



CHALMERS



Legislative actions in handling of waste disposal

The effect of waste receipt and its change on marine actors

Bachelor's thesis for International Logistics Program

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CHALMERS UNIVERSITY OF TECHNOLOGY
Göteborg, Sweden, 2024

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Two pictures besides each other, the left a presentation of the EU flag, and the right, a crane from Gothenburg port. Foto: Bobbsled. Foto: Godot13

https://commons.wikimedia.org/wiki/File:European_flag_in_Karlskrona_2011.jpg

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Preface

Following is a bachelor thesis written by two students at Chalmers University of Technology within the department of Mechanics and Maritime Sciences, written for the International Logistics Program. Initially the idea for this bachelor thesis is based upon one of the writers' professions as a shipping agent, whereas the marine waste receipt system was introduced during the year of 2023. With help from the shipping agency company OP SHIP the idea of the reports content was created. We want to give a special thanks to the supervisor for this bachelor thesis Olle Lindmark as the external supervisors Joakim Arnesson and Jason Barpe, along with a great appreciation to all interview respondents who made this bachelor thesis possible.

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SAMMANDRAG

Denna rapport presenterar resultaten från aktörer som har en huvudroll, för att undersöka perspektiv och processer relaterade till hanteringen av maritimt avfall med fokus på hanteringen av avfallskvittot. Separata intervjuer har genomförts med tre olika intressentgrupper, fartygs agenter, skeppskaptener och hamnar, som definierats i kapitel 2.6. Resultaten och slutsatserna från dessa intervjuer är organiserade inom tre huvudteman: processen för avfallskvittot, potentiella utmaningar i processen samt ifall avfallskvittot är grundläggande i med fokus på miljöförbättringar.

Rapporten inkluderar även resultat från andra aktörer som har huvudroll med fokus på avfallskvittots prospekt, nämligen Sjöfartsverket och Transportstyrelsen. Dessa två huvudsakliga myndigheter är statliga, som introducerades i kapitel 2.4. Myndigheterna övervakar lagliga och praktiska aspekter och processer respektive men med kommunikation sinsemellan. Den fullständiga processen för avfallskvittot innefattar olika kommunikationssteg mellan intressenter, inklusive mottagande och sändande av kvittot till varandra, verifiering och rapportering till myndigheter. Potentiella utmaningar som uppstår är fel vid inmatning av data samt brister i kommunikationen.

Diskussionsdelen av rapporten fokuserar på hur avfallskvittot är grundläggande och att de ska följa lagstiftningen och koppla dessa till miljöaspekter. Optimering av tekniska lösningar och främjande av samarbete mellan intressenter föreslås för att uppnå potentiellt ökad effektivitet i processen för avfallskvittot. Trots utmaningarna erkänner involverade aktörer vikten av avfallskvittot när det gäller miljöförbättringar inom den maritima industrin för att följa lagar som fastställts av högre instanser. Samarbetet mellan de tre aktörer är extremt viktigt för att följa direktiven samt utveckling av samarbetet, också med fokus på bra fungerande kommunikation.

De genomförda intervjuerna valdes att genomföras som semi-strukturerade för att möjliggöra kvalitativa insikter och erfarenheter från involverade aktörer. Trots valet av dessa erkänns potentiella fel i form av fullständigt förlitande på självrapporterade data. Därför kan framtida forskning involvera en blandning av metoder för att närma sig ämnet för att få en mer djupgående förståelse.

Sammanfattningsvis spelar avfallskvittot en viktig roll för att driva miljöförbättringar inom den maritima industrin, även om ytterligare samarbete och optimering krävs för att hantera utmaningarna och för en smidig process. Denna rapport är skriven på engelska.

Nyckelord: avfallshantering, avfallskvittot, hamnar, fartygs agenter, myndigheter, lagstiftning, miljöförbättring, processer.

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ABSTRACT

This report presents the findings of interviews conducted to expose perspectives and processes in relation to maritime waste management with a focus on waste receipt handling. The separate interviews have been conducted with three different stakeholder groups including Shipping agents, captains of involved vessels and ports, as defined in chapter 2.6. The findings and results of said interviews are organized within three main themes, the process of the waste receipt, the potential challenges in the process as well as if waste receipts are essential with a focus on environmental improvement.

The report also includes findings from other main roles with a focus on the waste receipt process. The Swedish maritime administration and The Swedish Transport Agency. These two main authorities are governmental, as introduced in chapter 2.4. The authorities oversee legal and practical aspects and processes respectively with discourse amongst each other.

The full process of the waste receipt involves different communication steps between stakeholders including receiving and sending the receipts amongst one another, verification and reporting to authorities. Potential challenges occurring are data entry errors as well as gaps in communication.

The discussion part of the reports focuses on if waste receipts are essential and for them to comply with legislation and connecting these to environmental aspects. Optimization of technical solutions and promotion of collaboration between stakeholders are proposed to achieve potential enlarged efficiency and effectiveness of the waste receipt processes. Despite challenges, involved actors acknowledge the importance of the waste receipt in terms of environmental improvements in the maritime industry to comply with legislations set by higher forces. The collaboration between the three actors is extremely important for complying with the directives as well as the growth of the collaboration as well as effective communication between them.

The conducted interviews were chosen to be conducted as semi-structures to allow qualitative insights and experiences from actors involved. The report recognizes potential challenges in terms full reliance of self-reported data. Therefore, future research could involve a mix of methods approaching the subject to receive a greater understanding.

Overall, the waste receipts play an important role in driving environmental improvements in the maritime industry, although further cooperation and optimization is needed for addressed challenges and for a smooth process. This report is written in English.

Keywords: waste management, waste receipt, ports, shipping agents, authorities, legislation, environmental improvements, processes.

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ACRONYMS AND TERMINOLOGY

EMSA	European Maritime Safety Agency
EU	European Union
HELCOME	Helsinki Commission
IMO	International Maritime Organization
MSW	Marine Single Window
PRF	Port reception facilities
SDG	Sustainable development goals
SFS	Swedish code of statuses
UN	United Nations

1. INTRODUCTION

The following chapter presents the overall background of marine waste disposal and the history of waste receipt and its implementation in Sweden, from The European Union's Directive through the works of The Swedish transport agency and The Swedish Maritime administration. Moreover, the introduction includes the overall aim of the report and its related research question as well as its delimitations.

1.1 Background

The last of May 2023 the Swedish transportation agency implemented a jurisdiction regarding handling of waste receipts in Swedish ports. According to Swedish transport agency regulation (TSFS 2023:15) chapter 5 10§ translates those regulations of actions against pollution from ships. The one responsible for the waste receiving facility are to create a waste receipt that contains certain information in accordance with the information given by the Swedish transport agency. This waste receipt is to truthfully be filled in by chief/captain of said ship in connection to delivering waste. The situation is the overall management of waste disposal regarding waste for different shipping actors.

The Swedish transport agency in collaboration with Swedish maritime administration are acting through a legislation from EU called Directive 2019/883. This Directive is the foundation of the changes made by the Swedish transport agency and was conducted in 2019 whereas member countries of the EU are to adjust as to better suit their national legislation. As for Sweden the use of a program called Marine single window (MSW) is used to report what waste is to be discarded at the port. The problem arises with these receipts, due to lack of access for the use of MSW for some marine actors, the extra administrative work needed to handle the waste receipt, as well as the overall overall effects of it. Further, with fast implementation of the legislation, problems are created and when friction derives through legislation, actors' willingness to work towards a common goal can be affected. A negative outlook due to extra time, work and effort can make it difficult for actors to operate within the legislative boundaries and maintaining a sustainable environmental approach due to workload, where the three main actors related to the changes are agents, captains, and the ports.

Transportstyrelsen (2023) explains how port facility has an obligation to give a waste delivery receipt to the vessels arriving at their facility to unload waste and can be sent both via digital and in a physical copy. The vessel in which case the captain has a duty to pass on this information in MSW. A penalty of 10 000 Swedish crowns is set for involved parts, if no delivery of receipt was made to the vessel, and not submitted into MSW.

The part involved in the handling of waste receipts are many, the terminal of designated waste receiving facility are to arrange the receipt. The ship agent is to get the receipt from the terminal to send it to the ship calling the port, for chief/captain to fill in the amount and specified waste to be delivered. This receipt is then sent back to the appointed agent for them to send back to terminal to get a signature from terminal. Waste receipt is after that sent back to agent for them to send signed waste receipt back to ship as well as reporting all waste delivered into Swedish MSW. There are many parts involved, making it a complicated and dragged-out process.

1.2 Aim of the report

The problem lies in the legislation contributes to increased positive environmental actions or if the regulation implemented only slows the gear in the machine, making the actors take extra detours of time and administration.

Therefore, to get a better understanding how actors orient themselves with their environmental work and how legislative affects their overall attitude towards the debatable purpose of waste receipts the following questions are.

1.3 Research questions

- What does the waste receipt process look like a for the actors and how can it be more effective?
- How is the waste receipt essential for the actors to effectively implement their environmental approach?
- How has the implementation of waste receipts affected different actors within Shipping regarding workload?

1.4 Delimitations

The legislation regarding waste receipt, (EU directive 2019) was added in 2019 therefore the report mainly limits itself to sources published after this. Exception is made for explaining the origin of the 2019 directive such as previous legislation regarding waste management e.g. directive 2000/59/EC.

The waste receipt process mainly effects three actors which further delimitate the report in only those perspectives. These three actors are shipping agents, ports, and captains. The report also focusses on Swedish marine market, due to lack of access to international actors, and to better understand EU's directive at a national scale when it has been practically incorporated to governmental law. As for the Swedish marine market, the report focus lies on dry cargo ships and tankers vessels which has no dispensation towards waste receipt.

2. THEORY

This chapter will begin by introducing maritime conventions and commissions which are responsive to environmental policies and legislations to highlight and receive understanding on how these above mentioned are a background to how waste from vessels is to be handled. Further on this chapter will continue with the effects of legislations on today's marine actors in addition to how the legislations regarding above are affecting the actors in the maritime industry. Lastly this chapter will give shallow understanding of different maritime actor's role in waste handling within shipping as well as how the Swedish maritime administration and the Swedish transport agency view of the problem.

2.1 EU Directive 2019/883

In April 2019 the European parliament implemented a new legislation called Directive 2019/883 (EU, 2019). The directive main drive is to protect the marine environment through means of international conventions. The directive is partly based on a previous directive from the MARPOL Convention called 2000/59/EC, created in the 2000 which also focusses on the safety of marine environment. EU 2019 also states that during the last two-decade, control over ships waste discharge have been stricter to accommodate the new legislation. The 2019 directive consider the United Nations (UN) sustainable development goal (SDG) 14, as a significant driver for supporting marine species in terms of biodiversity and natural infrastructure (EU, 2019). They further explain in a more recent directive from 2008, how smaller ports handle their waste management through the municipality. The reason being not to exhaust the local authorities in which the port is supposed to make the port users having access to information about the utilization of the waste reception, (EU, 2019). They continue in explaining their use of SafeSeaNet, a monitor system formatted by the EU, as well as their inspection database system THETIS. Both these programs are in use by the EU as means of enforcing the directive to its involved members.

Regarding the SDG 14, The global goals (n.d) explains the necessity in reducing pollution at seas to shield marine life globally to uphold biodiversity. Target 14.A of SDG 14 explains the relation to implanting international legislation of sea law. This legislation reflects the UN's framework in making the oceans more sustainable, where the SDG is one of the EU directive's drivers.

2.2 Swedish Government's proposition 2022/23:62

From previously mentioned EU directive 2019/883 the Swedish government submitted a proposition to the Swedish Parliament on the 16th of February 2023 in Stockholm according to the Swedish Government (Regeringen, 2023). This proposition is called 2022/23:62 and within the proposition suggestions regarding legislative changes are proposed, these in line with the EU directive 2019/883 regarding waste from ships and waste reception facilities. Here forth it is proposed by the Swedish government new authorizations that will further develop and announce directives. These Authorizations are given to the government or other authorities that the Swedish government chooses. It states that the authorized id to give these directives to ports amongst other. The directives conclude different parts of the waste receiving system for ports including the handing over of a waste receipt to the vessel which has disposed waste. The legislations are proposed to come into force on the 1st of May 2023. (Regeringen, 2023).

The legislative changes proposed are changes within the Swedish law (1980:424) regarding actions against pollution from ships according to the Swedish Government. Here within it is stated under 3 chapter 8§ that, by law it's required to leave a waste receipt of delivered waste,

save the receipts onboard vessel as well as reporting the data on the receipt, (Regeringen, 2023). From proposition 2022/23:62 the Swedish Code of Statues (SFS) added the SFS 2023:171 which is the changes made on the law 1980:424 following the proposition, (Svenska Författningssamlingen, 2023).

2.3 The MARPOL Convention

The MARPOL Convention, established in 1973, under the auspices of the International Maritime Organization (IMO), serves as a paramount international treaty aimed at curbing pollution from ships, (IMO, n.d). Its significance was amplified with the adoption of the protocol of 1978, prompted by a series of alarming tanker accidents in 1976-77. This protocol, assimilating the original 1973 Convention, was consolidated into a combined instrument effective from 1983. Subsequently, a protocol introduced Annex VI, an additional regulatory framework addressing emerging pollution concerns, which took effect in 2005. Over time, MARPOL has undergone revisions and amendments to work with and evolve through challenges and technological advancements (IMO, n.d).

At its core, MARPOL's regulations target the prevention and reduction of ship-generated pollution, encompassing accidental incidents and routine operational activities. Its six technical Annexes provide a comprehensive framework addressing various pollution sources and mitigation measures (IMO, n.d).

MARPOL stands as a testament to international cooperation in environmental preservation claims IMO (n.d), fostering responsible practices within the maritime industry. By establishing robust regulatory standards and safeguarding vulnerable marine ecosystems, and as environmental challenges persist, MARPOL remains a cornerstone instrument in the collective effort to ensure the health and integrity of our marine environment for present and future generations, (IMO, n.d).

2.3.1 MARPOL annexes

All the annex's work with marine safety and pollution whereas the main annexes relevant to the process of waste receipt is mainly explained in annexes I, II, III, IV and V. The first relevant annex, number I, explained by IMO (n.d) was incorporated in 1983, and deals with oil pollution prevention. It mandates measures for preventing oil pollution from both operational and accidental sources, including requirements for double hulls on new oil tankers. The second one, annex II, also in force since 1983, focuses on controlling pollution by Noxious Liquid Substances in Bulk. It sets discharge criteria and control measures for these substances, ensuring they are only discharged to designated facilities under specific conditions. Annex III, effective from 1992, addresses prevention of pollution by harmful substances carried by sea in packaged form, establishing standards for packaging, marking, and documentation of harmful substances. Annex IV, in force since 2003, regulates prevention of pollution by sewage from ships. It prohibits sewage discharge into the sea except under specific conditions, such as when using approved treatment plants or systems. Annex V, the last relevant annex to waste receipt was effective from 1988 and focuses on Prevention of Pollution by Garbage from Ships, banning the disposal of all forms of plastics into the sea and specifying disposal distances and methods for various types of garbage, (IMO, n.d). These annexes circulate around EU directive 2019/883 where much of its legislation bases their work regarding the information given in the annexes.

2.4 The Swedish Transport agency and Swedish Maritime Administration

The two main government authorities handling the waste receipts interception of EU directive 2019/883 are through the works of the Swedish transport agency and the Swedish maritime

administration. Conducted interviews with members of both authorities was made, about their involvement in the handling of waste receipt and how they work and communicate with Swedish marine actors and each other. The work between the administration and the agency is motivated as crucial in making EU legislation feasible. Regarding the relationship between both, the agency is seen as a supervision authority and the administration as the technical solution. They explain how EU's directive should be seen as the high bar of what is the bare minimum of what is to be included in the waste receipt, and further motivate actions of actors to include more information. Transportstyrelsen (2023) forwards to what a waste receipt shall include as well as a template shown in appendix 1.

When a directive is made by the EU, each country member must abide by the laws and regulation. How this works from a national level is through delegated government authority, which in the case of directive 2019/883 where the Swedish transport agency governs. The responsibility lies with them to nationalize the legislation, and effectively making it viable for the industry to change. This demands from the EU needs to be followed or risking a penalty for the Swedish state. EU like the Swedish transport agency has regulation of supervision to see that actors comply with the new demands, through the works of European Maritime Safety Agency (EMSA). EMSA is a marine supervision organization and is seen as EU's extended arm in the maritime market. EMSA also uses a program called safe sea net which the Swedish maritime administration is responsible for, which involves the transfer of information from MSW to safe sea net.

The Swedish maritime administration task is to help the Swedish transport agency making the legislation workable in the means of technical solution for the marine actors. They do not make changes to the regulation but communicate the situation of the marine actors and are also responsible for the management of MSW, which is the tool used to report the waste receipt. The administration also helps with information gathering through direct contact with different marine groups, such as *Svensk Sjöfart* and *Skeppsmäklarförbundet*. The administration has an overall grasp of how the actors work with the waste receipt which they motivate could be increased in knowing more detailed work of the marine actors. Communication with said groups is explained as vital in making this legislation viable. The administration and the agency also state that the implementation of waste receipt is quite recent and motivates how the necessary supervision and evaluation has not come to fruition yet due to the recency bias of the legislation. Through means of effective communication of what works and what does not for the actors, is further emphasized to the making of a constructive conversion.

Regarding their relationship to related actors and the use of MSW, only captains and agents have access to the system, whereas port does not have the ability to its related information. Exception does exist, where both the port of Gothenburg and the port of Gävle can use the system, which at the start was intended for all the ports of Sweden but had trouble to be carried out in completion. One solution was to have ports the necessary information from safe sea net Sweden instead, which ports have access to today. Access to MSW for all ports is explained as a possibility in the future, where the argument of more information available is good, and in such case that MSW helps proceeding this, there's likelihood to be added.

2.5 The Baltic Marine Environment Protection Commission

HELCOM (n.d) explains that in 1974 an intergovernmental organization named The Baltic marine environment protection commission, more known as the Helsinki Commission (HELCOM) was founded by seven coastal countries surrounding the Baltic Sea. The main reason behind the origin of the commission was based on increasing environmental problematics that occurred due to industrialization. They continue to mention that the convention seeks to protect the Baltic Sea from all pollution sourcing from air, sea, and land which all member countries

that have signed the commission are needed to keep measurements on usage of marine resources in the sea as well as connecting inland waterways along with measuring how biological diversity is withheld and to keep conserving the habitats within and along the Baltic Sea, (HELCOM, n.d).

In the Helsinki Commission HELCOM (n.d) continues to mention that conveying is done annually with all contracting parties, which includes Denmark, Estonia, the UN, Finland, Germany, Latvia, Lithuania, Poland, Russia, and Sweden. Ministerial-level meetings occur every three years. Contracting parties appoint Heads of Delegation to represent them where the commission issues recommendations on marine environment protection and maritime sustainability, decides budgets, and makes key decisions through consensus. HELCOM (n.d) also explains that chairmanship rotates every two years based on English alphabetical order among contracting parties.

2.6 Maritime actors

Generalcargoship (n.d) explain how, within the shipping industry there are multiple actors involved in each sea transportation. Some of these actors involved in the transport chain are also involved in the handling of waste aboard the vessels. These are mainly the vessel crew, the port that the vessel is calling as well as the port's waste receiving facility and lastly the vessels appointed agent.

The institute for apprenticeships (2022) describes that the agents within the maritime industry are typically stationed at ports across the nations. Port agents are employed by commercial firms, which may be situated within a port or elsewhere. The primary aim of this position is to act as a liaison between vessel operators/owners and port authorities to ensure the smooth arrival, operation, and departure of ships in a port. This involves assisting vessels throughout their voyages worldwide and providing necessary support to captains. Duties include securing necessary permissions, ensuring proper crew staffing, and arranging adequate provisions for the vessel, (Institute for apprentice ships, 2022). What is a seaport (2020) mentions that the ports functions are many, loading and unloading cargo, facilitating cargo, bunkering operations and so forth. Regarding waste ports, they are to have reception facilities (PRFs) for ships' waste which is vital for managing waste effectively in ports. These facilities mainly collect waste from ships, such as cargo leftovers, garbage, oily water, sewage, and even debris caught from fishing vessels. PRFs often go beyond just collecting waste, they also sort, treat, and recycle it, which sometimes can create new products for sale, which supports a circular economy. Member States are responsible for ensuring PRFs in ports, according to the Port Reception Facilities Directive, (EMSA, n.d).

3. METHOD

This chapter explains the methodology used in gathering information used in the theory and result chapter. The section describes the data collection and data analyzing process through interviews and how they are selected and transcribed. It also contains how the interviews were conducted and what method was used.

3.1 Research Methodology

Forskningshandboken by Denscombe (2018) is used in acquiring the understand of how to use different kind of interviews and how they should be conducted. Denscombe defines research interview, which this report partly uses as a method, as “*A method for data collection with the used of people to answer the researchers question as a data source*”. This definition is used to to understand interview as means of data collection. Only actors who partake in the use of waste receipt are used as sources which include, port, agents, captain as well as the Swedish transport agency and the Swedish maritime administration. Due to the nature of waste receipt being a relative new concept in terms of Swedish legislation where the implementation of it being mandatory for Swedish actors in risk of not submitting the receipt would result in a penalty, came into fruition in May 2023. Interviews of concerning actors in the market is therefore the main source material.

3.2 Theory sampling method

The sources used in the theory chapter of the report is primarily legislation from government officials. Its basis is on the directive and its foundation of already existing laws. Exception from this is chapter 2.4 regarding The Swedish transport agency & Swedish Maritime administration whereas interview was conducted in sampling relevant information to the Swedish legislation. The other parts, The Baltic Marine Environment Protection Commission, EU Directive 2019/883 and the MARPOL convention all are transnational legislation which the Swedish transport agency & Swedish Maritime administration basis their national legislation of. The findings of the international conventions, directive and commission are through their own websites, directed from both the interviews and the legislation itself.

Why the reports choose the government agency as one of the main sources in the theory, is their direct contact with the legislation, where they themselves are main source of its legally binding constraints in Sweden and therefore the most credible source. As for the other sources which basis on legal text. Why the legal text is credible is the legal authority it has where what is said is binding for all related parts. The legal text is also credible due to the clarity of the wording and the objective standpoint it has. Peer reviewed work would also be a good source of information, but the recency bias of the reports problem prohibits the use of these reviews for the reason of there being few or none of its kind related to waste receipts. Law text from directive, international legislation and discourse with the Swedish legislators is therefore the best credible source material the report can use.

3.3 Interviews

The data collection process is provided through interviews with relevant actors. These actors include Captains, ports, and shipping agents. These actors were chosen due to all three participate involvement in the use of waste receipt. Communication between them is essential and is therefore important to get a better understanding of the process of waste receipts. This in turn helps to make a better assessment of how it might affect the impact of their environmental approach. The total amount of conducted interviews was eight, where three was with agents,

two with ports, one captain, and finally with the Swedish transport agency & Swedish Maritime administration. A test meeting was conducted with the extended supervisor to find relevant interview question fit for a market perspective and the necessity of conducted interviews with government authorities to become more nuanced and give a broader perspective of the waste receipt process and the legislation. The questions were sent out to the participant before the interview if asked for by the participant otherwise they were presented under the interview was conducted. The interviews were also recorded using a mobile phone to be able to play back the information given as well as being able to transcribe its context. The interviews were conducted hybrid, meaning both in person and online using Microsoft Teams.

For the report to take an ethical stand, the interviewed was sent a document called *letter of missive* (see appendix), containing information about the author, the report, and how their involvement will help the data sampling. *The letter of missive* was also sent with a letter of consent, describing how the interviewed participants have rights to withdrawal to what they have said during the interview, as well as how the information given will be used confidential the consent form is therefore a mean of taking an ethical standpoint towards the participants. The reason being to promote a sense of justice and fairness, and to protect the integrity of the one interviewed.

3.3.1 Interview selection and criteria

The interview selection process was made by accessibility through already existing contacts and reaching out through mutual connections. E-mails was sent out to various actors who are working with or in relation to waste receipts. The report aimed towards getting nine interviews, three per segmentation (agent, port, and captain), but due to information given during the interviews, the report settled on eight interviews from the three actors with an additional two from the Swedish transport agency and the Swedish maritime administration. The interview with the agency and the administration respectively is used as mentioned before, in the theory chapter of the report. The criteria of the interviewed was being a part of one of the three segmented groups as well as working with or in relation with waste receipts. Due to one of the authors current involvements of waste receipts, convenience selections were used to contact actors who are involved with or working with waste receipts. The report uses Sage portal in finding relevant methods and terminology where the method of using convenience sampling as the procedure for data collection is classified by Wronski (2022) research methods as “*by the relative passivity of data collection than anything else*” and describes how the nature of this sampling method could result in a particular bias which can affect the result.

To be able to increase the scope of the report, reaching out to the Swedish transport agency and Swedish maritime administration was important to create more nuanced view of the whole situation. Including government agencies as well as its concerns actor give a triangulation scope of the concern problem. Where the view of multiple marine participants is taking into consideration.

3.3.2 Semi -structured interview

Semi-Structured interview is the methodology used to acquire relevant data for the assignment source material and is the strategy used in all conducted interviews. In principle the questions are used as a guide to steer the participant to explain relevant information to the topic of our research question. The interview questions are therefore brought forward to be able to make good estimate of the report research question. The questions can vary depending on what information the participant gives, but as a given standard the interview was said to take approximately 40-60 minutes, where seven standard questions were used to gather the data from the interview (see appendix). Regarding the interviews conducted with The Swedish

transport agency & Swedish Maritime administration, nine different questions was sought out to be answered. The use of a semi structured interview gives opportunity to make the participant further explain relevant information or add another point of view which the interview question did not account for which can also give the possibility to add more interview question during the process of gathering data and doing more interviews.

3.4 Qualitative data analyzing and Thematic analysis

Analyzing the reports qualitative data was made by the approach of conversation analysis to develop material for the result. In a narrower term of data analysis, transcription was the medium used in how the material gathered through the conversation from the interviews to the text used in the result. The recording of the conversation was played back to understand, relay, and make claims based on the answer given by the participant. Nordstrom (2019) describes transcription as *“the situated, theoretical, and ethical act of materializing spoken research events (e.g., interviews, focus groups, and other events that are subsequently transcribed) into written text”* which was the reports method of formulating the spoken words into text.

The analysis of the text to make a discussion and conclusion is to bring forward relevant themes which can purpose is to explain the research questions. Fugard & Potts (2019) explains how an attempt to describe Thematic analysis by referring to Braun & Clarke, 2006, p. 82, as *“represents some level of patterned response or meaning within the data set”*. The themes in this report were created through means of segmentation, where grouping answers from the interview questions together in its relation to the research questions. The interview questions were therefore connected to creating the three themes used to answer the three research questions. The raw data set in this case was the transcribed result.

3.5 Conduct of research

The report starting point was identifying the problem in the market setting. The main problem of waste receipts was already known by one of the authors, therefore access to related information regarding the waste receipt process and the use of MSW was already known. An aim and related research questions could be made to guide the report forward. After this an evaluation was made on which method is best to acquire the data, where interviews were concluded the best choice for as a sampling method. Reaching out to possible participants as well as gathering already existing information regarding waste receipts and its related legislation was the next step. During this period dialogue with both supervisor and external supervisor are had to guide and help during the process. After the first interview the necessity to get in contact with the legislators (The Swedish transport agency and The Swedish maritime administration) was imminent. The interviews continued with the different actors as well as with the government agencies. When enough information was gathered in relation to theoretical saturation and limited access to more participants, the analyzing of the data began, and partly started during the period of the last interviews. The analyzing gave a result we could connect to the reports aim and research question and its relation to the theory, and a discussion could be made. The discussion could give an estimate of the answer to the research questions which is described in the conclusion.

4. RESULT

This chapter will present the results of data collected by various interviews. The text in this chapter are results based on several interviews performed in line with the method used. The result itself is based on three different themes kept in mind when selecting relevant interview questions for each actor role, these themes are, the process itself, the risk of potential errors of the process and thirdly the environmental effect of the waste receipt. The respondents interviewed for this report are all stakeholders within shipping mentioned in chapter 2.6. As stated in that chapter, the stakeholders that are involved within the process of the waste receipt handling are shipping agents, the vessel itself, meaning either a captain or other crew members who might be responsible as well as the port that are the receivers of the waste.

4.1 The process of the waste receipt

Two respondents that differ from other stakeholders interviewed are the two main authorities that have control over the implementation of the waste receipt. These are The Swedish Transport agency and The Swedish Maritime Administration. The Swedish Transport agency is the authority that put the Swedish law regulation shipping waste receipts into effect correlating to the EU directive 2019:883 mentioned previously. The Swedish Transport Agency are at the helm of the legal actions while The Swedish Maritime Administration handles all practical implementations and processes that the above-mentioned actors must comply with as. These two conducted interviews were however, used in the theory chapter of the report and will not be included in the results.

4.1.1 The ports process of the waste receipt

The respondents interviewed from the ports have been somewhat in charge of the environmental parts of their facilities. The full process of the waste receipt for the port starts firstly with receiving the waste receipt, usually from the agents. Commonly this happens over 24 hours before the vessel arrives at the port or port terminals to arrange garbage disposal. The ports in Sweden have different ways that the agents are supposed to inform them of above-mentioned information, although the most common way is a pdf form, shown in appendix 1, which is to be filled in with some ship's particulars in addition to amount of waste to be disposed and furthermore the type of waste that is to be delivered. This type of waste receipt complies with the legal requirements that are set out by The Swedish Transport agency. At variance of above some ports have a form to be filled in on the port's own web page where their form includes the same legal information that is required as above. Overall, the port working respondents for this report all have the same information within their receipts. After disposal of the waste, the port or more specifically the port worker in charge, do somewhat of an estimation that the amount and type of waste complies with what was reported in the waste receipt and thereafter put a signature and stamp on the receipt and return it to either the agents for the vessel call or the vessel itself.

4.1.2 The ship agents process of the waste receipt.

The Ship agent's role in the handling of waste was told by the respondents to be crucial for the system to work properly. The system MSW is where the agents upload all information required for the vessel call, and this is where the agents upload the waste receipt. The agents' process starts when they receive the Pre-arrival file from the vessel, from this file the agent can find out if the vessel intends to dispose any garbage, if this is the case the agents send the waste receipt PDF file for specified port that vessel is calling. If the port does not have PDF file for the

receipt, the agents will fill in the waste supposed to be disposed on the forms on their website. This form is then sent to the captain or vessel to be filled in, signed, and stamped by the captain or chief officer or other crew members who might be in charge. This is then in most cases sent back to the agent wherefrom they forward the information to the responsible person in the port.

The agent respondents claim this above process goes rather quickly, although the process is not completed here. Once the waste receipt is sent to the port it is in most scenarios not returned until after the vessel has disposed of the waste, it is then signed and stamped by the designated person in the port whereas they have controlled that the amounts reported on the receipt is in accordance with has been disposed. When the agents receive the waste receipt back, they will have to fill in the correct figures in MSW and send the PDF file to the Vessel in case they did not receive it back from the port themselves.

This is in the most cases how the process looks for the agents, although there are some cases where the process is simplified, for example when there is vessel that go on liner trade where they visit the same ports within the same time schedule and therefore generate the same amount of waste. The vessel can then write the expected amount directly on the Pre-arrival file and fill in a receipt with the port themselves instead of having the agent be an intermediary.

4.1.3 The vessels process of the waste receipt

The respondents from the interviews answering for the vessel side concluded that often it is the chief officer along with the captain of the vessel that together make some kind of assumption of how much waste has been generated. This assumption is based upon previous voyages, further on the figures they calculate are what is sent to the agent on the waste receipt. The designated crew member of the vessel then awaits berthing and disposal of the waste whereas they in some ports receive the signed waste receipt from the port. If the vessel does not receive the receipt at this stage, they either wait to receive it from the agent, if the wait from the agent is unnecessarily long, they might have to remind the agent to ask the port for a signed waste receipt. The vessel then needs to save the physical copy of the receipt for two years in accordance with their garbage plan to be able to present these in case of a port state control.

4.1.4 The process of waste handling in port

The port is not only responsible for the waste receipt but also the gathering and handling of all disposed waste from vessels. The ports all must work in accordance with legal frameworks regarding how they receive the waste, sort the waste and furthermore how they plan to dispose of the waste. Every year the ports must submit a report of all received waste, which should include all types and an estimated amount delivered for each type. Most ports have a connected waste reception facility which attains all waste that the port receives.

4.2 Potential risk of errors in the process

Potential risk of errors in the process are mainly applied to agents whereas the vessel have a potential to make mistakes regarding the human factor due to the directive within the garbage plan. The agents are needed for uploading the waste receipt in MSW whereas authorities can trace the vessel call, if this is in any regards mistakenly uploaded or not uploaded at all there can be difficulties for the authorities to follow up. The agent respondents have acknowledged some difficulties of receiving the waste receipt from both vessel and the ports in some cases, the agents therefore often have difficulties to keep track of whether they have or have not received the receipt therefore also difficulties with uploading the waste receipt to MSW.

Whereas most port publish the waste receipt in form of PDF, but MSW only accepts excel files for upload the agents must manually fill in each amount and type of waste reported from the vessel, this could potentially lead to errors due to human factor.

4.3 The role of waste receipts in environmental improvement

The respondents of the interviews are mainly positive toward the main idea behind why the waste receipt. Many respondents acknowledged that the shipping industry have been looked at as a dirty business for many years due to lesser focus on environment in previous years. Therefore, the respondents overall see a need for the shipping industry to work with their environmental impact, regarding this the waste receipt plays a role. Overall, the respondent acknowledges the importance of environmental work, nevertheless there are larger parts of the industry where the environmental focus is more required for a faster change. Some respondents mentioned the significance the waste receipt has on the shipping industry in regards of sea and water life, which was mentioned as a part of the industries work towards SDG 14 *Life below water*.

4.4 Future analysis

Many respondents acknowledged that it is incredibly good for the industry to work on both small and large parts of the environmental improvements. Other industries and businesses as well as private people can look upon the shipping industry as further ahead and competitively stronger due to this.

One question that arose among the agents' side of the respondents was rather it is within reason that the agents upload the waste receipt when it is received in the Pre-arrival form sent by the vessel. This due to the agent not being able to inspect or in any way examine the amount of waste disposed in the port before the vessel has arrived and disposed the garbage. Therefore it should be reported in MSW in relation to departure and not arrival.

Furthermore, some port and agent respondents recognize the importance of having a communication with the authorities that set the legislations as well as the authorities that provides the technical solution regarding the legislation. This is to be able to have a smoother process for the stakeholders already in the implementation phase.

5. DISCUSSION

This chapter is based upon information given in previous chapter from presented respondents and stakeholders in the result in comparison with the theory chapter. This discussion will go through themes from the interviews regarding the interview respondents' interpretations of the interview questions. The chapter also includes the discussion of this report's choice of method, and the pros and cons based on validity and reliability.

5.1 The waste receipt created purpose

The waste receipt implementation to Swedish legislation is due to the fact of The Swedish transport agency obligation to being an EU member, making it mandatory for directives given out from the organization to be included as national legislation. When the EU directive 2019/883 was enforced, the agency together with the Swedish maritime administration had to comply with its demands which henceforth created the purpose for the waste receipt. Not implementing said legislation would result in a penalty to the Swedish state. Therefore, making the process of incorporating the new directive, communication between the agency and administration was imminent of making it viable for the marine actors.

The importance regarding Swedish legislation is more so abiding the laws off international authorities. So regardless of it being effective in making actors work with environmental approach or not the legislation is mandatory. The problem of making it to work effective practical in Sweden is somewhat justified. That's where the Swedish maritime administration has its use of helping the legislation work through technical solution for the industry. What is required in this case is understanding and communication with its related actors in order to find the best solution.

5.1.1 Optimizing and technical solutions

Whilst the waste receipt management system facilitates data collection and reporting, could be more optimized through means of simplifying the process for involved stakeholders and therefore minimize potential risk of errors. Verification processes as well as automation of data entry could be potential technological solutions that could magnify the accuracy and efficiency in maritime waste management's processes.

These changes will be a possible solution in making the process of waste receipt and waste management more effective, which leads to less administrative work for the related parts. Understanding and communicating these details to the Swedish maritime administration, would possibly lead to a better result for all member involved.

5.1.2 The legislation impact on represented stakeholders

The waste receipt legislation is based on international legislation such as The Baltic Marine Environment Protection Commission UN's SDG 14 and one the MARPOL Annexes. A clear connection exists between this legislation and the impact it has on the marine actors. As shown in appendix 1, the basic receipt template is described using MARPOL annexes as a mean to show what information is needed to have a certified waste receipt which both the Swedish transport agency and the Swedish marine administration explains need to fill out completely and truthfully for it to be viable. This legislation impact requires all three actors to communicate with each other in order make the receipt truthful and complete, hence their process of waste receipts.

5.1.3 Joint effort and cooperation between stakeholders

The Interviews underline the importance of collaboration within the waste receipt managements where ports, agents and the vessel operator all are crucially important, for the process to comply with the directives underlying. Their coordination and cooperation are key to guarantee efficient handling of the receipt from start which is calculation generated garbage to final upload in MSW. However, errors and challenges become apparent due to complexity within this process, the full reliance in the human factor for data entry and communication. Consequently, promoting greater collaboration as well as highlighting the importance of well working communication between actors would mitigate the challenges. Further on the respondent have highlighted the importance of data sharing with one another, now only agents can report information to MSW but to already sharing some information with the port could improve the simplicity of the waste handling overall as well as the specific waste receipt making the whole process more effective.

5.1.4 Compliance to directives and environmental liabilities

The implementation of the waste receipt system is in line with all regulatory directives, with a fundamentality in MARPOL convention and further on the directives from EU and The Swedish Transport Agency. The Fundamental MARPOL convention strengthens the waste receipt's role in the environment work within the maritime industry due to the aim of safeguarding marine environments. The waste receipt serves as a vital tool for surveilling waste generation onboard vessels and the reasonable disposal of these and the respondents and actors are acknowledging the importance of the waste receipt management regarding frameworks, as well as recognizing the future importance of having environmental liabilities in the regular work within the maritime industry.

5.1.5 Ethical environmental insights

An important aspect of the directive, which is further emphasized in SDG 14, MARPOL Annexes and HELCOM. All these international legislation and conventions works towards promoting and improving environmental aspects in the marine sector. HELCOM explains the part of biodiversity and conserving marine habitats, as an important step towards working with environmental goals, which regarding the waste recipes from the results aspects shows that the receipt has their purpose for environmental change. HELCOM as well as the other legislation is made in the view of ethical insights, where the supposed changes is off purpose to improve marine life in areas such as protection and sustainability. The waste receipts role in informing waste estimation helps with the overall recycling which contributes to the market's environmental insight.

5.2 Choice of method

Choosing Semi-structured interviews as the main research approach has advantages such as gathering qualitative insights from stakeholders within the choice of subject. Interviews as such gives a close interaction between participants and the interviewer resulting in personal narratives and experiences regarding the subject. Semi-structured interviews give flexibility within question which allows the respondents to dive into details and viewpoints that the authors may not have in mind. Nevertheless, the importance of acknowledging limitation within the subject is crucial for the methodology. While variation within the sampling of respondents is important it may cause for a limitation in information. The full breadth of information may therefore not be implied in the report. Furthermore, relying in self-reported respondents can

conclude biases and some inaccuracies in the result. To avoid and work around these shortcomings, future research could include qualitative studies to get a broader perspective of the maritime waste management and the waste receipt system.

The reason for choosing interviews as the source of information gathering is mainly due to the recency bias of the problem which results in very few peers reviewed reports making it difficult to get the same information with a literature study regarding case studies. A qualitative data collection was the better option in terms of data collection due to the nature of the problem, where understanding the problem and the solution was unattainable using a quantitative measurement because of the inability to ask reactionary questions during the interview, which e.g. a survey fails to do. A survey would however give the ability for the interviewer to formulate a better and longer answer if given more time to think, which could give a deeper and more put together response. Regarding using interviews in contrast to a survey, the possibility for answer expansion during the discourse and the opportunity to speak freely and informally is something the report highly regards and therefore more attractive regarding data collection. The survey format makes it harder to freely speak of one person's ideas. Being able to answer outside of the interview prepared questions, to further explain the problem or solution is something the report puts heavy weight on. Using a survey to obtain the data would therefore be less profitable but could give an ability to reach a broader audience due to being easier to conduct faster than interviews. One such benefit could be to include more ports in order to get a broader understanding how different ports works with their waste receipts. More insight on how they get managed could give a more nuanced perspective, and possibilities for improvement and maybe give more "out of the box" solutions, which is lost due to having less participants which could question the theoretical saturation. The answer we got, however, does not show this. To counter the previous point, a walkthrough of the waste receipts and perhaps sending the question before the interview could achieve similar results in case of a more put together response, which was tried but to little difference in answers. Another possible alternative method is using focus groups where a better understanding of the problem could be brought forward and overall, more depth. They do, however, require careful planning and thoughtful analysis, which in regards to time and experience of the authors could be difficult to achieve in regards to the resources. The strength of using a semi structured interview is its feasibility and ability to get relevant information at a quick and easy procedure. With more time and resources, using a focus group with relevant actors would be more preferable. The report acknowledges this, but also understand its limitation where the method used is seen as the best alternative.

The reason of using six interviews with captains, ports and agents was both due to lack of willing participants and theoretical saturation. The authors limited resource in gathering more stakeholders (captains, agents, and ports) was a difficulty, where more time and connections would increase the possibility in attaining more participants. The data collected was however not as diverse in spread of answers, meaning most of the questions were similar with small variation. Therefore, an argument of theoretical saturation could be made, where more interviews would not give much more information than the six interviews with marine actors already gave. This can however also be a result of geographical and social similarities of the participants, due to many participants was contacted trough chain referrals, where one person refers to another which refers to another, creating a chain. This can give a skewed view of the market, where you get a more segmented part of the market, where the scope of the overall report become smaller and therefore missing parts of the whole field in the marine market.

In terms of a better walkthrough of the waste receipt to the actors by the legislators, little difference would be of consequence. Even if there were a step-by-step guide on how to fill it out, its purpose and overall carrying out would still be questionable and therefore unnecessary. Unless clear directives of the waste receipt role and how it will be monitored by the legislators, could result in a preferable outcome. Regarding walkthrough of the referrals at higher instances could however result in clearer communication from the legislators to the actors which could have led to improved implementation. Better communication because of the walkthrough from legislators to the actors before the implementation of 2019/883 could also have given more time to ease in the influence of the waste receipt and therefore more acceptable.

In the case of reliability and validation which are important in examining the credibility of the report, using interviews in both the theory and result chapter from sides of booth actors and the legislation authority gives a more credible and nuanced view of the problem, in terms of triangulation.

Regarding the validity of the report the interviews conducted show a good representation of the question at hand, since they all work with waste receipts. The first meeting with external supervisors also helped making the interviews more oriented to the main problem of waste receipt. As for the reliability, the interviews were conducted with both the Swedish transport agency and the Swedish maritime administration which both are the origins of the legislation making them a credible source, as well as using relevant captains, ports and agents working today with said legislation.

5.2.1 Validity

The reports weakside regarding its credibility is the internal validity. Because one's author already existing knowledge of and involvement in working with waste receipts can create a bias towards that person owned conflicted thoughts of the problem. Which can give skewed interpretation regarding the data analyzing portion of the report. This interpretation of the transcription part of the data analyzing lowers the validity of the report. The connection towards the interviewed because of convenience sampling can also add to a specific view and interpretation of the data. The authors ability to stay neutral in terms of analyzing data could be questionable which lowers the credibility but have been taken into careful consideration during the process. Another part which lowers the validity of the assignment is the control of the participants to clarify the possible interpretation made to give a clearer answer. Once such possibility could be made where the result part of the report could be sent out to the participants where they could further explain something that the report might have interpreted wrong. The reports strong point regarding the validity is its source triangulation, where booth government agency and marine actors was interviewed, which give a broader spectrum oof the problem and different view, which gives a higher validity.

Regarding external validity, the problem of waste receipts mainly impacts the marine market and the actors mentioned in the report. The involvement of both the actors who need to manage the waste receipts and the ones who govern them, give a good representation of the involved players. The theory and result chapter are therefore a good representation of the population who gets affected by the problem of waste receipts. More participants from different geographical places and the size variations could however give a better representation of the population and add to the report's external validity. But regarding limited resources the report has given the best representation of the population as it can.

5.2.2 Reliability

The two dependability which the reports rely on, is the researcher and the technical equipment, which in this case are the authors and the mobile phone used in recording the interviews. Regarding the technical equipment, the recording was easily recognizable with good audio such as the words being spoken was clear and distinguishable. And from the view of the researchers, all interviews were given from the authors modern tongue, and one being already involved in the problem of waste receipts, resulted in a good quality of understanding and possibility to drive discourse further during the interviews which makes an argument of high reliability. However, the ability to remain neutral mentioned in 5.2.1, lowers the researcher's quality which in turn gives the report a questionable confirmability.

Due to the nature of qualitative sampling and analyzing methods, both validity and reliability is handled continuously during the making of the report. Therefor interpretations and authors biases are regularly questioned. In terms of external supervisor, where both is involved in the handling of waste receipts from the agent side, gives a good but also potentially skewed view of the problem.

6. CONCLUSION

The following chapter encapsulates the conclusion of this reports result with regards to the previous chapters and the discussion, providing a concise overview of the key findings to answer the research question in chapter 1.3.

6.1 What does the waste receipt process look like for the actors and how can it be more effective?

In conclusion the process of the waste receipt is a joint effort between multiple actors in the maritime industry, port authorities, shipping agents and the crew of the vessel, whereas the port reception facilities play a role in treating the waste from the vessel to correctly report all disposed waste. The process of the waste receipt begins most times with the agents receiving the information regarding waste to be delivered from the vessel crew. Following this is sent to the port authority whereas the amount of waste and all specification on the receipt are verified by the port, signed, and stamped and herewith sent back to the agents for reporting to MSW and sent back to vessel. However, challenges such as delayed receipt transmission and manual data entry hinder the efficiency of the process. To mitigate these risks, stakeholders advocate for streamlined communication channels and technological solution to empower real-time data exchange between stakeholders.

6.2 How is the waste receipt essential for the actors to effectively implement their environmental approach?

Overall stakeholders recognize the waste receipt as a good tool for protecting and working with the environmental parts of the shipping industry. Regardless of the administrative hardship, the waste receipt serves a purpose for advocating liability to all stakeholders within the shipping industry. These waste disposal actions in line with the legislations fosters a culture of environmental responsibility within the industry which drives stakeholders to actively work on bettering their environmental work. Moreover, the stakeholders see a good chance for the shipping industry to enhance their environmental reputation which the industry obtain, where waste receipt play a noticeable roll.

6.3 How has the implementation of the waste receipt affected different actors within Shipping regarding workload?

The implementation of the waste receipt has created various impacts on the stakeholders. Shipping agents and ports take on a great administrative responsibility, including transmission of the receipt and data entry, while the vessel obtain more reporting duties with every port call where they dispose waste as well as maintaining compliance records onboard. While the waste receipt results in increased workload the stakeholders overall see an importance of complying with environmental legislations, herewith the actors view the idea behind the receipt as good, whereas the workload that it brings a burden. Looking ahead, streamline processes and an increase of better technology can mitigate and lighten the workload pressures while still enhancing important environmental outcomes.

6.4 Recommendations for further research

To conclude a more qualitative result for the subject further interviews would have to be made with including of more different types of stakeholders as well as several more actors within each stakehold sector to receive a broader result.

Potentially further studies could include a broader view of how waste receipts are handled within the rest of EU regarding the EU legislation 2019/883. This greater view could help with the Swedish implementation and potentially improve the technical solution with less administrative burdens.

A method researching the relatively new EMSWe that is to be implemented during the year of 2026, could give greater intel in how the authorities Swedish Maritime Administration will continue to work with streamlining the work for all Swedish maritime actors.

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APPENDIX

Appendix 1: Maritime waste receipt content, TSFS, 2023

Bilaga 2. Avfallsavlämningskvitto

Uppgifter för avfallsavlämningskvitto MEPC.1/Circ.645/Rev.1.

1. Uppgifter om mottagningsanordning i hamn

1. Plats/terminalnamn,
2. Tillhandahållare av mottagningsanordning i hamn,
3. Tillhandahållare av behandlingsanläggning (om annan än ovan),
4. Datum och tid för avfallsavlämning från/till:

2. Uppgifter om fartyget

1. Fartygets namn,
2. IMO-nummer,
3. Bruttodräktighet,
4. Fartygstyp (oljetankfartyg, kemikalietankfartyg, bulkfartyg, containerfartyg, annan typ lastfartyg, passagerarfartyg, ro-ro, annat (specificera)),
5. Ägare eller operatör,
6. Registerbeteckning/signalbokstäver,
7. MMSI-nummer

3. Mängd i kubikmeter som mottagits av följande avfallstyper

Marpol bilaga I – olja

Oljehaltigt länsvatten, oljehaltiga restprodukter (sludge), oljehaltigt spolvatten från tankrengöring, förorenat barlastvatten, avlagringar och slam från rengöring av tankar eller annat (specificera)

Marpol bilaga II – skadliga flytande ämnen

Ämnen i kategori X, Y respektive Z, andra ämnen

Marpol bilaga IV – toalettavfall

Marpol bilaga V – fast avfall

Plast, matavfall, hushållsliknande avfall (t.ex. pappersprodukter, textilier, glas, metall, flaskor, porslin), matolja, aska från förbränning, driftsavfall, djurkadaver, fiskeredskap, elektroniskt avfall, lastrester (skadliga respektive inte skadliga för den marina miljön)

Marpol bilaga VI – luftföroreningar

Ozonnedbrytande ämnen och utrustning som innehåller sådana ämnen, rester från avgasrening

Avfall som inte omfattas av Marpol

Passivt uppfiskat avfall

Appendix 2: Missiv letter



Vi heter Malvina och Alexander och är studenter inom internationell logistik på Chalmers tekniska högskola. Vi håller på att skriva examensarbete gällande avfallshantering och ska fördjupa oss i hur lagstiftning kring avfallskvitton kan påverka aktörers vilja att göra rätt i hanteringen av avfallskvitton. Hur och varför extra tid, arbete och ansträngning kan göra det svårt att få aktörer att verka inom lagstiftningens gränser och upprätthålla en hållbar miljöbelastning. Vi riktar oss till den målgrupp inom sjöfartssektorn som jobbar med eller vars arbete påverkas av avfallshantering och regelverken som är relaterade till detta ämne.

Därför vill vi gärna samtala med dig som ____ angående detta ämne och kommer med förfrågan ifall ni skulle vilja delta i en intervju som är beräknad till 40–60 min att genomföra. Möjlighet att delta konfidentiellt är helt okej om de skulle begäras. Intervjun tar helst plats i person kring Göteborgstrakten, men om de enbart skulle intresseras att göra digitalt så finns det också en möjlighet för det. Intervjun är tänkt att äga rum mellan Mars-April 2024.

Ert deltagande kommer hjälpa oss att förstå påverkan av dessa regelverk och hur de eventuellt kan sätta hinder för, hjälpa med eller påverka arbete med avfallshantering. Uppskattar gärna svar så tidigt så möjligt om ni är intresserade eller ifall de skulle vara någon fråga angående arbetet eller intervjun.

Med Vänliga Hälsningar,

Malvina & Alexander

Malvina Dittmer



Alexander Wessman



Handledare

Olle Lindmark



Appendix 3: Consent form

Informerat samtycke om deltagande i examensarbetsprojekt

A view in marine waste disposal and how legislative actions impact their environmental approach. *The effect of waste receipt and it's change on marine actors.*

Chalmers tekniska högskola

Institutionen för mekanik och maritima vetenskaper

Avdelningen för maritima studier (Internationell Logistik)

SE – 412 96 Göteborg

Innan vi ber om din medverkan vill vi informera om vilka **etiska regler** som gäller i projektet.

- Jag har tagit del av informationen kring deltagande i studien och är medveten om hur den kommer att gå till samt den tid den tar i anspråk.
- Jag har fått tillfälle att få mina frågor angående studien besvarade innan den påbörjades.
- Jag deltar i denna studie helt frivilligt och har blivit informerad om varför vi har blivit tillfrågade samt vad syftet med deltagandet är.
- Jag är medveten att jag när som helst under studiens gång kan avbryta mitt deltagande utan att behöva ge en orsak till detta.
- Jag ger mitt medgivande till Chalmers tekniska högskola.
- Jag ger detta medgivande förutsatt att inga andra än de studenter/lärare/forskare som är knutna till studien kommer att ta del av det insamlade materialet.
- Jag är medveten att studien är helt anonym och insamlad data kommer att redovisas utan koppling till person, fartyg eller företag/rederi.
 - Mina personuppgifter kommer att hanteras i enlighet med EU:s allmänna dataskyddsförordning (GDPR) och på ett sätt som inte inkräktar på min personliga integritet.

Genom att skriva under denna blankett ger du ditt så kallade informerade samtycke till att delta i studien under dessa förutsättningar och att du tagit del av den information som presenterats.

Jag godkänner att intervjun spelas in i analysyfte.

Ort:	Datum:
Underskrift:	
Namnförtydligande:	
Kontaktuppgifter: FRIVILLIGT	

Appendix 4.1: Interview questions

Frågor Hamnar

1. Hur ser processen ut för er angående hur man hanterar avfallskvittorna? Vilka steg krävs kommunikationsmässigt?
2. Hur ser attityden kring avfallskvitton ut? Hur blir ni bemötta när ni ber om kvittot från respektive parter (kaptener och Agenter)?
3. Tror ni/du att avfallskvitton är ett bra medel för att förbättra avfallshanteringen? Finns de några positiva och/ eller negativa aspekter med detta system?
4. Tror ni att dessa direktiv kommer påverka fartygsbefraktnings branschen förmåga till att konkurrera? Och tycker ni att dessa direktiv är nödvändiga för att få branschen att arbeta med sin avfallshantering?
5. Hur tror ni att avfallskvitton kommer att fungera i framtiden?
6. Hur följer ni upp kring vad som rapporteras in, med de faktiska avfallet som ska hanteras?
7. Tror ni att andra hamnar bearbetar arbetet med avfallskvitton på liknandet sätt som ni?

Frågor Agenter

1. Hur ser hela processen ut för er angående hur man hanterar avfallskvittorna? Vilka steg krävs kommunikationsmässigt?
2. Hur ser attityden kring avfallskvitton ut? Hur blir ni bemötta när ni ber om kvittot från respektive parter (kaptener och hamnar)?
3. Tror ni att avfallskvitton är ett bra medel för att förbättra avfallshanteringen? Finns de några positiva och/ eller negativa aspekter med detta system?
4. Tror ni att dessa direktiv kommer påverka fartygsbefraktnings branschen förmåga till att konkurrera? Och tycker ni att dessa direktiv är nödvändiga för att få branschen att arbeta med sin avfallshantering?
5. Hur tror ni att avfallskvitton kommer att fungera i framtiden?
6. Anser ni att eran inverkan i processen om avfallskvitton är nödvändig?

Appendix 4.2: Interview questions

Frågor Kaptener

1. Hur ser hela processen ut för er angående hur man hanterar avfallskvittorna? Vilka steg krävs kommunikationsmässigt?
2. Hur ser attityden kring avfallskvitton ut? Hur blir ni bemötta när ni ber om kvittot från respektive parter (Hamnar och agenter)?
3. Tror ni att avfallskvitton är ett bra medel för att förbättra avfallshanteringen? Finns de några positiva och/ eller negativa aspekter med detta system?
4. Tror ni att dessa direktiv kommer påverka fartygsbefraktnings branschen förmåga till att konkurrera? Och tycker ni att dessa direktiv är nödvändiga för att få branschen att arbeta med sin avfallshantering?
5. Hur tror ni att avfallskvitton kommer att fungera i framtiden?
6. Anser ni att eran inverkan i processen om avfallskvitton är nödvändig?
7. Upplever ni att avfallskvittorna genomförs och godkänds i rimlig tid och i samband med den självaste avfallshanteringen?

Frågor Transportstyrelsen

1. Enligt lagtext, vad definieras som ett kvitto?
2. Vad avgör om det är ett giltigt kvitto eller ej?
3. Hur görs uppföljning av kvittorna?
4. Vem är ansvarig om kvittot inte rapporteras i MSW?
5. Vem är ansvarig att betala vite för uteblivet kvitto?
6. Vad händer om denne ansvarig inte får tillbaka kvitto från respektive inblandad part?
7. Vad finns det för krav på hur kvittot skall se ut?
8. Vems signaturer skall finnas på ett kvitto för att bli godkänt vid eventuellt uppföljning?

Appendix 4.3: Interview questions

Frågor till Sjöfartsverket

1. Hur insatta är ni i processen för agenter, hamnar och kaptener?
2. Hur har EU direktiven implementerats? Är de ni tillsammans med Transportstyrelsen, eller har ena myndigheten agerat från direktiv av den andra?
3. Hur kan hamnarna få uppkoppling till MSW för att minska mängden administrativt arbete?
4. Vad räknas som ett kvitto enligt er?
5. Har ni någon rutinmässig kontakt med agenter, kaptener eller hamnar angående hur kvittona hanteras
6. Hur ser eran kontakt ut med Transportstyrelsen angående hur avfallskvittorna ska hanteras och eventuellt utvecklas
7. Har ni i samband med Transportstyrelsen några kriterier för när vite utfärdas för icke ifyllda eller icke rapporterade avfallskvitton. Om ja, hur får aktörerna denna information om kraven/kriterierna?
8. Vem bär ansvaret om kvittot inte rapporteras i MSW?
9. Tror ni att kontakt med involverade aktörer är viktigt för eventuell förbättring av systemet?

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