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**The Swedish implementation of the SECA regulations –  
does Sweden fulfil the international requirements  
regarding the sanction system?**

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# 1 Introduction

## 1.1 General

A Sulphur Emission Control Area (SECA) is a designated area where the allowed amount of Sulphur emission is set lower than the global limit. The SECAs are regulated on a global level in the The International Convention for the Prevention of Pollution from Ships (MARPOL) Annex VI, on European Union (EU) level via Directive 1999/32/EC, amendment 2012/33/EU and in national legislation in the concerned nations. The SECAs in existence today include the Baltic Sea, the North Sea, and the North American and United States Caribbean Sea<sup>1</sup>. In these zones, the limit for Sulphur emissions is set to 3.5% globally and the upper limit within the SECA's is set to 0.1%<sup>2</sup>.

The main goal of the SECAs is to lower the amount of emission of SO<sub>2</sub> and SO<sub>3</sub> (SO<sub>x</sub>) since the emission of SO<sub>x</sub> is one of the main contributors to acidifications and eutrophication of ecosystems<sup>3</sup>. SO<sub>2</sub> also forms a part of the particulate air emission that can damage not only people's health and the environment, but in the long run effect the economy by disrupting the normalcy of human social interaction and physically threatening infrastructure<sup>4</sup>. The EU estimates that the effects of Sulphur emission will damage human health and decrease life expectancy by up to two years<sup>5</sup>. In addition the SO<sub>x</sub> emissions contribute to the nutrient nitrogen deposition which leads to eutrophication<sup>6</sup>.

Air emissions can travel long distances<sup>7</sup> before causing any damage or effecting the ground. For example, the acid rain formed with the association of SO<sub>3</sub> with H<sub>2</sub>O present in

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<sup>1</sup> (IMO, MARPOL consolidated edition 2011, 2011) Annex VI 14(3) p. 266

<sup>2</sup> Ibid Annex VI 14 (1) and 14 (4) pp. 266-267

<sup>3</sup> (European Commission, 2005) p. 27

<sup>4</sup> Ibid p. 27

<sup>5</sup> (Commission, European Commission:Environment:Air:Transport & Environment, 2016)

<sup>6</sup> (European Commission, 2005) p. 27

<sup>7</sup> (Commission, European Commission:Environment:Air:Transport & Environment, 2016)

the atmosphere<sup>8</sup>. The wide ranging effects of acid rain sparked the demand for a regional and international legislation to deal with this problem<sup>9</sup>. Shipping maintains a reputation as a form of clean transportation due to the relatively low emission level per ton transported goods compared to road transport. As a consequence to this reputation, regulation regarding air emission from ships has long remained limited<sup>10</sup>.

Despite the low relative emission, it was assessed that by 2050 the emissions from ships would be greater than the total land-based emissions, unless something was done to limit these emissions<sup>11</sup>. In the Communication (2011) 441 the EU claims that the new limit set out in the 2012 revision is expected to lead to a lowering of the Sulphur level in the air by 75% in the whole EU and 90% in the SECAs<sup>12</sup>. This development will likely generate a EUR 15-34 billion benefit due to health and mortality improvements in the EU<sup>13</sup>. Meanwhile, the cost for the implementation of the regulation is estimated to EUR 2.6 – 11 billion<sup>14</sup>. Therefore the economic loss would be relatively small in proportion to the environmental and human health gain<sup>15</sup>.

Since the implementation of the SECA-regulation sanction system in Sweden, it has gained much critique. In a 2014 press release the director of air and sea transport at the Swedish Transport Agency (STA) stated that it remains difficult to convict a vessel for non-compliance within the system used today, especially if the vessel is of a foreign flag state<sup>16</sup>. Most of the critique addresses issues relating to inefficiencies of the sanction system. For instance, it is often difficult for prosecutors to construct burden of proof in levying sanctions against offenders.

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<sup>8</sup> (European Commission, Memo 11/512, (2011)) p. 3

<sup>9</sup> (Svensson, 2014) p. 44

<sup>10</sup> (European Commission , 2011) p. 2

<sup>11</sup> (European Commission, Memo 11/512, 2011) p. 1

<sup>12</sup> (European Commission, COM (2011)441, 2011) p. 3

<sup>13</sup> Ibid p. 3

<sup>14</sup> (European Commission, Press release IP/11/888, 2011) p. 1

<sup>15</sup> (European Commission, Memo 11/512) p. 2

<sup>16</sup> (Swedish Transport Agency, 2014) p. 2

This problem is not new to the Swedish authorities. The STA reviewed the national SECA-regulation in 2013 and highlighted some of the most important aspects of the supervising system and the sanction system<sup>17</sup>. The STA's report reiterate familiar criticisms of the systems and searches for new ways of dealing with non-compliances. In its report, the STA examined the existing alternative legislative options and suggested a development for a new administrative sanction which would replace or complement the current criminal sanction system<sup>18</sup>.

As a member state of the EU Sweden is obliged to meet the requirements set out in EU legislation. The main purpose of this thesis is to describe the problems inherent within the current system and discuss whether the requirements set out in EU legislations are met. A selection has been made of three alternative sanction systems. These are described and compared with the system currently used. These sanction systems are later discussed in order to check if the international requirements that Sweden is obliged to meet as an EU member state are met.

## **1.2 Method**

Due to the new implementation of the Sulphur Regulation<sup>19</sup> (Svavelförordningen SFS 2014:509) in Sweden and the apparent lack of a functioning enforcement and sanction system, it has been problematic finding literature which deals with the issue directly. The report that the STA conducted in 2012 recommends implementation of the Sulphur Directive (Svaveldirektivet 2012/33/EU)<sup>20</sup> by using alternative jurisdiction. These suggestions have influenced the selection of the alternative jurisdiction in Chapter 4. At present, few sources exist which deal with these alternatives in relation to the Sulphur Regulation. The research is therefore made by looking into the literature regarding the alternative jurisdiction in general. Due to the general approach of the literature, difficulties emerge when applying them to the requirements for the sanction system in the Directive 2012/33/EU. Conclusions have

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<sup>17</sup> (Swedish Transport Agency, TSS 2013-2085, 2014) pp. 35-47, 49-62

<sup>18</sup> Ibid p. 68

<sup>19</sup> Non-official translation

<sup>20</sup> Non-official translation

been hard to draw and even harder to back up in literature. The literature seems to centre on the technical and practical issues in complying with the SECA-regulations. This aspect of the discussion has received much attention. The main problem in Sweden today involves the lengthy process of supervising the non-compliance, and conducting investigation within the criminal sanction system. Due to the focus of nurturing an expedient sanction system, these present inefficiencies garner attention especially when comparing the alternative systems with the requirements of the Directive 2012/33/EU. The numerous inefficiencies of the current process increasingly attract the interest of the Swedish Criminal Justice system. Perhaps a political or economic strategy might increase the systems effectiveness in organising resources as an alternative to restructuring the legal system. However such speculations lie outside the scope of this thesis.

Since the implementation of the Directive 2012/33/EU has gained some critique, this thesis is making an attempt to investigate alternative sanction methods and see if they could better fulfil the requirements in Directive 2012/33/EU. Any general conclusion has not been possible to reach, but this thesis attempts to highlight the possibilities and the difficulties with each alternative based on the general literature.

In the absence of available literature on the subject, people and companies within the shipping sector and the supervising authority were contacted and interviewed, the most significant being used in this thesis. These interviews endeavour to expose the shortcomings of a nascent system, where many parts are missing or under developed. Gaining a first-hand understanding has led to the recommendations included in this thesis which aim to ensure compliance, supervise the compliance and calculate the sanctions. Many parties are working in different ways to create a system where the compliance can be secured, the supervising can be reliable and the sanction system effective and just.

## 2 Background

### 2.1 MARPOL Annex VI and Directive 2012/33/EU

At the International Maritime Organisation (IMO), air emission pollution was discussed in the work that led up to the MARPOL Convention 73/78, but no regulation regarding air pollution was included at that time<sup>21</sup>. In 1988 the issue on air pollution from ships was raised at the IMO Maritime Environment Protection Committee (MECP) 26th session<sup>22</sup>. In 1997 the Annex VI to MARPOL on air pollution was adopted and came into force in 2005. In this Annex the SECAs were introduced and in these areas a lower emission limit was set<sup>23</sup> for them with an emission limit for Sulphur oxide set to a maximum of 1.5% and a global maximum limit set to 4.5%<sup>24</sup>. This was reflected in the EU legislation in Directive 1999/32/EC with amendment Directive 2005/33/EC in which the SECAs North Sea, Baltic Sea and English Channel were designated<sup>25</sup><sup>26</sup>. By incorporating the IMO regulation in EU legislation the enforcement and monitoring systems were strengthened due to the EU competence in the sector<sup>27</sup>. In the Directive 1999/32/EC no global limit for Sulphur emission was adopted. It was also argued that the average Sulphur level in the EU was held at around 2.7% which was well below the 4.5% maximum level set in the Annex VI at the time<sup>28</sup>. Subsequently, no further enforcement or monitoring system would be necessary to ensure compliance with the global limit within the EU<sup>29</sup>.

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<sup>21</sup> ([Ourwork:Environment:PollutionPrevention:Historic Background, 2016](#))

<sup>22</sup> (Ijlstra, 1990)

<sup>23</sup> ([Ourwork:Environment:PollutionPrevention:Historic Background, 2016](#))

<sup>24</sup> *Ibid*

<sup>25</sup> ([Commission E. , Eurpean Commission:Environment:Air:Transport & Environment, 2016](#))

<sup>26</sup> Other areas that are defined as SECAs in MARPOL are the North Atlantic area and the United States Caribbean Sea area as from 2012 – MARPOL Annex VI

<sup>27</sup> (European Commission, SEC (2011)918 final, 2011) p. 7

<sup>28</sup> *Ibid* p. 10

<sup>29</sup> *Ibid* p. 10



In 2008 the MARPOL Annex VI was reviewed and the limit for Sulphur emission was lowered<sup>30</sup>. The EU decided to follow up in 2012 by amending the Directive 1999/32/EC to reflect the new standards for SO<sub>x</sub> emissions set out by the IMO in its revised MARPOL Annex VI. The new emission limit was then set to 0.1% Sulphur oxide within the SECAs, which entered into effect 2015, and 3.5% for other areas which will be lowered to 0.5% in 2020<sup>3132</sup>. The EU chose to incorporate the global maximum level of 3.5% as well as the limit for the SECAs in its' legislation<sup>33</sup>.

In annex II to the Directive 2012/33/EU three abatement methods are stated<sup>34</sup>. Method number one and three deals with different types of fuels and number two deals with cleaning systems for the exhaust gases. The practical appliance of the exhaust gas cleaning systems will be separated from the other in the following section.

### **2.1.1 Fuel Quality**

The first abatement method is a mix of marine fuels and boil-off gas<sup>35</sup>. Vessels currently use different types of bunker oils. Heavy Fuel Oil (HFO) is a residual oil that is a dirtier oil than the distilled oils and can contain high levels of Sulphur<sup>36</sup>. Other fuels used are distilled oils, usually categorised in Marine Gas Oil (MGO), and Marine Diesel Oil (MDO). The MGO is lighter than the MDO and can be used in the same engines as the HFO. Vessels can therefore use the HFO outside restriction areas and then change to MGO when entering. The MDO contains a Sulphur level of 1,5% and the normal MGO a Sulphur level of 1%<sup>37</sup> but the MGO that most vessels are assumed to be using inside the

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<sup>30</sup> (European Commission, 2011) p. 3

<sup>31</sup> (Directive 2012/33/EU) (9)

<sup>32</sup> This may be delayed until 2050 depending on the access to available cleaner fuel.

<sup>33</sup> (Directive 2012/33/EU) (9)

<sup>34</sup> (Directive 2012/33/EU) annex II

<sup>35</sup> Ibid annex II

<sup>36</sup> (Swedish Transport Agency, TSS 2013-2085, 2014) p. 18

<sup>37</sup> (M Lundh, 2009) p. 39

SECAs is a lighter MGO that contains 0,1% Sulphur<sup>38</sup>. Since this fuel is compatible with the engines for HFO this would lead to an initially lower cost for the ship<sup>39</sup>.

The boil-off gas regards the usage of Liquefied Natural Gas (LNG). The LNG has to be kept on board at a low temperature (-162°C) in order to remain in liquid form<sup>40</sup>. When the temperature rises in the tanks, the LNG evaporates and this vapour is called boil-off gas<sup>41</sup>. LNG contains low amounts of Sulphur<sup>42</sup>. The challenges with LNG concerns the spacious tanks needed for the fuel and the infrastructure ashore needed for the supply<sup>43</sup>.

The third alternative in Directive 2012/33/EU annex II is the use of biofuels<sup>44</sup>. Bio-fuels are regulated at IMO in the International Code of the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC Code) and on EU level in the Directive 2009/28/EC and should comply with the International Organisation for Standardization (ISO) and European Committee for Standardization (CEN) standards<sup>45</sup>.

Methanol is an alcohol which contains about half the energy compared to diesel oils<sup>46</sup> and, in contrast to LNG, does not need to be cooled down or put under pressure, it can be used under normal temperatures and pressures<sup>47</sup>. Like LNG, Methanol also contains low amounts of Sulphur<sup>48</sup>.

### **2.1.2 Exhaust gas cleaning system**

The second type of compliance stated in annex II relates to exhaust gas cleaning systems<sup>49</sup>. Presently, there are two main types of exhaust gas cleaning systems (scrubbers):

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<sup>38</sup> (Swedish Transport Agency, TSS 2013-2085, 2014) p. 18

<sup>39</sup> (Swedish Transport Agency, TSS 2013-2085, 2014) Ibid p. 18

<sup>40</sup> (Swedish Transport Agency, TSS 2013-2085, 2014)Ibid p. 21

<sup>41</sup> (Park, Song, Lee, Lim, Han, 2012) p. 69

<sup>42</sup> (Swedish Transport Agency, TSS 2013-2085, 2014) Ibid p. 21

<sup>43</sup>(Swedish Transport Agency, TSS 2013-2085, 2014) Ibid p. 21

<sup>44</sup> (Directive 2012/33/EU) annex II

<sup>45</sup> (Directive 2012/33/EU)Ibid annex II

<sup>46</sup> (Swedish Transport Agency, TSS 2013-2085, 2014)Ibid p. 21

<sup>47</sup> (Brynolf, Magnusson, Fridell, Andersson, 2014) p. 2

<sup>48</sup> (Swedish Transport Agency, TSS 2013-2085, 2014) Ibid p. 21

<sup>49</sup> (Directive 2012/33/EU) annex II

wet and dry<sup>50</sup>. The wet scrubbers use salt water from the ocean to clean the exhaust gas by binding the Sulphur and removing it from the gas<sup>51</sup>. The water is later cleaned and let out into the ocean again. The sludge is stored on board.

The scrubber efficiency depends on the sea water's salinity, temperature and depth<sup>52</sup> which must be monitored for better results<sup>53</sup>. Higher salinity produce a better result<sup>54</sup>, because of this, the ratio of salt and fresh water mixture in the Baltic Sea, contributes to an unstable environment in which to employ an open scrubber.

The dry scrubbers uses a closed system on board in which calcium hydroxide is used as the cleaning material<sup>55</sup>. The calcium hydroxide is reusable on board and the scrubber produces a rest product which has to be discharged onshore<sup>56</sup>. Discharge the rest product onshore presents an alternative for the wet scrubbers, but this would lead to higher costs for handling and it also requires a receiving station located on shore in addition to the storage space on board<sup>57</sup>. To date, no real scientific conclusion has been made on the effect the scrubber discharge may have on the eco system, but a prolonged lowering of the pH levels in the ocean caused by the NaOH may affect the ecosystem negatively<sup>58</sup>.

## **2.2 The flag and port state jurisdiction.**

Under the United Nations Convention of the Law of the Sea (UNCLOS), a state can enforce legislation upon a ship under various capacities. It can enforce under the competence of a flag state<sup>59</sup>, a coastal state<sup>60</sup> and a port state<sup>61</sup>. This section does not regards the

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<sup>50</sup> (Swedish Transport Agency, TSS 2013-2085, 2014) p. 23

<sup>51</sup> Ibid pp. 23-24

<sup>52</sup> (H. Ülpre, 2014) p. 294

<sup>53</sup> Ibid p. 294

<sup>54</sup> Ibid p. 294

<sup>55</sup> (Swedish Transport Agency, TSS 2013-2085, 2014) p. 24

<sup>56</sup> Ibid p. 24

<sup>57</sup> Ibid p. 24

<sup>58</sup> (H. Ülpre, 2014) p. 294

<sup>59</sup> (UNCLOS) art. 94

<sup>60</sup> Ibid art. 220

<sup>61</sup> Ibid art. 218

legal situation for navy ships or similar state ships, but concerns the jurisdiction of merchant ships.

The sanction system in Directive 2012/33/EU paragraph 4 focuses on the flag and port state<sup>62</sup> whereby the focus in this chapter will lie on the flag state and port state jurisdiction.

The main obligation to make sure that ships are compliant with international rules and regulations remains primarily with the flag state<sup>63</sup>. The flag state has the sovereign right to grant a ship the right to fly its flag<sup>64</sup>. There has to be a “genuine link” between the flag state and the ship<sup>65</sup>, but each flag state reserves the right to decide what would amount to a “genuine link”. According to UNCLOS the flag registration carries the right to innocent passage in the territorial sea of a coastal state<sup>66</sup> and the right to sail the high seas as regulated in UNCLOS art 87<sup>67</sup>. The flag state has the duty to exercise jurisdiction and control over the ships flying its flag<sup>68</sup>. Flag state controls are to be made periodically and enforcements of the relevant international regulations are ensured during these controls<sup>69</sup>. When considering the actual geographic remoteness between the flag state administration and the ship, especially regarding regulations concerning specific territorial areas, the flag state might run into difficulties exercising the control. Unfortunately, some flag states does not possess the competence or resources to exercise this control<sup>70</sup>. Flag states which do not exercise the control over the ships are sometimes called “flags of convenience” due to the economic benefit and liberty the owner enjoys when registering under these flag registers.

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<sup>62</sup> (Directive 2012/33/EU) 4

<sup>63</sup> (UNCLOS) art 217

<sup>64</sup> (Mansell, 2009) p. 3

<sup>65</sup> (UNCLOS) art. 91

<sup>66</sup> Ibid art. 17

<sup>67</sup> (Mansell, 2009) p. 2

<sup>68</sup> (UNCLOS) art. 94

<sup>69</sup> Ibid art. 217. 3

<sup>70</sup> (Mansell, 2009) p. 3

To ensure the safety and security at sea, the port state jurisdiction has increased their role in the enforcement of international standards for ships<sup>71</sup>. The port state has to prove jurisdictional basis for its enforcement of measures<sup>72</sup>. The jurisdictional basis is the territorial sovereignty, which includes the internal waters and ports<sup>73</sup>. Port states have the right to prescribe and enforce measures onto voluntarily visiting ships<sup>74</sup> and can impose entry requirements for ships wishing to enter a port<sup>75</sup>. A ship has no right to enter a foreign port under international law<sup>76</sup> and has to follow the rules of the port state like any person visiting a foreign country<sup>77</sup>. Should the ship reject these requirements, the port state can deny entry<sup>78</sup>. The argument is that the ship is in the port voluntarily and could chose not to visit that particular port<sup>79</sup>.

The port state is not unlimited in its right to enforce measures upon a foreign ship. The flag states interests are protected from abuse of right of the coastal state in the general principles of international law, some of them stated in the “safeguards” in section 7 in UNCLOS<sup>80</sup>. These safeguards consists of 10 regulations and they oblige the coastal state to follow certain procedures: facilitate representation of the foreign state in the proceeding (art. 223), only use identified state vessels in enforcement (art. 224), not to endanger the safety of navigation of the ship (art. 225), not cause undue delay to the ship (art. 226), non-discrimination of foreign ships and observe procedural rights towards the ship (art. 227-230), notify the flag state (art. 231) and be held liable if the enforcement was found unlawful (art. 232)<sup>81</sup>. Furthermore, article 300 in UNCLOS concerns the good faith and abuse of

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<sup>71</sup> (Molenaar, 2007) p. 226

<sup>72</sup> Ibid p. 229

<sup>73</sup> (Kopela, 2016) p. 93

<sup>74</sup> (Molenaar, 2007) p. 246

<sup>75</sup> (Kopela, 2016) p. 94

<sup>76</sup> Ibid p. 246

<sup>77</sup> (Ryngaert, Ringbom, 2016) p. 382

<sup>78</sup> (Kopela, 2016) p. 94

<sup>79</sup> Ibid p. 106

<sup>80</sup> (Marten, 2011) p. 49

<sup>81</sup> (Sage, 2007) p. 368

rights safeguard. Even though the good faith principle is important to any legal system, uncertainty remains<sup>82</sup>. It appears that interpretation is required for each specific situation. The same problems appear when interpreting whether a state has abused its right or not and courts decisions will likely function on a case by case basis<sup>83</sup>.

In practise, these entry requirements are subject to treaties that the particular port state would be a party to but also comity and policy prevents the port state in enforcing legislation in issues which does not affect the interests of the port<sup>84</sup>.

The UNLCOS has in article 220(1) expanded the coastal state jurisdiction to the territorial sea (sovereignty) and the Exclusive Economic Zone (EEZ) (sovereignty regarding certain rights)<sup>85</sup>. The competence of a coastal state is more limited in the EEZ than in the territorial sea under UNCLOS. The breach of the visiting ship has to be conducted in the area where the state has sovereignty in order for the state to be able to enforce measures against the ship. A breach within the territorial sea can be sanctioned based on the sovereignty of the port state. A non-compliant Sulphur emission in the territorial sea would fall under the territorial jurisdiction and the capacity of the coastal state<sup>86</sup>. In this event, the port state maintains the right to enforce measures.

A breach in the EEZ must occur within the field where the port state wield these rights in order for the port state to affect the sanction. In art. 218 of UNCLOS discharge outside the territorial sea can be sanctioned when that vessel is in port. With further support in the 220(1) any pollution in breach of international rules and standards inside the states territorial waters or EEZ can be sanctioned when the vessel is in port. The enforcement of breach against the Sulphur Directive in the EEZ can be made through entry requirements under the assumption that the coastal state jurisdiction is enforced in ports<sup>87</sup>.

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<sup>82</sup> Ibid p. 226

<sup>83</sup> Ibid p. 226

<sup>84</sup> (Molenaar, 2007) p. 228

<sup>85</sup> Ibid p. 93

<sup>86</sup> Ibid p. 102

<sup>87</sup> (Kopela, 2016) p. 102

In Sweden, the control of foreign flagged ships for compliance with the Sulphur regulations has been conducted under the port state competence<sup>88</sup> and it has proven very difficult to sanction foreign flagged ships visiting Swedish ports.

## **2.3 Sanctions**

### **2.3.1 The sanction system under MARPOL Annex VI**

The MARPOL does not provide with a sanction system in itself, but relies on the member states to enforce the different annexes<sup>89</sup>. The member states has the option to delegate certain tasks to surveyors and organisations recognised by the member state, but the responsibility remains with the member states administration to ensure compliance<sup>90</sup>. In MARPOL Article 4(1) the flag state should establish sanctions and under the 4(2) any violation should be subject to sanctions from the coastal state<sup>91</sup>. Any member state of the MARPOL Convention who chooses not to comply with the MARPOL can do so without sanctions<sup>92</sup>. A ship which is found non-compliant within the jurisdiction of a member state which has implemented the MARPOL into national law can be sanctioned by that member state under the coastal and port state competence.

Under UNCLOS the member states may impose monetary sanctions only, except if the violation of MARPOL is of a “wilful and serious discharge” in the territorial sea<sup>93</sup>. Violations outside the territorial sea may be sanctioned with monetary penalties only<sup>94</sup>.

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<sup>88</sup> (Petrini, 2016)

<sup>89</sup> (Wang, 1986) p. 315

<sup>90</sup> (IMO, MARPOL How to do it., 2013) p. 26

”MARPOL How to do it” is a manual adopted by the IMO meant to ”provide useful, practical information to Governments, particularly those of developing, on the technical, economic and legal implications of ratifying, implementing and enforcement of the Convention ” (IMO, MARPOL How to do it., 2013) p. 1

<sup>91</sup> Ibid p. 23

<sup>92</sup> (Wang, 1986) p. 305

<sup>93</sup> (UNCLOS) art. 230

<sup>94</sup> Ibid art 230

Whether the sanctions are administrative, penal or civil depend on the member states' legislation, and the "MARPOL How to do it" shows the advantages of using administrative sanctions<sup>95</sup>. It is further recommended that the fines would have a given range of minimum and maximum level and the actual amount given in each situation should depend on the severity of the violation<sup>96</sup>.

The flag state has the power to, and usually do issue an International Air Pollution Prevention (IAPP) Certificate and an International Energy Efficiency (IEE) Certificate for ships over 400 gross tonnage which are compliant with the MARPOL Annex VI<sup>97</sup>. These certificates will be issued after a survey of the ship. If the ship is found non-compliant at a survey the flag state will then have the sanction method of withholding the certificates<sup>98</sup>. The flag state issues certificate as a mean to avoid the ship being held for lengthy controls and supervision when in a foreign port<sup>99</sup>.

The requirements regarding the SECAs are defined in Annex VI 14 and under 14 (6) the requirements for ships which operate both outside and inside the SECAs. These ships need to possess a written procedure on board for the changeover from high Sulphur fuel to low Sulphur fuel which should be done expediently for the system to be fully flushed and compliant with the regulations<sup>100</sup>. Under Annex VI (18. 2.1) the ship should be able to present a record of action taken to comply and that attempts were made to buy compliant fuel if found non-compliant<sup>101</sup>. The burden of proving that the non-compliance was not intentional therefore lies with the ship.

### **2.3.2 The sanction system under Directive 2012/33/EU**

The Directive 2012/33/EU is meant to transpose the new amended regulation regarding Sulphur emission in MARPOL, but sets stricter requirements on the sanction and

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<sup>95</sup> (IMO, MARPOL How to do it., 2013) p. 25

<sup>96</sup> Ibid p. 25

<sup>97</sup> Ibid p. 85

<sup>98</sup> (IMO, MARPOL consolidated edition 2011, 2011) annex VI (5.3.3) p. 258

<sup>99</sup> (Obinna Okere, 1981) p. 534

<sup>100</sup> (IMO, MARPOL consolidated edition 2011, 2011) annex VI (14.6) p. 266

<sup>101</sup> Ibid annex VI (18.2.1) p. 270



monitoring systems than those in the MARPOL Annex VI<sup>102</sup>. The Directive 2012/33/EU makes the member states responsible for making sure that the regulation is enforced, complied with and that there should be a development and an aim to make compliant fuel available for ships entering their ports<sup>103</sup>. Furthermore, the EU Directive states a minimum level Sulphur emission for vessels in port of 0,1%<sup>104</sup>. When amending the 1999/32/EC with the Directive 2012/33/EU several other changes had to be made in order to reflect the IMO standard. The alternative compliance method definition was broadened to pave the way for both EU-flagged vessels and vessels visiting the EU ports<sup>105</sup>. New definitions for heavy fuel oil and gas oil were incorporated<sup>106</sup>. With the broadening of the compliance requirement, these definitions opened up the way for methods besides cleaner fuel, such as exhaust gas cleaning systems<sup>107</sup>.

The Directive reflects MARPOL's regard for requiring proof that compliant fuels has been searched for<sup>108</sup>.

The sanction system that Directive 1999/32/EC mentions, is to be set out by the member states<sup>109</sup>. It has 3 criteria, which includes the Directive to be: effective, proportional and dissuasive<sup>110</sup>. In the 2012 amendment, it is furthermore stated that the economic profit made by non-complying has to be eliminated and that there should be an escalating penalty for several cases of non-compliances<sup>111</sup>. That would mean that the second time

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<sup>102</sup> (European Commission, Memo 11/512, 2011) p. 1

<sup>103</sup> (Directive 2012/33/EU) art 5a.

<sup>104</sup> Ibid art 4b

<sup>105</sup> (European Commission, SEC (2011)918 final, 2011) p. 28

<sup>106</sup> (Directive 2012/33/EU) Art 2 (a) (1) and art 2(a) (2)

<sup>107</sup> Ibid art 2(c) (3m)

<sup>108</sup> Ibid 5b (b)

<sup>109</sup> Ibid (17)

<sup>110</sup> (Directive 1999/32/EC) art 11

<sup>111</sup> (Directive 2012/33/EU)(29)

a subject is found guilty of non-compliance the penalty will be stricter than the first instance. How the member states organise their national sanctioning system should be presented to the European Union Commission for reviewing<sup>112</sup>.

As seems common within the environmental legislation, the impact on the environment is estimated based on the collective, total emission. It is difficult to discern the impact which every single emission has directly and therefore the causation can be hard to prove<sup>113</sup>. The requirements in Directive 2012/33/EU are not of a compensational character, but of a dissuasive and preventive character. Instead of focusing on compensating the victim (the inhabitants of the coastal state), the aim is to create a sanction system that prevents the polluter from emitting emissions. The proportional requirements is therefore based on the profit made by non-compliance, instead of focusing on the harm done by non-compliance. This would likely open up for an easier way of establishing supervising methods since the burden of proof will be to show that non-compliance has happened during x time by x % emitted Sulphur. The coastal state does not have to prove to what extent the harm has been caused by the non-compliance.

### **3 The Swedish implementation of sanctions**

#### **3.1 The criminal sanction system under Swedish national legislation.**

The Swedish territorial waters and EEZ are all inside the SECAs which obliges Sweden to implement the SECA-regulations in Directive 2012/33/EU and enforce sanctions for non-compliance.

In Sweden, the national regulation on Sulphur emissions in the SECAs are regulated in the Sulphur Regulation with support in the Environmental Code (Miljöbalk) and the Instrument of Government (Regeringsformen)<sup>114</sup>. The Sulphur Regulation refers to the Environmental Code and Environmental Inspection Regulation<sup>115</sup> (Miljötillsynsförordning

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<sup>112</sup> (Directive 1999/32/EC) art 10

<sup>113</sup> (Voigt, 2008) pp. 15-16

<sup>114</sup> (SFS 2014:509) §1

<sup>115</sup> Non-official translation

2011:13) regarding the supervision and reporting obligation<sup>116</sup>. According to Sulphur Regulation the supervision of compliance is regulated in the 26:th Chapter of the Environmental Code<sup>117</sup>. The supervising authority for the Sulphur Regulation is the STA<sup>118</sup>. The sanctions for non-compliance is regulated in the Environmental Code<sup>119</sup>.

### 3.1.1 Sanction system

The sanction for non-compliance with the Sulphur Regulation is set in Chapter 29 §3 of the Environmental Code and maintains the penalty of monetary fine or up to two years in prison<sup>120</sup>. This specific paragraph regulates handling with chemicals in a way that could be dangerous to the environment and apply to several other types of non-compliances. This is a criminal sanction in which only the criminal justice system can decide on a sanction.

Therefore, an obligation exists for the supervising authority to report any non-compliances to the police or prosecutor<sup>121</sup>. The police or Swedish prosecutor will decide whether or not to conduct a criminal investigation will be made after they have reviewed the report<sup>122</sup>. As a rule, an investigation shall be conducted, unless the reported crime falls under the exceptions in the Code of Judicial Procedure 23:4a§ or 23:22§<sup>123</sup>. According to the Code of Judicial Procedure 23:4a§ the prosecutor may dismiss any reported non-compliance if the process of investigating the non-compliance is so costly it no longer stands in

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<sup>116</sup> (SFS 2014:509) §39

<sup>117</sup> Ibid

<sup>118</sup> (SFS (2011:13)) ch2 §27 .1

<sup>119</sup> (SFS 2014:509) §47

<sup>120</sup> (Environmental Code) Chapter 29 §3

<sup>121</sup> Ibid Chapter 26 §2

<sup>122</sup> (Code of Judicial Procedure) 23:1§

<sup>123</sup> Ibid

proportion with the non-compliance<sup>124</sup>. It may also be dismissed if it is clear before any investigation is conducted that the non-compliance will not lead to any stricter sanction than monetary fines<sup>125</sup>.

### **3.1.2 Gross Negligence Environmental Code Chapter 29 §3.**

In order to be sanctioned for non-compliance with the Sulphur Regulation, the prosecutor has to prove that the non-compliance was made intentionally or through gross negligence<sup>126</sup>. According to the review of the Environmental Code in 2005 it was highlighted that the gross negligence requirement was only applicable for Chapter 29 §3 and that ordinary negligence was required for other sanctions within the Environmental Code<sup>127</sup>. Due to the general application of the Chapter 29 §3, the requirement for gross negligence is kept as a limitation of the regulation<sup>128</sup>. It was further argued that since there is a requirement of exercising due care when handling chemicals in Sweden and that sanctions can be imposed on persons when they omit to show due care<sup>129</sup>, the requirement of gross negligence was kept as a limitation to the otherwise general application of the sanction<sup>130</sup>. Furthermore, it is sufficient to prove that a risk of harming the environment or people's health has occurred due to the non-compliance<sup>131</sup>. No proof of actual harm is required.

In an investigation as to whether there has been gross negligence it will be taken into account whether or not there are specific regulations within the area<sup>132</sup>. Since we do have a specific regulation for Sulphur emission from ships this could probably be a disadvantage to the non-compliant. Exactly what consequences a non-compliance with a specific

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<sup>124</sup> Ibid 23:4a§

<sup>125</sup> Ibid 23:4a§ (Wennberg, 2008) p. 94

<sup>126</sup> (Environmental Code) Chapter 29 §3

<sup>127</sup> (Prop 2005/06:182) p. 61

<sup>128</sup> Ibid p. 63

<sup>129</sup> Ibid pp. 62-63

<sup>130</sup> Ibid p. 63

<sup>131</sup> (Environmental Code) Chapter 29 §3

<sup>132</sup> (Prop 2005/06:182) p. 63

regulation will lead to remains to be seen if ever tried in criminal court. Whether or not it will amount to gross negligence could be doubted.

According to The Swedish Transport Agency there have been 16 cases of non-compliance, of which all have been dismissed due to lack of proof of intent or gross negligence<sup>133</sup>. The Directive 2012/33/EU states in article 6 that the sampling and analysis should be done by testing samples from the fuel on board and controlling the bunker delivery notes and the ship's log book<sup>134</sup>. The evidence put forward in Sweden have been tests of the bunker fuel that the inspector has taken from the bunker tank along with engine log book, the oil record book and the bunker delivery notes in accordance with the Directive 2012/33/EU<sup>135</sup>. Even though the tests have been in accordance with the regulation this evidence have not been enough to prove intent or gross negligence. No case has led to conviction so far. If there is a bunker delivery note stating an allowed Sulphur level, but the samples show a Sulphur level higher than in the delivery note, there might be difficulties proving intent<sup>136</sup>. If a person thought the bunker was compliant there is no intent and it might be hard to prove gross negligence for the purchase.

In order to try to prove intent or gross negligence the STA has developed a form for the master or chief engineer to sign<sup>137</sup>. This form is a statement that the samples taken are from the bunker used during the transit in SECA-area<sup>138</sup>. The problem with this form is that it does not hold in court as a statement of intention or gross negligence<sup>139</sup>. Even combined with the recordings in the ship's oil log book will not be enough to get a judgement from a Swedish criminal court<sup>140</sup>. The person signing the paper has to be fully aware of the meaning of the paper and this has to be orally given in court<sup>141</sup>. In order to get a statement in

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<sup>133</sup> (Petrini, Environment expert, Swedish Transport Agency, 2016)

<sup>134</sup> (Directive 2012/33/EU) art 6.

<sup>135</sup> (Petrini, Environment Expert, 2016)

<sup>136</sup> (Swedish Transport Agency, TSS 2013-2085, 2014) p.51

<sup>137</sup> Ibid p. 50

<sup>138</sup> Ibid

<sup>139</sup> Ibid

<sup>140</sup> Ibid

<sup>141</sup> The so called 'Muntlighetsprincipen'.

court it would seem the person signing the paper would have to stay in the country or return to the country at the time of the hearing. This would probably require a detention of the ship, which is not available under the Environmental Code.

## **3.2 Control in practice**

### **3.2.1 Supervision of fuel quality**

The supervision system used today is based on the fuel quality used on board. The inspectors conduct the inspection by looking at the concerned documents (engine log book, bunker delivery notes, oil record book) along with the bunker oil test<sup>142</sup>. When the test are taken and sent to the laboratory it might take a few days before they reach a final result<sup>143</sup><sup>144</sup>. The tests are sent from the laboratory to the STA's head quarter where a decision based on the test result is made whether or not to report the non-compliance to the police or Swedish prosecutor. The changeover from HFO to MGO causes problems for the bunker test result since there's a high risk of contamination of the MGO due to residues of the HFO in pipes etc. on board<sup>145</sup>.

### **3.2.2 Supervision of exhaust gas cleaners.**

There is limited regulation regarding the supervision of scrubbers. For the scrubber to be compliant with the MEPC 59/24 Add 1 Annex 9, the difference between the inlet and outlet of the water used in the wet scrubber cannot be higher than 2pH units<sup>146</sup>. The maximum outlet for scrubbers using NaOH is also set to 8.0 pH at the ships' discharge point<sup>147</sup>. But at the moment there is no real way of monitoring the outlet and inlet and therefore

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<sup>142</sup> (Petrini, Environment expert, Swedish Transport Agency, 2016)

<sup>143</sup> (Swedish Transport Agency, TSS 2013-2085, 2014) p. 38

<sup>144</sup> The laboratory in Sweden is situated in Gothenburg and the result will be ready in 24 hours, but to this comes the normal postage time which might in total be up to 2-3 days if the samples are taken in for example Luleå in northern Sweden. Ibid p. 38

<sup>145</sup> Ibid p.19

<sup>146</sup> (H. Ülpre, 2014) p. 293

<sup>147</sup> (Directive 2012/33/EU) annex II

there is no reliable way of ensuring compliance for the discharge of scrubbers<sup>148</sup>. The lack of supervising methods makes it hard to determine to what extent the scrubber has been in use both regarding the running time and to what extent it actually cleans the exhaust gas.

## **4 Alternative sanctions.**

### **4.1 Introduction**

According to the report that the Swedish Transport Administration published in June 2014 the system used today in Sweden is not designed to be applicable to Sulphur emissions from ships<sup>149</sup>. The currently used sanction system does not appear to fulfil the requirements in the Directive from EU nor MARPOL. By supporting the SECA-regulation in the Environmental Code the sanction system is the same one as for a number of chemical environmental non-compliances<sup>150</sup>. The Environmental Code is designed to be general in order to have a broad cover<sup>151</sup> and this is ill suited with the specific requirements regarding the SECA regulations.

The effective requirement is not met mostly because of the time consuming processes found within the supervision system and in the general criminal sanction system where expert institutions need to conduct criminal investigations. Whether or not the system today meets the dissuasive requirement is difficult to determine since there is a small risk of getting any sanction at all for non-compliance at this time. The proportionality requirement sets different problems. A non-compliance with the Environmental Code is considered serious, but there are problems regarding who should face criminal charges. Additionally, if monetary sanctions are used, difficulties could arise on the creation of a system that both stands in proportion to the profit made and also maintain a dissuasive effect.

In the review of the Environmental Code 2005 the values and interests protected in the Environmental Code were highlighted and it was stated that an environmental crime

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<sup>148</sup> (Molitor, 2016)

<sup>149</sup> (Swedish Transport Agency, TSS 2013-2085, 2014) p. 17

<sup>150</sup> (Prop 2005/06:182) p. 63

<sup>151</sup> Ibid p. 63

was to be considered serious<sup>152</sup>. The current sanction system was considered proportionate for the non-compliances and crimes it was created to punish<sup>153</sup>. This was a general discussion regarding all the non-compliances that would be sanctioned under the Chapter 29 in the Environmental Code<sup>154</sup>. No discussion was further held regarding the seriousness of the specific sanction scales under Chapter 29 §3 in the Environmental Code, it was merely stated that the penalty will be up to 2 years in prison<sup>155</sup>. Specific non-compliances regarding the Sulphur Regulation were also not discussed<sup>156</sup>. Since the discussion is considered general and is meant to emphasise the seriousness of not protecting the environment the possible maximum sentence of 2 years in prison could be proportionate for non-compliance with the Sulphur Regulation. This would stand in conflict with the recommendation in MARPOL that the sanction should be monetary unless a more severe violation occurred. As the Sulphur can travel far before damaging the ground environment it could be hard to see how any geographical limit could revise the sanction from monetary to prison sanctions. The severity would have to be judged on the amount in percentage and how long the vessel was discharging, but even so, difficulties could arise when setting a limit for severity on a sliding scale. Difficulties in measuring the exact effect each emission has on the environment further complicates the process of judging the seriousness of each non-compliance. Since it was stated in the review of the Environmental Code in 2006 that the seriousness of environmental crimes justified up to 2 years in prison<sup>157</sup> so it might be discussed whether or not a changeover to a monetary fine could be in equal proportion. According to the Report from the Swedish Transport Agency in 2014 the criminal sanction system should in this case be changed for an administrative sanction<sup>158</sup> in order to fulfil the requirements in Directive 2012/33/EU.

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<sup>152</sup> Ibid p. 51

<sup>153</sup> Ibid p. 51

<sup>154</sup> Ibid p. 51

<sup>155</sup> Ibid p. 61

<sup>156</sup> Ibid p. 61

<sup>157</sup> Ibid p. 51

<sup>158</sup> (Swedish Transport Agency, TSS 2013-2085, 2014) p. 4



The question whether or not the current penalty of up to 2 years in prison is an appropriate system would further depend on who would risk the penalty and how much influence the offender has over the decision to comply or not. Under Swedish jurisdiction it is within the master's obligation to keep up with the current rules and regulations in the areas he/she is sailing<sup>159</sup>. Depending on the charter party and the employment contract the master and/or chief engineer may not be responsible for the bunker ordering<sup>160</sup>. Their only means of influencing the choice of bunker could be limited to informing the charterer which rules apply for the area when telling them to order the bunker, to checking the specification in the bunker delivery notes before bunkering and later the bunker samples taken at bunkering<sup>161</sup><sup>162</sup>. The effects a master or chief engineer would suffer if refusing to accept non-compliant fuel will depend on the employment contract and the flag state employment legislation<sup>163</sup>. If the master or chief engineer can prove that he/she has informed the charterer what kind of fuel is compliant in the area and controlled the bunker delivery note, this might be enough to prove that he/she has not acted with intent or gross negligence as long as the bunker specification is compliant. If the bunker note specification is not compliant and the master or chief engineer was fully aware of the SECA-regulation, then this might be proof of intent or gross negligence. It would indicate that the master or chief engineer knew the risk he/she was taking and took the risk of a criminal sanction to avoid other conflicts with the employer. It can be questioned whether or not the sanction system for the Sulphur Regulation that puts a master or chief engineer in a position where he/she cannot effect the choice of bunker but later may have to choose between unemployment and criminal charges is within the democratic values of Sweden. If it is proven that he/she is not updated on the current regulations the effects might depend on the flag state employment legislation and on the requirements made for each position. A ship where the crew does not

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<sup>159</sup> (Swedish Law of the Sea) Chapter. 6. 2§2 Non-official translation

<sup>160</sup> (Byfält, 2016)

<sup>161</sup> Ibid

<sup>162</sup> It might take a few days before getting the results from the bunker tests. Ibid

<sup>163</sup> "If you refuse to enter the area or to accept the bunker you can pack your bags and go home". Ibid.

fulfil the international rules and standards is subject to measures taken by the port state<sup>164</sup>. On the other hand one can argue that knowledge about the SECA-regulation is common knowledge within the branch and ignorance in this matter is not legitimate. If the person/persons risking criminal charges are not crewmembers, but situated in an office abroad it could be problematic enforcing the sanction, depending on in which state the responsible party is situated. If the master or chief engineer is the one risking the penalty and it is common practise to let the charterer make the decision which bunker to buy, then a criminal sanction system aimed at the master or chief engineer would not be a good system to avoid non-compliance.

Although the seriousness of non-compliance and the impact Sulphur emissions have on human health and the environment might justify a criminal sanction, the criminal sanction system used today is not designed to meet the specific problem that shipping poses. A criminal sanction system should and does set high requirements on the burden of proof and this means that the police and prosecutor must have the time to conduct a criminal investigation, something that has proven to be a time consuming process. As the Environmental Code states, there has to be proof of intent or gross negligence. Even though the court is supposed to take into consideration the existence of the specific regulation when deciding on gross negligence this has not been enough to get a conviction in court. All these demands are necessary when handling the criminal justice system, but in this case it becomes too inefficient and leaves the sanction system toothless. Depending on the work load at the bunker test laboratory, at the Swedish Transport Agency's office and at the Swedish prosecutor/police the time it takes from the time of non-compliance until the prosecutor can make a decision, may take up to a year<sup>165</sup>. During this time the ship has most likely left Swedish waters and in some cases the prosecutor has leveraged this fact as a reason not to conduct a criminal investigation<sup>166</sup>. Even if the prosecutor had chosen to conduct a criminal investigation, it might be difficult and costly to investigate abroad, notwithstanding the difficulties of showing intent or gross negligence.

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<sup>164</sup> (Bang, Jang, 2012) p. 173

<sup>165</sup> (Swedish Transport Agency, TSS 2013-2085, 2014) p. 49

<sup>166</sup> Ibid p. 50

The supervising has so far been made in connection with the Port State Control under the Paris MOU<sup>167</sup>. In this way the selection of ships to inspect has fallen under the Paris MOU selection system. This control system is not aimed to target the SECA-regulations specifically, but this might be sufficient anyway since the Paris MOU has developed a risk based system where member states share information from earlier inspections. By having access to information about a ship before it enters Swedish ports the STA has the opportunity to get an overview of the status of the ship. A ship that have disregarded rules before might indicate a trouble regarding the company's structure. The supervising and reporting obligation is further slowed down due to limited technical aids. The bunker tests takes a few days to finish and the bunker systems on board faces a high risk of contamination due to the technical construction of the fuel tanks. There are specific problems regarding the exhaust gas cleaners and the determination of the usage of them. An exhaust gas cleaner could be switched off without the supervisor having any good way of determining to what extent it has been in use. This cause for problems when determining the severity of the sanction on a scale. Until there is a requirement and a technical control system for the scrubbers, it will be hard to determine the sanction.

The sanction system needs to be changed in order to fulfil the requirements in Directive 2012/33/EU. In the report on the sanction system for SECA-regulation the Swedish Transport Agency suggests the development of an Air Pollution Charge<sup>168</sup>, which is meant to be a new administrative sanction<sup>169</sup>. It also considers supporting the SECA-regulation with other administrative sanctions such as the Environmental Sanction Charge and the sanction system based in The Law on Prevention of Pollution from Ships<sup>170</sup>. This will therefore be the basis of this Chapter along with the current system. The sanction system is guided by the three criteria that are found in Directive 1999/32/EC and 2012/33/EU and the current system, the Environmental Sanction Charge and the Law on Prevention of Pollution

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<sup>167</sup> Paris Memorandum of Understanding

<sup>168</sup> Luftföroreningsavgift. Non-official translation.

<sup>169</sup> (Petrini, Environment expert, Swedish Transport Agency, 2016), (Swedish Transport Agency, TSS 2013-2085, 2014) p. 4

<sup>170</sup> (Swedish Transport Agency, TSS 2013-2085, 2014) pp. 56, 59

from Ships will be discussed with these guidelines in mind. The administrative sanction under the Law on Prevention of Pollution from Ships in Chapter 8 regulates the Water Pollution Fine<sup>171</sup> (Vattenföroreningsavgift), which is an administrative sanction applicable for oil spill from ships. The Water Pollution Fine will also be explained and investigated to verify if a parallel system could be an option for a new sanction system.

## 4.2 Environmental Sanction Charge

In Chapter 30 of the Environmental Code, an administrative sanction is presented as an alternative to the criminal sanction system. The Environmental Sanction Charge does not involve the criminal system, instead, it divides the non-compliances into two categories; environmental crimes and other non-compliances which are not to be regarded as crimes. The latter category falls outside the criminal sanction system<sup>172</sup>. Currently, non-compliance with the Sulphur Regulation is classified as an environmental crime, as it falls under the criminal sanction system.

The Environmental Sanction Charge was reviewed in 2004 due to arguments of a slow and inefficient system where too many non-compliances were left unsanctioned. It was held that the Chapter 30 of the Environmental Code should fulfil criteria which are different from the ones given for the Sulphur Directive. The criteria were that the administrative sanctioning system for Environmental Sanction Charge should be fast, simple, clear and template based<sup>173</sup>. It is held that not all non-compliance with the Environmental Code require classification as environmental crimes (but will still be regarded as non-compliance)<sup>174</sup>. It is those non-compliances which are not classified as crimes that should result in an administrative sanction<sup>175</sup>. The non-compliances which would not be regarded as crimes are the minor ones<sup>176</sup>. Therefore, the Environmental Sanction Charge is designed to relieve

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<sup>171</sup> Non-official translation.

<sup>172</sup> (SOU 2004:37) p. 57

<sup>173</sup> Ibid p. 80

<sup>174</sup> Ibid p. 57

<sup>175</sup> Ibid p. 57

<sup>176</sup> Ibid p. 57

the police/prosecutor from the less serious non-compliances. Non-compliances which falls under the category that is sanctioned by an administrative sanction are outside the scope of the criminal legislation. Therefore the supervising authority's obligation to report does not regard these as non-compliances<sup>177</sup>. Ideally, the number of reports which would not warrant an investigation is lowered. This provides the supervising authorities the means to early on in the process decide<sup>178</sup> whether or not a crime was committed. The sanction process would be more efficient and the prosecutor/police could spend more time and resources on investigating the more severe non-compliances<sup>179</sup>. Moreover, the system with the Sanction Charge is similar to the current sanction system used today with regard to its design which focuses on a general application of non-compliances with the Environmental Code.

Problems have arisen in regulating the balance between the criminal sanction system and the administrative sanctions system under the Environmental Code. In 2006 Chapter 30 which regards the option to use administrative sanctions for certain non-compliances was amended as an alternative to the criminal sanction system. However, critique has still been aimed at the system as it is now.

The change was meant to clarify the border between the criminal sanction system and the administrative sanction system. The supervising authorities raised objection regarding the reporting obligation for all non-compliances, including minor ones<sup>180</sup>. The critique that the supervising authorities under the Environmental Code authorities brought to light was hoped to be solved by clarifying which non-compliances would result in a criminal sanction and which would result in an administrative sanction<sup>181</sup>.

In practise, the clarification of which non-compliances that would result in a report and which would not does not seem to have had the desired effect and the Organisation for

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<sup>177</sup> Ibid p. 57

<sup>178</sup> (Environmental Code) Chapter 30 §3

<sup>179</sup> (SOU 2004:37) p. 58

<sup>180</sup> Ibid p. 57

<sup>181</sup> Ibid p. 57

Economic Co-operation and Development (OECD) criticised the current system for being unclear in its environmental performance review 2014<sup>182</sup>.

OECD mentions the problem with the usage of administrative sanctions in Sweden due to the risk of double jeopardy (*ne bis in idem*) when having these systems parallel<sup>183</sup>.

The enactment of the Environmental Sanction Charge may require a change in the SFS 2012:259 Chapter 7 regarding chemical products. Every section of this regulation is designed with reference to a non-compliance of a specific regulation<sup>184</sup>. Non-compliance with the Sulphur Regulation may illicit an addition to the SFS 2012:259 stating the amount in fines for non-compliance with the Directive 2012/33/EU. If a non-compliance occurs for the second time and an Environmental Sanction Charge has been sanctioned for the first non-compliance, the amount for the second Sanction Charge should be double the amount for the first Sanction Charge<sup>185</sup>. The maximum fine amount is 1 000 000 SEK<sup>186</sup>. In §3 and §4 the time limit held by the subject to correct the non-compliance before a new Sanction Charge can be fined differs. §3 gives a “reasonable time” as the time limit and §4 states a maximum of 2 years.

A changeover to Environmental Sanction Charge might eliminate some of the more time consuming processes and a strict liability could be included. The general system with administrative sanctions is based on strict liability<sup>187</sup> in order to maintain an effective and fast system. This excludes discussions regarding the burden of proof and relieves the supervising authority from proving intent and or negligence<sup>188</sup>. In this way the burden of proof will be reversed and acts in accordance with the Directive 2012/33/EU in situations where the bunker delivery note shows evidence of non-compliant fuel. Strict liability might cause practical problems for the ship when changing over from high Sulphur fuel to compliant

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<sup>182</sup> (OECD, 2014) p. 10

<sup>183</sup> *Ibid* p. 10

<sup>184</sup> (SFS (2012:259)) Chapter 7

<sup>185</sup> *Ibid* Chapter 1 §3 and §4

<sup>186</sup> *Ibid* Chapter 1 §3 and §4

<sup>187</sup> (Miljöstraffrätten i förvandling, 2006) p. 45

<sup>188</sup> *Ibid* p. 45

fuel due to the risk of contamination in the changeover process. Problems of similar character is a general problem in strict liability cases<sup>189</sup> and this specific problem would probably require a technical solution on board. By giving the inspector the authority to issue fines for non-compliance based on strict liability the process would be accelerated. Ideally, this expedited process will not take more than the time it takes for the inspection to be conducted on board. The general design has posed problems in the current sanction system partly due to the slow process and unclear division between the administrative sanction and the criminal sanction. This problem could possibly be eliminated by referring straight to Chapter 30 in the Sulphur Regulation. In this way the critique brought by the OECD regarding double jeopardy would most likely not pose a problem either. Furthermore, the requirements that the Environmental Sanction Charge is designed to meet might fit better with the requirements stated in the Directive 2012/33/EU than the currently used criminal sanction system.

#### **4.2.1 Effective**

The criteria for an effective system in Directive 1999/32/EC are not the exact same as the first ones in the Environmental Code, but a fast, clear and simple system may very well amount to an effective system. The requirement of an effective system is not met only by speeding up the process, but due to the problems with short lay time in port, a speedy process is key to an effective system. Even if the Environmental Sanction Charge is supposed to be fast there is a three step manoeuvre that has to be performed before any sanction can be established<sup>190</sup>. First the suspicion has to be served to the suspect, then the suspect has to be given an opportunity to give his/her statement and after that a decision to perform an administrative sanction can be taken<sup>191</sup>. These three steps are necessary for the fulfilment of the requirements in the ECHR<sup>192</sup> article 6 which aims to guarantee a fair legal process<sup>193</sup>. It was held during the review in 2004 that the Environmental Sanction Charge

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<sup>189</sup> Ibid p. 45

<sup>190</sup> (Swedish Transport Agency, TSS 2013-2085, 2014) p. 60

<sup>191</sup> Ibid p. 60

<sup>192</sup> European Convention on Human Rights

<sup>193</sup> (SOU 2004:37) p. 59

would have to fulfil the criteria in the ECHR even though the administrative sanction system falls outside the criminal sanction system<sup>194</sup>. The payment will then be due 30 days after the decision is made<sup>195</sup>. Depending on the administrative requirements that follow the Environmental Sanction Charge the first parts might not be fast enough when considering the short period of time which a vessel lays in a Swedish port. Depending on how much time the suspect needs to prepare his/her statement and how much time the supervising authority needs to take the statement into consideration before handing the fine, this may amount to an unacceptably lengthy process. The ship should preferably still remain within the jurisdiction while the decision about the fine is made. The system could also be designed so that the suspicion could be served, the suspect gets the opportunity to give his/her statement and then the decision whether to sanction or not can be made within hours. Such a system would probably have to be tested towards the ECHR article 6 for approval. As the ship is obliged to be aware of and follow the rules and regulation for the area in which it is trafficking it may not require a long time to prepare a statement and show the cause of non-compliance. Since the ship also bear the burden of proving that it has tried to get a hold of compliant fuel and should be able to present documents of the changeover process from high Sulphur fuel to low Sulphur fuel, this could probably be prepared quickly on board.

A template based system could also be an advantage in order to fulfil the effective requirement. This system could in advance give the suspect an overview of what sanction to expect if found non-compliant and the supervising authority could, without having to conduct lengthy investigations, set the amount for the fine.

#### **4.2.2 Proportionate**

Another difficulty with the proportionality requirement in Directive 2012/33/EU is that the Environmental Sanction Charge as it is now in the Environmental Code has an upper limit of 1,000,000 SEK<sup>196</sup>. A vessel trafficking the route Rotterdam – Primorsk would

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<sup>194</sup> Ibid p. 62

<sup>195</sup> (Swedish Transport Agency, TSS 2013-2085, 2014) p. 60

<sup>196</sup> (Environmental Code) Chapter. 30: §1.3



in average save about 9867 USD per voyage with a non-compliance for about 25% in 2015<sup>197</sup>. A tanker ship with a Dwt of approximately 8300 sailing a distance equal to Rotterdam – Luleå would save approximately 250 000 – 335 000 SEK by a non-compliance of 100%<sup>198</sup>. These numbers are an average calculation and can in this paper only be given as an example of what the scale of economical profit for non-compliance might be. As the calculations for the economic incitements are derived from the current relatively low price of oil, and given that the number for a 25% non-compliance is high, it seems reasonable to assume that the upper bar in the Environmental Code Chapter 30 of 1 000 000 SEK may be too low to have the wanted proportionate effect<sup>199200</sup>.

However, the requirement of a proportional penalty might be hard to combine with a template based system. To eliminate the ill-gotten profit, different variables must be taken into account. Examples of variables which could be interesting are the oil prices, the bunker delivery notes from past records, and the time spent inside the SECA-area. One might have to trace these variables back to when the SECA was implemented in order to establish the severity of the non-compliance. By using a system where the voyage data and fuel consumption can be collected and by comparing the bunker delivery notes an estimation of the profit made by using high Sulphur fuel can be calculated<sup>201</sup>. This may require access to price-lists of low Sulphur from bunker delivery companies in the areas where the vessel has been sailing from as far back as the investigation period. This is required in order to calculate the profit made in bunker saving costs. Depending on how fast the SOU 2004:37 desires the Environmental Sanction Charge to be, it could be done by having quick access to the price lists and the voyage data without having to ask for it from the parties.

Again though, there is no way of controlling the amount of non-compliances for vessels using scrubbers to clean the exhaust gases. One way could involve some kind of

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<sup>197</sup> (Philip Berneblad, 2016) p. 30

<sup>198</sup> (Swedish Transport Agency, TSS 2013-2085, 2014) p. 31

<sup>199</sup> Ibid p. 60

<sup>200</sup> 1USD = 8,6 SEK valutaomvandling.se 2016-07-20

<sup>201</sup> (Rydbergh, 2016)

running-hour measure in order to see to what extent the scrubber has been used or the efficiency of the scrubber or other technical solution.

### 4.2.3 Dissuasive

Keeping in mind the upper limit in the Environmental Code Chapter 30 §1 .3 of 1,000,000 SEK for each non-compliance<sup>202</sup>, it will be hard to see how the Environmental Sanction Charge can have a dissuasive function. There seems to be a common understanding that the economic incentives for skirting the regulations are high<sup>203</sup> and increase with higher oil prices<sup>204</sup>. With an upper limit in the Sanction Charge system the dissuasive effect would rely on the oil price and when high profits can be made by not complying with the regulation, the Environmental Sanction Charge risks losing its dissuasive function. In Directive 2012/33/EU it is added that the sanction system should at least deprive the responsible party from the profit<sup>205</sup>, but just eliminating the profit would most likely not be enough to make the sanction system fulfil the dissuasive requirement. In that case a sanction for non-compliance will give no real economic loss, while it may save costs by getting away with a non-compliance if not found in a control. The ship will have no economic incentive to comply with the SECA-regulations, but might profit by not complying. The sanction has to be hurtful enough for the vessels owner/charterer not to think it profitable to take the risk. One solution centres on raising the amount of money given in fines or create a mechanic system to calculate the amount taking the oil price, and thereby the expected profit made by non-compliance, into consideration. This could possibly require a change in the SFS 2012:259.

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<sup>202</sup> (Environmental Code) Chapter 30 §1

<sup>203</sup> (Swedish Transport Agency, TSS 2013-2085, 2014) p. 31

<sup>204</sup> (Philip Berneblad, 2016) p. 22

<sup>205</sup> (Directive 2012/33/EU) (29)

### 4.3 Law on Prevention of Pollution from Ships

The Law on Prevention of Pollution from Ships is older than the Environmental Code<sup>206</sup> and through this law many global conventions concerning shipping are transferred to Swedish legislation<sup>207</sup>. The main basis for the Law on Prevention of Pollution from Ships is MARPOL and the law works as a framework for different regulations mainly concerning water pollution from ships and waste handling<sup>208</sup>.

At the time when the Environmental Code was issued, many of the regulations regarding pollutions were put in the new Environmental Code and the aim seems to be to collect the environmental legislation in one code<sup>209</sup>. Due to the fact that many of the regulations regarding pollutions from ships are based on international conventions it was held that it would be too complicated and unnecessary to incorporate these regulations in the new Environmental Code<sup>210</sup>. The legislator therefore chose to retain the Law on Prevention of Pollution from Ships. When the SECA-regulations were to be ratified in Sweden it was held that the Directive 1999/32/EC was not compatible with the Law on Prevention of Pollution from Ships and had to be enforced with support in the Environmental Code<sup>211</sup>. Therefore the support for the Sulphur Regulation was based in the Environmental Code. When the Law on Prevention of Pollution from Ships was reviewed 2011, it was suggested that the Directive 1999/32/EC should be supported in Swedish law by the Law on Prevention of Pollution from Ships, rather than the Environmental Code<sup>212</sup>. The argument for this was that it would be easier for the subject to understand<sup>213</sup>. It was held that the Environmental Code made the regulation unnecessarily complicated and confusing for the subject,

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<sup>206</sup> Law on Prevention from Pollution from Ships was published 1980 and the Environmental Code 1998.

<sup>207</sup> (Rubenson, 2016)

<sup>208</sup> Ibid

<sup>209</sup> (Prop 1997/98:45) p. 1

<sup>210</sup> (SOU 1998:158) p. 116

<sup>211</sup> (SOU 2011:82) p. 156

<sup>212</sup> Ibid p. 156

<sup>213</sup> Ibid p. 156

but with the support in Law on Prevention of Pollution from Ships Chapter 4 §1 the Directive 1999/32/EC could more easily be incorporated<sup>214</sup>. The supervising authority under Law on Prevention of Pollution from Ships is the Swedish Transport Agency and the Swedish Coast Guard<sup>215</sup>. The sanction systems used under the Law on Prevention of Pollution from Ships are the Water Pollution Fine and the Corporate Fine (Företagsbot), of which the last is set out in the Swedish Penal Code Chapter 36 §7. The Corporate Fine seems to be the only alternative applicable sanction within the Law on Prevention of Pollution from Ships<sup>216</sup>.

The Corporate Fine is meant to be used in situations where the crime has been committed in the line of business or by a person who can be identified with the company<sup>217</sup>. The Corporate Fine still puts the non-compliance within the criminal sanction system, but is aimed at the company making a profit of the non-compliance rather than letting the crew or owner pay the penalty. It is meant to be a complement to other penalties within the criminal sanction system<sup>218</sup>. The Corporate Fine can be set as penalty if the prosecutor declares and if the penalty otherwise would not be stricter than a monetary amount<sup>219</sup>. For the Corporate Fine to be applicable the penalty scale for the crime committed has to be stricter than fines<sup>220</sup>. The Corporate Fine does not have to involve a court trial, but rather if the suspect admits on site to the non-compliance by signing an admission and thereby the prosecutor can fine the company<sup>221</sup>. Should the suspect refuse to sign, the prosecutor will have to bring the case to court. A use of the Corporate Fine would still require maintaining the criminal sanction system and the ordinary procedures of criminal investigations and court procedure

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<sup>214</sup> Ibid p. 156

<sup>215</sup> (The Law on Prevention of Pollution from Ships (1980:424)) Chapter 6 §1

<sup>216</sup> (SOU 2011:82) pp. 242-243

<sup>217</sup> (Karlmark, 2006) p. 42

<sup>218</sup> (SOU 2011:82) p. 242

<sup>219</sup> (Penal Code) Chapter 36 §7

<sup>220</sup> (Karlmark, 2006) p. 42

<sup>221</sup> Strafföreläggande.

would still be applicable should the suspect refuse an admission<sup>222</sup>. The lower limit for a Corporate Fine is 5,000 SEK and the upper limit is 10,000,000 SEK<sup>223</sup>.

#### 4.3.1 Effective

Since the Law on Prevention of Pollution from Ships, similar to the Environmental Code, has a sanction system where the supervising authority reports any suspicion of crime to the prosecutor or police<sup>224</sup> there might be the same practical efficiency problem should the Directive 2012/33/EU be supported in the Law on Prevention of Pollution from Ships instead of in the Environmental Code. It seems like the efficiency here would be on the same level as within the Environmental Code, with the exception of the possibility to avoid court proceedings. But since the prosecutor until now has not had the time to start any criminal investigation and thereby has not reached a point where a decision whether to go to court or use other means of sanctions could be made, it is doubtful that an employment of the Corporate Fine would make the system effective enough. We still have to go through the same system with reporting to the prosecutor/police, and then they have to investigate the crime and perhaps later bring the case to court.

The prosecutor will further still need to consider the Code of Judicial Procedure Chapter 23: 4§a where the criminal investigation can be dismissed if the sanction is likely not to lead to any stricter penalty than monetary fines<sup>225</sup>. Since the changeover to a Corporate Fine will change the penalty from prison time to a monetary fine this option will remain available for the prosecutor maybe even to a greater extent than under the current system.

Further a changeover to the Corporate Fine would not solve the problem of proving gross negligence or intent, unless this requirement is changed. Therefore an application of the Corporate Fine might not make the system more efficient.

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<sup>222</sup> (Åklagarmyndigheten:Från brott till åtal:strafföreläggande, 2016)

<sup>223</sup> (Penal Code) Chapter 36 §8

<sup>224</sup> (The Law on Prevention of Pollution from Ships (1980:424)) Chapter 6 §11

<sup>225</sup> (Code of Judicial Procedure) 23:4§a

### 4.3.2 Proportionate

The lower limit of 5,000 SEK might be insignificant when eliminating the profit. Considering the amount of the profit a non-compliance might bring, any non-compliance will quickly make a profit above 5,000 SEK and therefore require a higher fine. The lower limit might serve a purpose for the prosecutor when deciding whether or not to conduct a criminal investigation. Should a situation appear where the Code of Judicial Procedure 23:4a§ is applicable the lower limit of 5,000 SEK might be a guideline for the prosecutor in his decision, depending on the expected costs of the investigation. The upper limit of 10,000,000 SEK might be high enough to fulfil the proportionate requirement, but the elimination of the profit will depend on the bunker prices. Therefore the upper limit of 10,000,000 might be a good limit today, but with inflation, changing oil prices etc. this will change over time.

### 4.3.3 Dissuasive

If the sanction Corporate Fine is claimed by the prosecutor this can be directed towards the person/company making the profit from the non-compliance<sup>226</sup>. Depending on the profit made by non-compliance compared to the expected monetary sanction, the Corporate Fine might be dissuasive in a way other than the current system, since it takes aim at the profitable party. Whether the master can be held liable for the non-compliance will be decided taking into consideration the authority and influence the master have had in the specific situation<sup>227</sup>. As stated earlier, the authority deciding the Corporate Fine will have to look at the company structure and the influence the master has had over the decision in order to decide on a Corporate Fine. As long as the amount of the fine is expected to be high enough for the company not to be willing to take the risk this will fulfil the dissuasive requirement. The risk of a fine of up to ten million SEK would probably act as an appropriate dissuasion, but adding to this drastically increases the risk of actually getting caught. The requirement that the scale of the sanction has to be stricter than a monetary sum, but

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<sup>226</sup> (SOU 2011:82) pp. 242-243

<sup>227</sup> (Prop 2005/06:209) p. 40

the actual sanction for the given non-compliance should not be stricter than a monetary sum would likely cover most of the non-compliances. Due to the problems in the supervision and the fact that these will to a large extent remain during a change to the Corporate Fine, the practical solutions in the supervising systems would probably have to be solved before the Corporate Fine can be considered, whereby fulfilling the dissuasive requirement. In order for the prosecutor to claim Corporate Fine as sanction it has to be proven that the company has not done what may reasonably be expected to avoid non-compliance<sup>228</sup>. If the company can prove that supervision in accordance with the relevant regulations has been conducted the Corporate Fine is not an applicable sanction<sup>229</sup>. The burden of proving that compliant fuel was not available is already with the responsible party, and other things that reasonably can be expected from the ship/company will remain to be seen. For example, if there should be a requirement of technical solutions to avoid contamination on board, the costs of such a change of system must be weight against a fine. If this is considered too high to be reasonable, then a contamination under such circumstances might pass without fines. If nothing more than a “business as usual” way of ordering bunker, changing over from non-compliant to compliant fuels with the risks of contamination is required from the shipping companies then an application of the Corporate Fine would not make any real difference today. The shipping companies would then be able to carry on without risking facing fines under the Corporate Fine system.

#### **4.4 Water Pollution Fine**

As with most pollution regulation in shipping, the Water Pollution Fine is, similarly to the Sulphur Regulation, based on MARPOL and EU Directive. After the accident of *Prestige* and *Erika* the EU decided on Directive 2005/35/EG<sup>230</sup> to better strengthen the environmental protection. The Directive 2005/35/EG is based on MARPOL<sup>231</sup> and the criteria

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<sup>228</sup> (SOU 2011:82) p. 243

<sup>229</sup> Ibid p. 243

<sup>230</sup> (Johansson, 2013) p.

<sup>231</sup> (2005/35/EG) (2)

for the penalty for oil spill should be “effective, proportionate and dissuasive”<sup>232</sup>. These are the same criteria as set out in the 2012/33/EU. In Sweden the Law on Prevention of Pollution from Ships is designed to try to meet the requirements in Directive 2005/35/EG and under Chapter 8 the Water Pollution Fine is stated as a sanction method for oil pollution<sup>233</sup>. The Water Pollution Fine is an administrative sanction which apply to oil pollution from ships in the Swedish territorial waters, exclusive economic zone (EEZ) and the waters outside these areas in the Baltic Sea Region<sup>234</sup>. The liable person is the owner or the “redare”<sup>235</sup><sup>236</sup>. First-hand the “redare” will be held liable, and second-hand the owner will be held liable<sup>237</sup>. If the owner can prove that he/she has no influence over the running of the ship he/she cannot be held liable for the Water Pollution Fine<sup>238</sup>.

There is no required proof of negligence or intent<sup>239</sup> and the sanction is based on strict liability<sup>240</sup>. By using strict liability the supervising authority has to prove that the oil pollution is connected to the ship and that the oil is a mineral oil<sup>241</sup>. The pollution of substances other than oil is not covered under the Water Pollution Fine<sup>242</sup> since it was held that the implementation of other administrative sanctions might create an incoherent sanction system<sup>243</sup>. The Water Pollution Fine was further argued not to be applicable to emissions of

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<sup>232</sup> Ibid article 8.1

<sup>233</sup> (The Law on Prevention of Pollution from Ships (1980:424)) Chapter 8 §1

<sup>234</sup> Ibid Chapter 8 §1, Chapter 2 §2

<sup>235</sup> «The ”redare” is the person (or company) that runs the vessel for his or her own account, typically the owner or the demise charterer. Time charterers and voyage charterers are not considered ”reders”. » (The Norwegian Maritime Code, preface.)

<sup>236</sup> (The Law on Prevention of Pollution from Ships (1980:424)) Chapter 8 §2

<sup>237</sup> (SOU 2011:82) p. 241

<sup>238</sup> (The Law on Prevention of Pollution from Ships (1980:424)) Chapter 8 §2

<sup>239</sup> (Prop 2005/06:209) p. 26

<sup>240</sup> (SOU 2011:82) p. 241

<sup>241</sup> Ibid p. 242

<sup>242</sup> Ibid p. 246

<sup>243</sup> Ibid p. 246



chemicals due to the difficulties of discovering and estimating the extent of the emissions<sup>244</sup>.

The supervising and deciding authority is the Swedish Coast Guard<sup>245</sup>.

The fine is calculated via a mechanism which is based on the extent of the oil pollution and the gross tonnage of the ship<sup>246</sup> in connection with the Price Base Amount<sup>247</sup>. The Coast Guard has the right to detain a ship to secure further evidence<sup>248</sup> or to await security to be posted for a given Water Pollution Fine<sup>249</sup>. The main purpose of the sanction is preventive<sup>250</sup>. A decision of a Water Pollution Fine can be appealed at the district court where the Coast Guard who has given the fine is situated<sup>251</sup>.

Most shipping companies tries very hard to avoid oil spill due to the huge economic consequences this could have on the companies and the coastal states. The amount the Water Pollution Fine will have in case of a major oil spill will probably just be one of many costs involved (The costs for the Spanish state after the *Prestige* oil spill was estimated to EUR 4328 million by the Spanish prosecutor<sup>252</sup>). Since Sweden has been spared of any major oil spills, it is hard to estimate the effect the sanction system will have in such a situation.

A parallel system to the Water Pollution Fine could provide an effective system, where strict liability could be included and the lengthy process reduced by giving the supervising authority the power to decide on the fine without involving the prosecutor/police. On the other hand there could be a disadvantage not to have access to the expertise of the police and the prosecutor. There might be an argument against having the opportunity to fine high amounts without consulting the criminal investigation authorities, since they have

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<sup>244</sup> Ibid p. 246

<sup>245</sup> (The Law on Prevention of Pollution from Ships (1980:424)) Chapter 8 §8

<sup>246</sup> Ibid Chapter 8 §3

<sup>247</sup> (Prop 1994/95:28) pp. 5-6

<sup>248</sup> (The Law on Prevention of Pollution from Ships (1980:424)) Chapter 8 §6

<sup>249</sup> Ibid Chapter 8 §7

<sup>250</sup> (SOU 2011:82) p. 241

<sup>251</sup> (The Law on Prevention of Pollution from Ships (1980:424)) Chapter 9 §3

<sup>252</sup> (Caballero-Míguez, Fernández-González, 2015) p. 90

the expertise to give strict sanctions. The suspect can appeal in the district court and there might be a possibility to enforce the sanction for non-compliance in the territorial area and the EEZ, which could be considered enough to maintain the legal security.

The problem regarding the supervision could still remain, and the arguments used regarding the applicability of the Water Pollution Fine on emissions of chemicals could be used in this matter as well. It could also be useful to create a mechanism for the calculation of the fine based on the Price Base Amount.

#### **4.4.1 Effective**

A system similar to the Water Pollution Fine could be effective, since the supervising authority would have the decisive power to issue fines without having to report to the police or prosecutor. The option to use detention gives the supervising authority a way to secure evidence and keep the ship within the geographical limit of the jurisdiction, but this is a measure which is considered serious and should not be used to cause undue delay<sup>253</sup> in accordance with the “safeguards” in UNCLOS. The use of detention can have big economic impacts on the shipping company<sup>254</sup> and this should probably be weighed against the amount of the fine and the quality of the evidence. Detention should be used with caution. The strict liability requirement would further ease the burden of proof for the supervising authority and this might shorten the time it takes to collect the evidence. With the right technical tools, the option to use detention to secure evidence might not be relevant. In this case, the evidence could possibly be secured during the time of the normal cargo operations in port.

When the supervising authority has decided on a fine, detention is an effective way of getting a posted security for the fine amount. Once this is done the ship should be free to leave. Regarding the Water Pollution Fine the monetary amount in the fines could be high enough to justify a detention. In case this method should be used as a sanction system for the Sulphur Regulation the fines would probably have to be matching those of the Water Pollution Fine. Should the responsible party find the fine unjust, he/she can appeal in the

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<sup>253</sup> (Swedish Transport Agency, TSS 2013-2085, 2014) p. 57

<sup>254</sup> Ibid p. 58

district court which allows for the legal justice order to be maintained without having to use the criminal sanction system.

#### **4.4.2 Proportionate**

Taking into account the discussion regarding the usage of detention to secure evidence and security for a fine the amount of a fine has to be proportionate to justify such means. A high fine would reflect the values of considering the impact of lowered life expectancy and the environmental degradation. The question remains of whether it is just to punish one non-compliant party for the impact made by many. The estimations made regarding the costs from oil pollution have been in connection with the oil spill from any given vessel. The evaluations of costs made regarding the Sulphur emissions are made based on the total emissions from the shipping sector. Therefore it might be difficult to argue that the amount of fines should be comparable to the fines under the Water Pollution Fine. The Water Pollution Fine uses a template based mechanism to set the amount for the fine. The template is based on the Price Base Amount and utilises index regulation<sup>255</sup>. Which variables that should be included in such a mechanism would maybe have to be similar to the ones in the Water Pollution Fine, but possibly based on the engine capacity, the amount of time that the vessel has been non-compliant and the calculated profit made based on the bunker oil price at the time of the non-compliance.

#### **4.4.3 Dissuasive**

The main purpose of the Water Pollution Fine is to be dissuasive<sup>256</sup> and due to the high amount that the Water Pollution Fine would result in, given the event of an oil spill, the dissuasive requirement would probably be considered fulfilled. One should bear in mind that after an oil spill the sanctions are not the only costs brought to the responsible party, but tort claims have been brought forward as well. Since the causation is easier to establish for an oil spill compared to a Sulphur emission it is hard to compare a system where so many parties could sue in tort. The risk of getting sued in tort is smaller due to the vague

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<sup>255</sup> (Prop 1994/95:28) p. 5-6

<sup>256</sup> (SOU 2011:82) p. 241

line of causation. In case of Sulphur emission it could be that the only cost that would follow a non-compliance would be a fine. If a parallel sanction system for Sulphur emission would give fines in the same class, it remains to be seen if it would fulfil the dissuasive requirement. In Sweden ten sanctions were decided on in 2010<sup>257</sup> which indicates that the strict liability makes it probable that the owner or “redare” will be held liable for any oil emission. This could be one reason why oil spills are something the owner/”redare” actively tries to avoid. The use of the Price Base Amount as base in the mechanism to calculate the fine would probably keep the dissuasive function over time and might better serve the purpose than a maximum limit stated in a regulation.

The option to use detention in order to secure the evidence or await security posted for the fine could by itself be a dissuasive method. The economic impact a detention might have on the ship could possibly be enough to incentivise the responsible party to post security for the non-compliance and/or ensure compliance. Depending on the economic impact a detention would have on the contractual situation for the ship it might be the lesser of two evils to buy compliant fuel or just pay the fine. A court of appeal is essential to avoid abuse.

#### **4.5 Summary**

By supporting the Sulphur Regulation in the Environmental Code Sweden implements a sanction system not designed to meet the international requirements for the sanction system. The level in criminal sanction system in the Environmental Code reflects the protected values, but is not necessary in order to meet the recommendations in MARPOL. The person that will face the criminal charges is another issue discussed. To charge the crew is one way, but in reality they have limited means of influencing the choice of bunker. This choice could, in many company structures, be made by the company ashore. Since it is the company responsible for ordering the bunker that is benefitting from the choice of bunker, it would be suitable if that company were to face the sanction. A system aimed to sanction the economic benefitting party is preferred. The criminal sanction system delays the

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<sup>257</sup> Ibid p. 242

process by resorting to a time consuming investigation. The technical means available does not provide a system with fast and reliable means sufficient to enforce criminal sanctions. The requirement of gross negligence or intent has proven too high, even though it supposed to be taken into consideration that there has been a breach of a specific regulation. The system could better serve the purpose if based on strict liability and/or reverse burden of proof. The reverse burden of proof is in line with the 2012/33/EU.

As the current sanction system leaves non-compliance unsanctioned a change in the system is recommended.

The selection process of choosing ships to inspect has so far been made under the PSC and this could be a sufficient risk based selection.

The Environmental Sanction Charge might not be suitable as it is an administrative sanction still within the Environmental Code. Problems regarding the border between the criminal sanctions and the administrative sanctions are not yet clarified and could pose problems for the implementation of the Sulphur regulations. As the Environmental Sanction Charge is within the Environmental Code it subsequently allows for the problems of enforcing compliance with a specific regulation with a general sanction system. By allowing the supervising authority to sanction the system could be faster and perhaps more non-compliances could be sanctioned. It could be that the upper limit of the sanction is too low to meet the dissuasive requirement. An application of the Environmental Sanction Charge is not unproblematic and would require a change in the legislative structure regarding Chapter 30 in the Environmental Code. The Environmental Sanction Charge is constructed to be faster than the criminal sanction, but it remains to be seen if it is fast and effective enough to be applicable to the shipping industry. As the Sanction Charge is a monetary penalty, if aimed at the right party it could be proportionate. The upper limit of 1.000.000 SEK may be too low, depending on the profit made during the non-compliance. This limit could furthermore eliminate the dissuasive character of the sanction system.

The Law on Prevention of Pollution from Ships is based on international conventions regarding shipping and could therefore be a better fit for the industry. Within this law two sanction systems are available; the Corporate Fine and the Water Pollution Fine.

The Corporate Fine remains within the criminal sanction system, but gives a better way of sanctioning the party benefitting from the non-compliance. The company will suffer sanctions from emissions made in line with its' business. The advantage in efficiency is based on an early acknowledgement of the non-compliance by the responsible party. If the acknowledgement remains absent, there is no advantage compared to the current system in this regard. Criminal investigations still have to be undertaken with regards to the costs compared to the sanction and the prosecutor may still dismiss investigations based on the Code of Judicial Procedure Chapter 23: 4§a. The upper limit of 10.000.000 could be a good limit, but due to inflations, volatile bunker oil prices, any upper limit could soon loose both its' proportion and dissuasive effect. The burden of proving that the company has done everything reasonable expected is in line with the requirements in Directive 2012/33/EU. In this particular case it will remain to be seen what could reasonably be expected of a company to avoid Sulphur emissions.

The Water Pollution Fine is an administrative sanction which is used in cases of oil spill in Swedish waters. It is an administrative sanction designed to meet the demands that shipping industry posts. The Water Pollution Fine is similarly to the Sulphur Regulation based on MARPOL and EU Directives. The requirements for the sanction system are the same for the oil spill as for Sulphur emission. The parties facing charges are the "reder" or owner which are the benefitting parties of oil spill/emissions. There is strict liability on oil spills. The fine is calculated based on the amount emitted, the size of the ship and the Price Base Amount. The fined company can appeal the fine in the district court of the supervising authority. The supervising authority has the right to detain a ship during the search for more evidence or to await security for the fine amount. Detention is a serious measure and should be used with caution, but the threat of detention could in itself provide for a more efficient system. The mechanism for calculating the fine has the advantage of not being exposed to inflation over time. The amount may not be comparable to the Sulphur emission since an oil spill has a more direct impact on the environment and can be traced to any single emission. The same goes for a lowering of the fine amount. It is hard to know exactly how dissuasive the Water Pollution Fine is due to the many tort suits a company may face in case of a major oil spill.

## 5 Conclusion

The criminal sanction system used today does not meet the requirements in Directive 2012/33/EU and a change is needed. All three alternative systems that have been examined in Chapter 4 shows of both advantages and disadvantages for the purpose of fulfilling the requirements in Directive 2012/33/EU. None of the systems are ideal in the way they are constructed now and would require changes within them to meet the requirements. There seems to be clear advantages in using an administrative sanction instead of involving the criminal justice system, but there is a fear of getting an incoherent system which might confuse the subject. An incoherent sanction system could, on the other hand, be preferred over a non-functioning system. A monetary system could easily be aimed at the benefitting party and an administrative monetary sanction could be preferred over a criminal sanction system. Since the incentive to skirt the regulations is monetary this could be a suitable sanction.

To create a more effective system, the time it would take from discovered non-compliance to decision on sanction would most likely have to be shorter than the system used today. Both the Environmental Sanction Charge and the Water Pollution Fine offer possible solutions to this problem. The Corporate Fine still requires an involvement of the criminal justice system, but provides a shortcut by having the responsible party admitting in an early stage. Since this shortcut depends on the admission of the non-compliance, the shortcut could easily be lost and the time problem would remain.

The proportionate requirement might be best served by having a mechanism similar to the one in the Water Pollution Fine due to the volatile bunker oil prices. A fixed amount may one month be considered proportionate, the next month it may not. In order to have a dissuasive sanction system the requirement of eliminating profit would probably not be enough. The balance between the proportional requirement and the dissuasive requirement could prove challenging for a system which uses monetary penalties, why a mechanism for the calculation based on the variables of the emission would be preferred.

To be dissuasive the penalty has to hurt. The responsible might therefore have to risk high fines in order to fulfil this requirement. A strict liability might also further add to the

dissuasive effect. Strict liability and a reverse burden of proof would probably be in line with both MARPOL and Directive 2012/33/EU. A dissuasive system would furthermore benefit from a clear targeting of the economic benefitting party. A system where the crew could be facing sanctions, but has little or no influence over the choice of bunker, neither profit from the non-compliance. By targeting the economic benefitting party such as the “redare” one of the incitements to skirt could be eliminated. A usage of detention of the ship in order to collect evidence or await security posted could add to the dissuasive effect.

To avoid abuse, an administrative sanction could be best served by having a court of appeal, similar to the system under the Water Pollution Fine. The court of appeal could possibly be the district court of the place where the supervising authority in any given situation has its office.

Hopefully we will see a change in the sanction system in Sweden soon. A stronger sanction system could further spark the development of low Sulphur HFO, supervision of scrubbers and supervising systems of both exhaust gases and fuel samples. Incentives to further technical development would keep Sweden in the forefront of sustainable technology and prepare for further challenges. A broadened enforcement of the Sulphur regulations would lead to better air quality and cleaner environment.

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