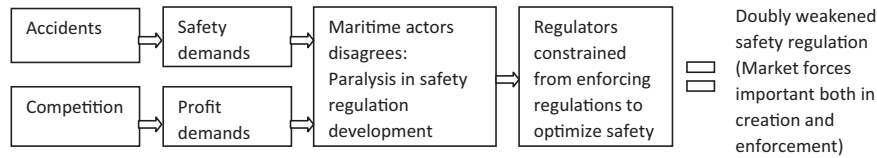


Fig. 1. Competing problems and priorities leads to weakened safety regulation in maritime transport.

facilitating for safe maritime transportation? I find that transport competition makes many maritime actors prioritize profit over safety regulation, which paralyzes safety regulation development and constrains the maritime safety regulators (see Fig. 1).

In the analysis, I use literature about safety, decision-making, and arena theory, which is explained in Section 2. As in arena analysis (Georgakopoulos and Thomson, 2008), my data materials consist of document analysis and interviews, though the interviews are only with the regulators (see method description in Section 3). The regulators' descriptions of their own decision-making are voiced in Section 4, categorized by the arena actors to which they relate the subjects, together with some information about the actors. In Section 5, the regulators' decision-making is analyzed, followed by a discussion of the situation of the maritime arena, to find out what affects the regulators' decision-making and to present the contents of Fig. 1.

## 2. Literature about regulatory decision-making in an arena

Decision-making and risk literature often mention that regulators are dependent on politicians and other actors around them. Yet studies seldom provide insights about the regulators' perspectives on their regulation and the context. To analyze what affects the regulators' decisions, I use an arena model (Renn, 1992) as a starting point to employ further decision-making theory (literature overview by Rosness, 2009).

As *safety* is a background subject here, this term must be clarified first (according to Rasmussen, 1997, 184): "Safety depends on the control of work processes so as to avoid accidental side effects causing harm to people, environment, or investment". A business can be safe to both people and economic profit. However, sometimes all negative side effects are unavoidable, and a value conflict arises over which of the positive effects one should prioritize (for instance, personal health or environment). Whether an operation is safe or not depends to a large degree on decisions made, before and during the operations, by groups of personnel at multiple societal levels and settings.

### 2.1. The arena approach

The arena approach can help explain group responses to risk issues and interpret institutional and political actions (Renn, 1992), such as the regulators' decision-making. An arena is a sphere or domain with certain participants, policies, interactions, and decision-making processes (Georgakopoulos and Thomson, 2008). In an arena, an actor has *discretionary space* – room for decisions and actions within a system (Dekker, 2012). The arena model (Fig. 2) illustrates patterns of such actors and the activities between them.

Arena theory is based on assumptions that the actors can influence and convince their decision-makers (by arguing or through public pressure) if they have sufficient resources available (Renn, 1992). Formal power is often not enough to get successfully one's preferred actions acted out in an arena. Authority must be accompanied with other valuable resources, such as social influence or financial capacity. Many arenas are so full of political constraints that decisions are not necessarily made in accordance with the val-

ues of any of the participants. If none of the actors can dominate the process, there can be a case of *political paralysis* and issues can remain unresolved (Renn, 1992). Political paralysis occurs when several actors fail to cooperate and decide on collective measures because of different values and goals.

### 2.2. Decision-making on the regulatory level(s)

Decision-making is seen as an individual or collective activity, over shorter or longer time, more or less intentional, constrained and shaped by context and individual qualities (Rosness, 2009). A decision is close every time an actor can choose to act out other alternatives. It is difficult to separate the decision from the decision-making process, and it is important to take into account the social context of the work (March, 1994; Rasmussen, 1997; Rosness, 2009).

Rosness (2009) characterizes decision settings based on proximity to the hazard and level of authority.<sup>1</sup> Currently, regulatory institutions are juggling between *political arenas*, *business management*, and *administrative and technical support functions*. Table 1 shows the dominant constraints and decision criteria in these decision settings (Rosness, 2009).

In the *business management* setting, managers rely on information from subordinates, and might not be able to weigh a full set of pros and cons. They are concerned with economic outcome and can be motivated to continue operations in conflict with safety (Rasmussen, 1997; Reason, 1997). Often, business decision-makers easily understand the process and value of the product (which can lead to bankruptcy if not handled right), while it is harder to recognize the processes and value of personnel or organizational safety (which can lead to catastrophe if not treated right) (Reason, 1997). This implies that they can value short-term financial and survival criteria rather than welfare, safety, and environmental criteria (Rasmussen, 1997). Employees are often pushed to work fast even if, theoretically, they should strive instead for quality. Hollnagel (2009) calls this the efficiency/thoroughness trade-off (ETTO) principle.

The *administrative and technical support functions* refer to personnel with limited formal authority, such as regulatory staff. Osmundsen et al. (2012) have found that the Norwegian Food Safety Authority personnel are obliged to make decisions that balance between societal interests and industrial interests, but that rigid regulations can limit their authority, constrain the decision-making, and sometimes result in irrational decisions.

In the decision setting of *political arenas* there are likely to be conflicting interests, as pointed out in arena theory. For instance, one often hears that "safety has a high priority, but so has employment and trade balance" (Rasmussen, 1997, 184). Interest groups are important here, due to the power in lobbies and the ability of interest groups to raise the voice of the public (Lindøe et al., 2011). Profit priority is often the case amongst maritime industry actors (Walters and Bailey, 2013).

<sup>1</sup> Rosness (2009) describes five decision settings: operations, business management, administrative and technical functions, political arenas, and crisis handling. For an example of research using his model on operational decision-making in Norwegian fish-farming, see Størkersen (2012).

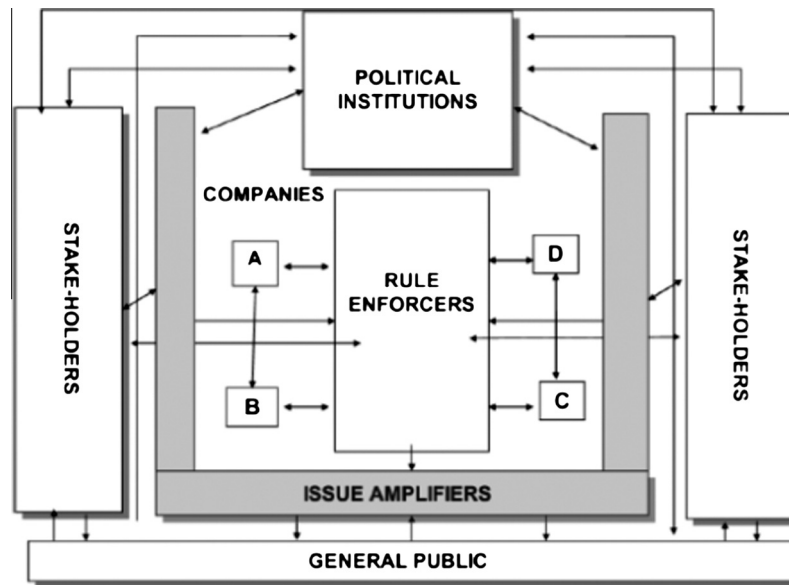


Fig. 2. The actors in an arena (Renn, 1992, as printed in Georgakopoulos and Thomson, 2008, 1120).

**Table 1**  
Characteristics of the three relevant decision settings (Rosness, 2009, 809).

| Decision setting                               | Dominant constraints  | Dominant decision criteria  |
|--|---|---|
| Business management                            | Information-processing capacity                                 | Optimize profit (or other key performance indicators)                         |
|  | Dependence on information filtered by subordinates              | Avoid trouble<br>Ensure commitment or compliance<br>Efficient decision-making |
| Administrative and technical support functions | Limited hands-on knowledge<br>No authority to enforce decisions | Comply with rules and standards<br>Consistency<br>Optimize a single attribute |
| Political arenas                               | Conflicts of interest<br>Changing constellations of power       | Robust consensus<br>Secure status of decision-maker                           |

### 3. Material and methods

This study based on interviews with persons from the maritime industry in different Norwegian research projects during the last decade (i.e., for the arena of aquaculture, see Fenstad et al., 2009; for offshore platform service, see Fenstad et al., 2010; for cargo shipping, see Størkersen et al., 2011; for high-speed passenger vessels, see Kongsvik and Johansen, 2013). Sources for the quotations given in this paper's results are specifically group and single interviews from 2011 and 2012, in the research project *Regulative rationalities and safety culture development*.<sup>2</sup> The 17 interviewed persons work at the Norwegian Maritime Authority and the Norwegian Coastal Administration (see Table 2). These representatives were selected because they manage especially relevant departments or have knowledge specific to the department's work and contact with the industry or other actors. Selections were also made so that, altogether, knowledge from most parts of the maritime regulatory organizations was covered.

The interviews took place at the authorities' offices at different locations, and were executed by one to three of the project's

researchers. All interviews were semi-structured research interviews of 1–2 h duration, and discussed the regulators' role to maintain safe maritime operations, how that role is performed in practice, how regulators cooperate with each other and others, etc., were discussed. The interviews were recorded, transcribed, and translated into English. The representatives from the two regulators had mainly the same views in most cases (which were quite surprising in themselves).

In the analyzing process, I applied the arena model (see Fig. 1 and the explanation in Section 2). The model was not used to select interviews, but it was implemented after data gathering as an analysis tool to categorize the data, to find patterns and to get an overview of how the regulators view the participants, interactions, challenges, and possibilities for decision-making in the arena (as suggested by Georgakopoulos and Thomson, 2008). Consequently, the empirical results in Section 4 in this paper are organized with respect to the actors of the arena.

Before the results of each actor type are presented in Section 4, each actor is introduced in a table. These facts are used to give an impression of the actor and of the arena altogether. Even though the different actors are presented briefly in the tables, all qualitative results are subjective perspectives of the regulators only. Consequently, this study mostly reflects the views of the regulators, and does not take into account the possible perspectives of other actors.

As this study only reflects the views of selected representatives for Norwegian maritime regulators, the findings cannot be general-

<sup>2</sup> The project aims to find out how culture influences safety on various organizational and societal decision-making levels – from the workers on deck, through the shipowners, to the authorities. We started with studying how the authorities view their own role when it comes to safety in the industry, and continued with asking employees in industry organizations about their roles and their views of the other levels.

**Table 2**  
Data used to find the results in Section 4.

|             | Maritime authority   | Coastal administration   | Total |
|-------------|--|--|-------|
| Interviews  | 9  | 3  | 12    |
| Interviewed | 13 key persons in departments working with strategic safety, laws and regulations, international affairs, passenger ships, cargo ships, inspection, and working and living environment | 4 key persons in departments working with coastal administration, ships and safety | 17    |

ized to other nations and arenas. Still, the results might shed light on some general aspects of the international maritime arena or general regulators' discretionary space in relation to other actors.

#### 4. Empirical results about the authorities' views on safety regulation

In the interviews, the regulators from the Norwegian Maritime Authority and the Norwegian Coastal Administration characterize their decision-making. Fig. 3 provides an overview of the maritime transport arena based on information from the interviews.

This section is divided into subsections of the arena-actor types, depending by whom the regulators perceive their decisions are influenced. Each subsection starts with information about the current actor before continuing with the regulators' descriptions from the interviews. Altogether, this will give a picture of the Norwegian maritime arena, with perspectives from the regulators.

##### 4.1. National rule enforcers: regulations and internal discussions

As described, two national regulators facilitate for maritime safety by controlling the vessels or maintaining the infrastructure along the Norwegian coast: The Maritime Authority and the Coastal Administration. See more information about them in Table 3.

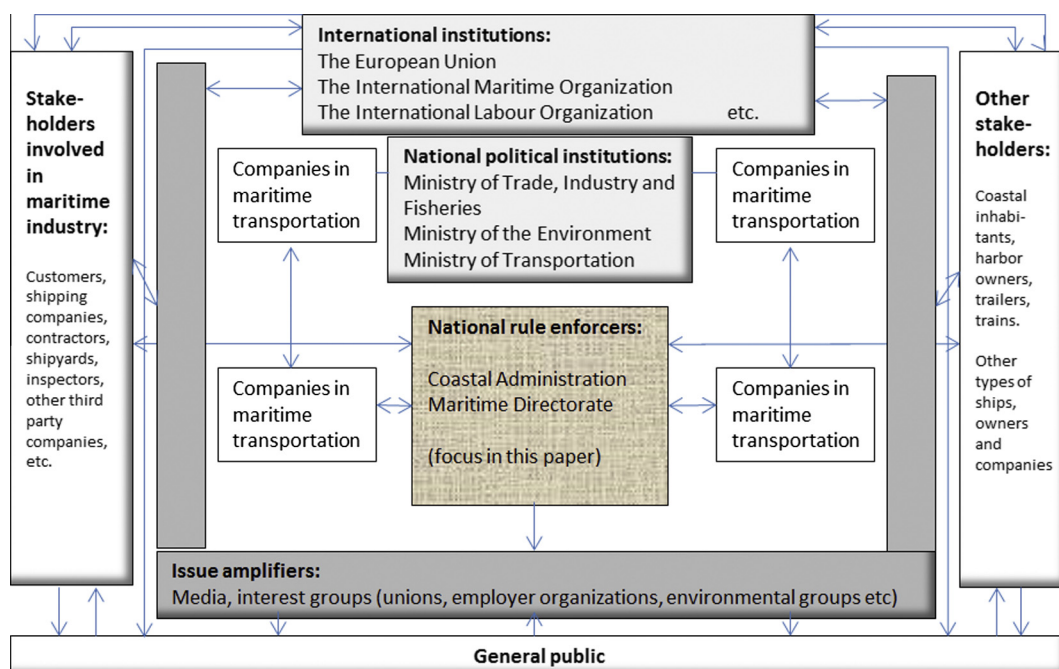
Representatives from both the Maritime Authority and the Coastal Administration say they have some discretionary space to act on their own to prevent accidents in maritime transport, even

though they work with limited resources and need to discuss interpretations and priorities among their peers.

When asked, the regulators state that they are satisfied with the policies they take care of (even though many add that the rules are comprehensive). Most of the regulators started their interview with a basal premise from the Norwegian Law on Ship Safety: Safety is the responsibility of the shipowners, and regulations require them to fulfill a minimum safety standard. All the represented regulators feel that they still play an important role in the creation of safety along the coast. They give and deny permits, make regulations (for instance speed limitations for certain areas), improve the emergency preparedness in an area or sub-branch, interact with the local authorities, try to make practical and manageable instructions, handle complaints, and so on.

*We actually have an easy job. We're put here to exercise regulatory requirements – equality for the law. Whether we like the complainers or not, we maintain equality for the law. We have to focus on the facts, no matter what.*

However, the regulators also underline some negative aspects with the policy-making and the formation of the regulations. Much of the Norwegian maritime regulation originates from international legislation. For instance is the International Safety Management-code integrated in the Norwegian Law of Ship Safety. National formulations are sought from cooperation between unions, employer organizations, and regulators (although several of the interviewed regulators point out the lack of funding to carry out such thorough processes). It is said that many of the rules are marked by fights between the parties; “who gets through or whose



**Fig. 3.** Actors important for the Norwegian maritime transport arena.



**Table 3**  
The Norwegian maritime regulators.

|           | Norwegian Coastal Administration<br>Source: <a href="#">Coastal Administration (2014)</a>  | Norwegian Maritime Authority<br>Source: <a href="#">Maritime Authority (2014)</a>   |
|-----------|--|---|
| Employees | Approximately 1000   | 307   |
| Tasks     | Responsible for infrastructure: fairways and fishing ports, port facility security, pilot and navigation services, vessel traffic services, national preparedness against acute pollution, transport planning. Exercising maritime legislation   | Supervision of the industry: Controls Norwegian vessels according to national regulations, and other vessels in Norwegian ports according to international regulations. Assure that Norwegian shipowners hold high safety and environmental standards and employ seafarers with good qualifications and working and living conditions. Manages the Norwegian ship registers |
| Goal      | “To make our coast and waters the safest and purest in the world”  | “To be a visible actor for sea safety in a clean environment”   |
| Owner (s) | <i>At the time of the interviews:</i> The Ministry of Fisheries and Coastal Affairs (in charge of coastal industry and pollution preparedness)<br><i>From 2014:</i> Norwegian Ministry of Transport and Communications (responsible for framework conditions for postal, telecommunications, and transport activities; roads, coastal environment and port and sea transport policy) | The Ministry of Trade, Industry and Fisheries (responsible for designating industrial and seafood policy with an eye to the future) and<br>The Norwegian Ministry of Climate and Environment (responsible for carrying out environmental policies)  |

compromises are chosen. When you form regulations, you are soon entering the politics”. The regulators’ political owners (see Fig. 3 and Section 4.4) are also in position to change the focus of finances and priorities. Even if regulations favor safety, the regulators can feel pressured to enforce the owner’s goals of continuing trade, industry, and culture – at the expense of safety.

“We want to get most safety for least resources”, repeat the representatives. They talk about how some safety measures are worth the investment (life vest campaigns and so on), while others are important but too expensive (for instance, improved requirements for safety ladders, mandatory pilots, and increased safety crew).

Subjects that are internally debated are competence, knowledge, and information gathering. The Maritime Authority is especially engaged in how much data they need to issue certificates, when they do not have the time to seek out every piece of information.

#### 4.2. International institutions

The transport industry is essentially international. For instance, 90% of the Norwegian fleet is active abroad, and foreign ships are frequent in Norwegian waters ([Norwegian Shipowners’ Association, 2014](#)). Norwegian regulations include a complex set of ratified international rules, which the Maritime Authority enforces over the Norwegian shipowners and vessels ([Pettersen and Bull, 2010](#)) (see Table 4).

The Norwegian regulators are connected tightly to international institutions, whose regulation-making processes are thorough and

time-consuming. An example from the IMO that was emphasized in the interviews is a term about life-raft hooks, which the regulators tell was completed ten years after initiation of the process because “consensus was not made until more accidents had occurred.”

The Maritime Authority representatives in particular underline that the international standards are bound to be frustratingly low. As long as lobbyists can argue that a country or an industry cannot afford higher standards, the international standards will not contain high safety demands (such as those made by the new Maritime Labour Convention, in the Norwegian regulators’ opinions). Even though many of the interviewed regulators are dissatisfied with the safety standards on many vessels, their experience is that they neither can make Norwegian rules too strict compared to other nations’ rules. Because maritime transport is so internationally oriented, a shipowner can perceive it as easier to flag out of Norway and into flags of convenience, than to comply with firm regulations. Norwegian officials say that they fear a situation where no vessels are registered in Norway and, consequently, are out of reach of the Norwegian regulators. They also fear that no foreign vessels or companies will bring their business to Norway. According to the regulators, strict Norwegian special-safety demands will scare business and national states, and in turn lead to global protection. Norwegian politicians do not want to encourage this.

Vessels registered in other countries must be treated carefully as long as they meet the international standards, even if they do not comply with all Norwegian regulations. This is said to be

**Table 4**  
International government in the Norwegian maritime arena.

|                                     |   |
|-------------------------------------|---|
| EU                                  | The European Union (EU) is an economic and political partnership between 28 European countries. Every action taken by the EU is founded on treaties that are negotiated, agreed, and ratified by all the EU member states ( <a href="#">EU, 2013</a> )<br>Countries not in the EU but part of the European Economic Area (EEA) must adopt parts of EU Law to enjoy free trade with the EU. These states (Iceland, Liechtenstein and Norway) contribute to the formation of new, relevant legislation at an early stage. However, they have no representation in or formal opportunity to influence further decision-making in the EU, although they are obliged to ratify it ( <a href="#">Wikipedia, 2014</a> ; <a href="#">EFTA, 2014</a> ) |
| ILO                                 | Policies of the International Labour Organization (ILO) are set by the annual International Labour Conference. Each member state has two government delegates: an employer delegate and a worker delegate. Every delegate has the right to express himself or herself and to vote freely when establishing conventions. Member states can choose to ratify the conventions. ILO’s Maritime Labour Convention (MLC) sets labor rights for seafarers, and thereby fair competition for shipowners. The MLC was adopted by the Conference in 2006 and entered into force worldwide in 2013. ( <a href="#">ILO, 2014a,b</a> )   |
| IMO                                 | The International Maritime Organization (IMO) is the United Nations’ specialized agency with responsibility for maritime safety and security, and prevention of pollution. The conventions in the IMO are established through consensus by all member states. When every government has consented to a formulated convention (such as the International Safety Management Code, ISM), they are obliged to enforce it. It often takes years to make a convention. ( <a href="#">IMO, 2012</a> )  |
| National and port-state enforcement | The Norwegian Maritime Authority enforces Norwegian regulations with ratified conventions over Norwegian registered vessels, and enforces directly the general international conventions over other vessels in Norwegian ports ( <a href="#">Pettersen and Bull, 2010</a> )   |

**Table 5**

The Norwegian maritime transport industry in numbers.

|  |  |
|--|--|
| Maritime transport versus air, rail, and roads | Maritime transport competes with transport on road, on rail, and in air. In Norway, many coastal communities depend on sea transport due to the long coastline. In 2013, sea transport had 52 million passengers (less than rail and roads) and carried 88 million tons of cargo (less than roads). (Statistics Norway, 2014e)   |
| Industry value                                 | The Norwegian fleet is the world's fifth largest in value (Norwegian Shipowners' Association, 2014). In 2012, the production value in water transport was 20.9 billion US dollars (while the total production value in the general Norwegian transport industry was 52.6 billion USD) (Statistics Norway, 2014d)   |
| Employees and company types                    | App. 152,120 employees are in Norwegian water transport, with 21,061 enterprises (Statistics Norway, 2014d) consisting mostly of 1–10 employees and 1–10 vessels. Transport vessels include cargo and passenger ships: oil tankers, well boats, vehicle carriers, ferries, express boats, general cargo vessels, and more. This is a complex group, with very different framework conditions. Some companies and sectors have low economic margins, such as Norwegian coastal cargo (Størkersen et al., 2011). Lindøe et al. (2011, 94) have described national and international bulk transport as complex, with “low cost” organizations using short-term contracts and “third world” work forces. In contrast to this, petroleum supply and large international cargo companies have financial muscle |
| Vessels, numbers                               | 2767 transport vessels were registered in Norway in 2013, for both coastal and international activity <sup>a</sup> (Statistics Norway, 2014a,b)  |
| Flags  | A substantial number of foreign registered ships and seafarers sail along the Norwegian coast. Some vessels originate in the countries they flag. Others have Norwegian owners, but are flagged in a country with different regulations (for instance, regarding tax, demands, and prohibitions) (Kristiansen, 2005)   |
| Risk of death                                  | In 2013, 281 Norwegian seafarers were injured and 5 killed (Statistics Norway, 2014c). The risk varies across the different transport branches. Seafarers' risk of death is 10 to 20 times greater than for onshore workers (Norwegian National Insurance Service, 2006). Globally, there were 600 casualties in the same year (Maritime Bulletin, 2014) among app. 1,300,000 seafarers (IMO, 2012)  |
| Vessels lost                                   | In 2013, 18 Norwegian registered vessels were totally lost, and 246 partially lost (Statistics Norway, 2014c). Globally in 2013, 69 large vessels were declared total losses (Maritime Bulletin, 2014)   |

<sup>a</sup> The transport fleet is also called the merchant fleet, but the formal definition of merchant fleet only includes vessels that do not carry passengers and are 100 gross tons or more (Statistics Norway, 2014a). In this study, passenger vessels and smaller freighters are included.

because of the principle of national sovereignty; the national regulators are supposed to control their ships, and other nations have to trust them to do that.

*If a boat with a Bahamas flag lies in the harbor of [a Norwegian city], it's the Bahamas who lie in this harbor. And that's pretty important, I tell you.*

#### 4.3. Companies in the industry

See Table 5 for facts about the Norwegian maritime industry. As previously stated, the Norwegian shipowners are responsible for the safety on their ships along the coast (Lovdata, 2007). The regulators want the companies to upgrade the safety standards from the regulation's minimum on the companies' own initiatives. In addition, the regulators initiate safety measures and run campaigns in branches and on vessels with a large number of accidents and limited industry safety initiative. The regulators indicate that their efforts to promote safety in maritime transport are indeed affected by the companies. All interviewed regulators want to level with the industry, but they also see that some maritime transport companies only make safety investments when sanctions are possible.

*To invest in safety equipment for [50,000 US dollars] can be a hard nut. But as soon as there are requirements, things happen.*

Representatives from both regulatory bodies highlight how it would have been safer with a newer fleet with better safety equipment, “but”, they always add, “there are all sorts of considerations to make”: Norwegian shipping is threatened by international shipping, while all shipping is threatened by other transport types. The competition is lowering prices. The regulators are very aware of the pressured economic state in parts of the maritime transport arena. The Maritime Authority representatives, in particular, are clear about their focus on branches with small safety budgets. They emphasize that regulations cannot push the business out of the country or over to trucks by demanding expensive safety measures. Some, therefore, reluctantly understand the ministries' priorities.

*You always have to balance on that border. We'll never get a chance to think of only profession. We can argue for it, then hand*

*it over to the ministry. And in some cases the ministry will get back to us and say “this isn't working”.*

They do not want to shut down the business for a shipowner, a local community, or a maritime transport branch (for example, sand transport) as long as the actors can be said to comply with regulations. Therefore, the Norwegian maritime regulations cannot be too demanding, as compared to the rest of the maritime world or the transportation industry. Some of the persons interviewed believe that the priorities of the regulatory bodies would have been different if they had other owners. This will be discussed further in the next section.

#### 4.4. National political institutions

Much of the political implications on regulation have been apparent already in the sections about rule enforcers, international regulation, and the companies, so this section is mainly about the differences in priorities between politicians and regulators (see the national political institutions' goals in Table 6).

In all interviews, the regulators emphasize the border area between *professional judgment* and *politics* (as seen in the last quote). The regulators understand their *profession* to be safety (or safety-related decision-making), while *politics* are perceived as values handed down from the politicians. This tension between safety and the priorities of the ministries is stressed strongly by the regulators. They worry that politicians can make decisions that can be problematic for safety. At the same time, the regulators are aware of the importance of satisfactory business conditions for the industry, so as to be able to have an industry to regulate. They still regret that politicians have a veto, are influenced by the public, media, lobbies, the next election, etc. – and can delete the work of hundreds of regulators in one media interview. Some of the regulators reveal that they rather wish they were owned by a hypothetical Sea Safety Ministry:

*There's so much politics in the picture here. We're owned by ministries [...]. So it's not always that industry and trade and safety are very well united. [...] There's no Sea Safety Ministry, for instance. I'm not saying I take easy on [the actual priorities of the owners]. But I say that the combination isn't always as easy. It can be a challenge sometimes.*

**Table 6**  
Goals of Norwegian political institutions relevant for the maritime arena.

|  |   |
|--|---|
| General goal<br>Goals and values of ministries | All Norwegian governments of the last decade have aimed at getting more transport from road to sea (Norwegian Cabinet, 2005, 2009, 2013). The Ministry of Trade, Industry and Fisheries (which owns the Maritime Authority) is responsible for the government's industrial, shipping, and seafood policy, so as to maximize value creation in the Norwegian economy. The Ministry promotes trade and entrepreneurial spirit. (Ministry of Trade, Industry and Fisheries, 2014). The Ministry of Transport and Communications (which now owns the Coastal Administration) is responsible for transport, telecommunication, and postal policies, including sustaining coastal environment and culture (Ministry of Transport and Communications, 2014). The Ministry of Fisheries and Coastal Affairs (owner of the Coastal Administration at the time of the interviews) also were to maximize the fishery and aquaculture trade and industries. |
|--|---|

#### 4.5. The general public and issue amplifiers

When the regulators mention the public they often refer to what they hear through the media, but sometimes the public also knocks on their door, as complainers, interest groups, or others with opinions (presented in Table 7). The regulators do not talk much about the nongovernment organizations and lobbying, but they highlight that there is a tight connection between those cases the media draws attention to, and the fields in which the interest groups are engaged.

The experience of the interviewed regulators is that the media are, to some extent, in a position to affect how the resources are being prioritized. Some say that “we jump when the media tell us to.” Several examples given in the interviews state this.

*We had a case about dangerous cargo on ferries, with lots of trouble and lots of publicity in the papers, where we in a way were forced into a process. And where the ministry pushed us to find a solution. Yes, we absolutely have those cases.*

Another example say that because of earlier media attention, there now is a focus in Norway on safety for ferries instead of vessels with more serious accidents.

The media's power, especially over the political institutions, is a dilemma for the regulatory bodies, but many of the representatives underline that, usually, the general operation of the organizations does not get disturbed by media attention.

### 5. Discussion of the situation in the maritime arena

The empirical data from the regulator interviews and the information tables can be analyzed to find what affects Norwegian maritime regulators' decision-making. First, in this section the regulators' decision criteria and constraints are discussed according to Rosness (2009) (see Table 1). This leads to a discussion of how the maritime-arena context affects regulation.

#### 5.1. The regulators' decisions and discretionary space

All decisions made by the Maritime Authority and the Coastal Administration are intended to provide safety along the Norwegian coast. This coincides with the top value of both organizations: safe sailing (Maritime Authority, 2014; Coastal Administration, 2014). Compliance and consistency are also important criteria, common to bureaucratic rationality, to preserve justice. Regulators are to be fair, and treat every client equally.

So, safety, compliance, and consistency are the fundamental decision criteria for the Norwegian maritime regulators. But to be practical (and avoid trouble), they also need to make decisions based on optimization of profit, efficiency, and consensus, with its various constraints.

Within their discretionary space, the regulators strive to reach robust consensus. The regulators must suggest and enforce regulations upon which the ministries, the public, the industry, and interest groups can agree. Now and then, the decision is not the regulators' to make; for example, when politicians have decided

on an action after a media outbreak. Sometimes the regulators disagree with the priorities of politicians. In order to make sense when communicating with the industry, regulators must still translate the conflicting priorities into one integrated meaning. The regulators master translation and balance within their limited discretionary space. Yet they find it difficult to act in many maritime branches because the industry associations have considerable power and their own agenda (as also found by Lindøe et al. (2011)). Regulators toil to show the maritime industry that it is necessary to strike a balance between production and protection, to neither become bankrupt nor create a catastrophe, and that it can be economical to think in long terms and prioritize welfare, safety, and environment (as stressed by Reason (1997) and Rasmussen (1997)). However, the conditions rarely give the regulators the opportunity to set such an agenda, because of their limited authority and discretionary space. Osmundsen et al. (2012) have also noted that regulators are expected to do the difficult task of balancing goals, while their framework conditions are too rigid to give sufficient authority or flexibility. With limited resources, the regulators cannot develop adequately and might not be able to increase safety (as described by Walters et al. (2011)).

As the regulatory bodies are part of a society with short-term economic and efficiency criteria (Rasmussen, 1997; Hollnagel, 2009), they also must operate with a business rationale. The political ministries have more goals than *safe sailing*. They are concerned with trade and economic growth. It is common that societies put production before protection (Reason, 1997). Nevertheless, when the Norwegian government established the regulatory bodies with the purpose of preserving sea safety, the intention seem to have been to give the regulators discretionary space to promote safety. In practice, the regulators still must be sensitive to media and the industry's needs. The regulators talk about the difference between their *profession* (prioritizing safety/protection) and *politics* (prioritizing industry/production). Professionally, they would like to prioritize safety, but the political owners – including the public and industry – value trade and less spending. The regulators therefore aim to get “most safety per dollar” (as they say) to optimize profit for the society. Their budgets give minimal resources of time and people (also described by Walters et al. (2011)). The regulators try to get just enough information to be able to harmonize the most important actors' decision-criteria within time budgets, and to avoid blame.<sup>3</sup> This can be seen as an efficiency/thoroughness trade-off, which most professionals experience (Hollnagel, 2009). The regulators have so many considerations to make prior to their decisions that they cannot realize projects they want.

Minimal discretionary space can lead to inertia, and literature describes regulators' lack of action and competence (Roe, 2013; Johnson, 2014). However, the regulators in this study emphasize that they do as much they can to prevent accidents. Some decisions cannot meet criteria of both safety and business, or compliance and consensus, but the regulators fight to prioritize after their profes-

<sup>3</sup> Hood (2010) writes extensively about the negative and positive consequences of actors' blame avoidance.

**Table 7**

Example of public representations and issue amplifiers in the maritime arena.

|  |  |
|--|--|
| The Norwegian Shipowners' Association          | represents app. 160 shipowners and 1800 vessels in tanker and bulk transport; short sea and offshore sector. Goal: "A broad agenda for impact and influence" – to protect members' interests in industrial and employment issues, and play an active role in industry concerns |
| The Association of Cargo Freighters            | represents Norwegian shipowners with a total of app. 300 cargo vessels. Goal: To raise the industry's economic and social conditions and ensure its interests in relations with government, charterers, etc.   |
| The Norwegian Seafarers' Union                 | represents app. 100,000 seafarers working on Norwegian and foreign vessels all over the world. Goal: Secure safe wage and working conditions for all groups of seafarers, both domestic and abroad   |
| The Norwegian Association of Maritime Officers | represents app. 8000 maritime leaders, such as captains and mates, in all types of ships, in Norway and abroad. One of the main goals is to use influence to ensure framework conditions   |
| The Norwegian Association of Engineers         | represent app. 6000 members at sea and on shore, and works for the members' working conditions, such as wages, safety, and competence  |

Issue amplifiers in the maritime arena can also be different types of media, environmental organizations, classification companies, insurance companies, and other groups and non-governmental organizations – national and international.

sional criteria. They point out that even though they prefer to do more or different actions, they have the discretionary space to enforce regulation securely.

To abstract the findings: this analysis shows regulatory actors constrained in their decision-making (insufficient resources or authority), and thereby have limited discretionary space to make decisions according to their own criteria. In spite of the narrow discretionary space and multiple constraints, they make the most out of the situation and take measures within their boundaries.

Theory-wise, most of the decision-making literature's constraints and criteria gathered by Rosness (2009) are recognizable in the regulator descriptions. However, this study exposes limitations in the theory, because some of the mentioned criteria are in practice constraints for the regulators: profit, consensus, and status of the decision-maker (where the decision is the politicians' and not the regulators') are often contrary to the main criteria of safety, compliance, and consistency. Trying to meet all criteria can also constrain the decision-making. When the literature needs so much elaboration, it indicates that there is not enough research on decision-making from the regulators' point of view.

The regulators emphasize several reasons for their constraints and limited discretionary space. For instance, national regulations are coupled with international agreements, and therefore suboptimal tools; political owners can determine or overrule the regulators' priorities; the internationality and fear of "flagging out" makes the industry powerful, as opposed to the regulators. The first reasons are common for regulators in general, and the last is found also by Lindøe et al. (2011). Together, they show that the Norwegian maritime regulators' decision-making is constrained by other actors' criteria, so the arena around the regulators needs examination.

## 5.2. Safety decisions in the maritime arena

How the maritime arena affects Norwegian regulatory decisions is discussed in this section.

Relevant literature states that regulators are dependent on the international context, the public's interest, politicians' priorities, and the industry's financial capacity (Lindøe et al., 2011; Rosness, 2009; Bratspies, 2009; Walters et al., 2011; Walters and Bailey, 2013; Reason, 1997; etc.). The regulators' drawing of the maritime arena takes this further, and shows that competition is a key attribute that results in profit being optimized instead of safety, causing paralysis in maritime safety regulation development (and thus further constraining the regulators).

The regulators depict the maritime arena as a place where most actors have many constraints and conflicting goals, so the arena cannot land upon joint inventive safety decisions. Lindøe et al. (2011) have shown that even multiple seafarers' loss of life is not

enough to make actors prioritize safety. Some studies show that ratified international conventions can result in better maritime safety (i.e. Knapp and Franses, 2009; Knapp and Van de Velden, 2011), while others dispute that regulations can reduce accidents when many states ratify, but still does not implement conventions (Knudsen and Hassler, 2011). About regulation, both the regulator interviews and previous research (see for example, Almklov et al. (2014), Dekker (2014), Bieder and Bourrier (2013), Walters and Bailey (2013), and Antonsen et al. (2012)) suggest that achieved safety conventions from the last few years have not developed the regulation; instead, they have lowered standards and used worn-out regulatory ideas of standardization, audibility, and accountability. The non-existing safety-regulation development indicates a political paralysis, to use Renn's (1992) term. Paralysis of safety regulation development is connected with competition: competition between maritime transport and other transport sectors, and especially competition between the countries and companies in the maritime transport industry.

Maritime transport is often low priced in order to compete with other transport sectors. The harsh competition leads many transporters to live continuously near bankruptcy, while others have a solid financial situation. The companies, shipowners, and general maritime transport industry see no other solution, if their business is to survive, than to shorten the margins so as to be cheaper than trucks and trains. This is often argued by the companies (to the regulators) as to why they cannot spend more on safety solutions than is regulatory required.

Competition between countries and companies in the maritime industry leads to at least three aspects that favors profit and hinder safety regulation development.

First, some countries or markets cannot afford to maintain high safety standards. This is one reason why the consensus-based international structures struggle to decide upon safety regulation. All countries represented in the IMO must agree before a convention is reached. Consequently, possible treaties have to fit to all types of economies and waters, and therefore can take up to a decade to accomplish. When the general argument is that everything must be able to be applied and complied with in every country, none of the arena actors are able to persuade the others to invest in expensive safety regulation. Therefore, from the Norwegian regulators' point of view, standards are set too low to be particularly useful. Walters and Bailey (2013) show that globalisation and the political and industrial economic-priority result in unsafe conditions for the seafarers.

Second, politicians usually want as much activity and trade as possible in their country. Norway is ratifying the conventions from the EU, IMO, ILO, etc., with some national additions, but stricter safety demands seldom are added. This is because scrupulous regulation is associated with fewer international competitive abilities for Norwegian industry. Decision-makers do not



want to inflict large investments on companies when many ship-owners have limited investment capacity. Political decisions (and thereby regulators) are constrained by the fear of ruining businesses, industries, and communities. In addition, high safety demands are believed to stop foreign ships from coming to Norwegian waters and ports, or provoke other countries to answer with protectionism, leading Norwegian shipping or other industries abroad to suffer (as also DeSombre (2006) points out more generally). The latter argument is also used by those wanting to keep businesses from moving to other countries. This takes us to the third and last argument of why international transport competition in the maritime arena leads to paralysis in safety regulation development.

Third is the scare of “out-flagging.” Some states offer convenience flags, which enforce mild regulation on ships and shipowners, and allow them to operate almost all over the world with limited control and safety demands (Kristiansen, 2005). Politicians fear that implementing special national rules can encourage their fleet to leave Norwegian ship registers and thereby trade balance. DeSombre (2006) say this makes states race toward the regulatory bottom (but governmental and issue amplifying actors can pressure the regulation-makers in the opposite direction, to the regulatory middle). Increased accidents the last years are strongly linked with new or expanding flags (Robers et al., 2013). This study’s regulators explain that all arena actors consider safety as important, but there is no use in safety regulation if one does not have an industry to regulate because it went bankrupt or flagged out. This logic makes safety regulation difficult.

All these examples reveal that many arena actors – in the perspective of the regulators – think mostly of competition, and make decisions to optimize profit, not safety. The accidents and competition challenges in the maritime arena make the actors prioritize diversely (see also Fig. 1). International institutions facilitate for safety, but politicians prioritize trade and worry about out-flagging, protectionism, and budgets, and delegate safety to regulators. Industry and interest groups do not want accidents either, but set economic survival and profit first (as generally clarified by Reason (1997)). Some regulations have been agreed upon during the last few years (such as the Maritime Labour Convention in 2006; effective from 2013), but according to the interviewed regulators, the conventions are half-hearted and too elementary. Actual development requires priority. None of the maritime actors have enough resources to convince each other to invest deeply in safety regulation. In the wording of Renn (1992), there is *political paralysis* in maritime-safety regulation development. It is also possible to call it a *regulation paralysis*, because the regulation development is paralyzed. If using that term, it is important to emphasize that the regulators’ regulation enforcement is constrained, not paralyzed.

When regulation development is paralyzed, it constrains the regulators’ safety facilitation. The regulations that exist are enforced, but the regulators do not see their discretionary space as sufficient to maintain sea safety. The interviewed regulators experience double standards when the politicians and ministries employ regulators to work for safety, while the ministries in practice want the regulators to prioritize what is in the media spotlight. Mearns (2014) has also pointed out the double standards of politicians and society, when the public expects to consume cheap products, but after accidents is stunned by poor safety measures. In my study, the regulators wonder if it had been easier if their owners also had safety as the first priority. Nevertheless, they do not believe that one actor could be so powerful and resourceful that it could persuade the industry into prioritizing safety, and thus end the paralysis in the maritime arena. If the public were sufficiently interested in safe maritime transport, it would be another case.

## 6. Conclusion and comments

To find out what influences maritime safety regulation, I have analyzed interviews with Norwegian maritime regulators, together with information about other maritime actors. The empirical data go further than, but are not contradictory to, earlier research.

This study highlights a serious international issue: Even though the maritime accident rate calls for better safety regulation, transport competition makes many maritime actors prioritize profit rather than safety, which paralyzes safety regulation development and constrains the maritime safety regulators. Because the market forces get precedence over safety, paralyzed innovative formation and constrained enforcement of regulation weaken the safety regulation double. According to the regulators, when the maritime arena rarely agrees upon safety standards, these standards are set too low and are non-innovative. Thus, development does not happen. (This can be shortened to *regulation paralysis*.) The regulators are not paralyzed, though; but they must do their job within a small discretionary space and without suitable tools – and sometimes the politicians override their decisions. The regulation becomes even weaker if the regulators formally are the only actors to prioritize safety in the maritime arena, yet their decisions are contaminated. With more discretionary space, the regulators could prioritize which transport sectors need most safety attention, and which regulations could prevent the most accidents.

Different opinions about which problem to solve first – survival or safety – stand in the way for transport safety. Implicit in the interviews lies a skepticism against the widely accepted idea that low safety demands are the only way to keep the maritime transport industry alive. To ignore the need for safety regulation in order to keep all companies’ heads above water will probably not lead to more safety in either the short or the long run (as Walters and Bailey (2013) strongly underline). For the regulators, it is common to consider whether or not the companies are able to overcome potential safety regulations financially. If the companies continuously are close to bankruptcy, there will never be more safety or thriving maritime transport industries. Rather, reducing safety demands can create a negative spiral, where poorer and poorer organizations give poorer services and become less safe, and thus scare the costumers away. That could paralyze the entire industry, not just safety regulation development. When some coastal cargo companies are functioning on a bare minimum, they stay at a minimum, with no developmental possibilities or power (Størkersen et al., 2011). If the government really wants the industry to survive, they must fully prioritize it. When the amount of accidents is not decreasing, it is important to give enough resources to safety protection, and to search for measures that actually work (as also stated by Bieder and Bourrier, 2013).

A persistent question in the aftermath of this study is how to end the regulation development paralysis in practice. The regulators’ present solution is balancing and translation, but this does not eliminate the problem. There is a need for contemporary research on the pros and cons of the different maritime regulation strategies, or of transport regulation in general. It can be appropriate to research the ministries’ discretionary space, and to discover how actors could be convinced to invest in safety. Today, the maritime transport actors seem to be penny wise and pound foolish, when they save on safety standards to save the industry.

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