



A BRIEF SWOT ANALYSIS ON ENVIRONMENTAL FEES AND INCENTIVES

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A brief SWOT analysis on environmental fees and incentives

- especially focus on ship generated waste and 2000/59/EC

- Green Cruise Port
- Sustainable Development of Cruise Port Locations
 - Riga, 26th April 2018
 - Petra Erkkola

Incentives & fees

Examples:

- * Shipping lane fees per ice class (FIN), environmental differentiation on the vessel based fee (SE), NOx fund (NO)
- * Auto mooring, LNG availability, waste water collection...

OECD makes the case for greater port-based environmental incentives

 OCTOBER 5TH, 2017



SAM CHAMBERS

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2000/59/EC

- * Directive 2000/59/EC of the European Parliament and of the Council of 27 November 2000 on port reception facilities for ship generated waste and cargo residues.
- * PRF to be available for visiting vessels, vessels are required to use it.
- * Principles:
 - * Cost not related to amount of waste
 - * Waste hierarchy to be maintained
- * Are these achieved in practice?

SWOT analysis

Strengths	Weaknesses
Opportunities	Threats

Strenghts

- * Landing of waste is facilitated by having a cost never-the-less what and how much is landed → no incentive to get rid of the waste “at-sea”.
- * EU wide system, thus same procedure in each visited port, harmonized system.

Weaknesses

- * Some ports do restrict the amount of waste landed within PRF → ideal of the directive is lost.
- * Vessels do not always know how the directive is implemented in a specific EU state.
- * Costs for example for cruise ships can become much higher than during travel with own waste landing plans (in US/Caribbean cruising 1 landing per week, in EU landing every port visit 5-6 times a week).
- * Not able to impact level of recycling, ports decide which waste fractions they collect. Despite this, requirement to land all waste.

Weaknesses

- * No incentive for the ship for example to de-water sludge or process bilge water (space providing), high water content in landed oily waste.
- * Variations in ports receiving solid (hazardous) waste → a single port during the cruise receives all solid hazardous waste.
- * Variations in ports receiving scrubber sludge (oily waste), some ports will receive it, some will not.

Weaknesses

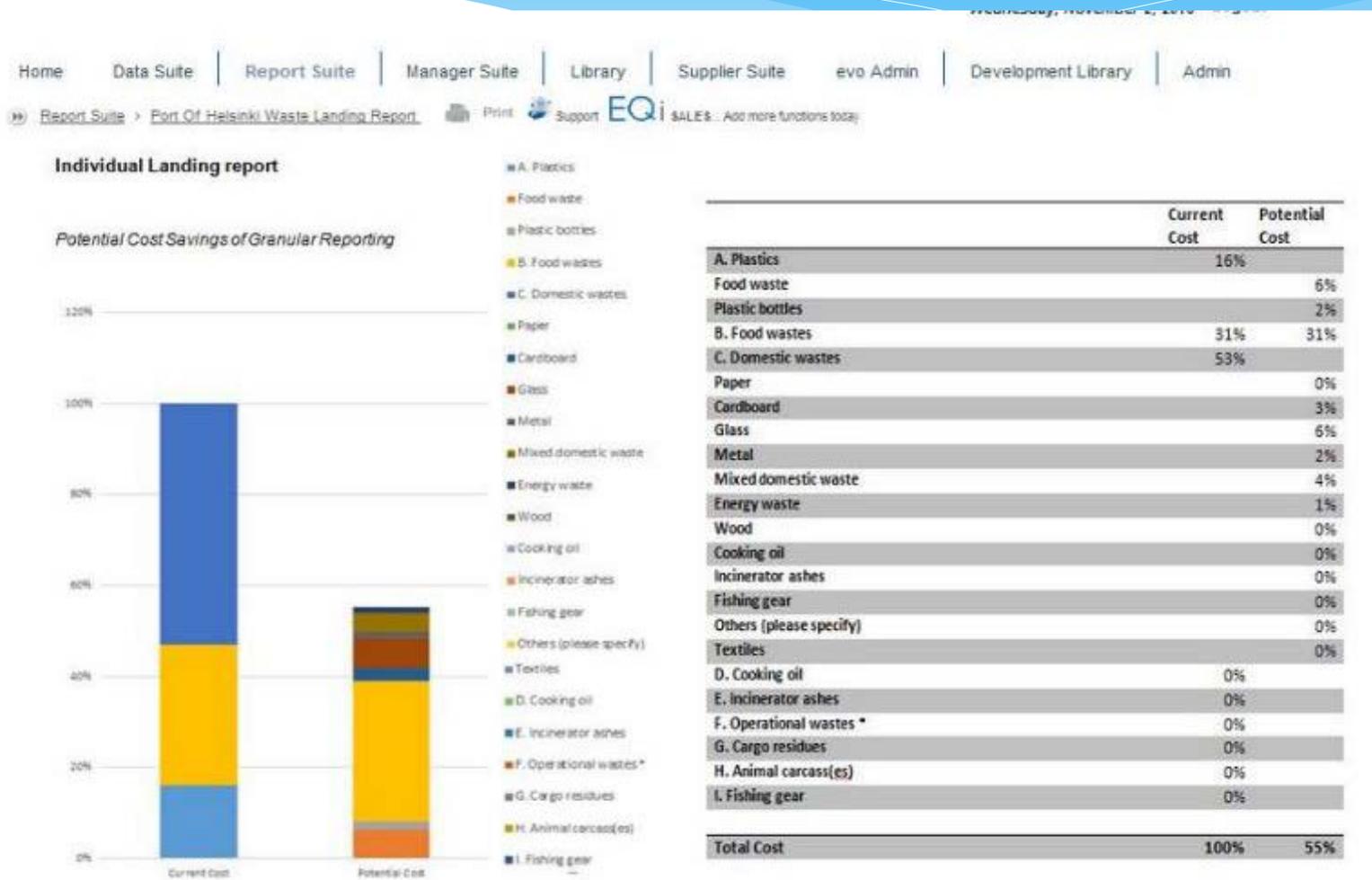
- * The controlling authorities control the process in a various manner → waste fee might not be correctly set for vessels.
- * No centralized communication method of how this functions how to seek for exemptions, costs not discussed openly.
- * Ships waste management plan needs to fit many different PRF's (difficult for ships crew to change SOP regularly).

Weaknesses

- * Many ports contract a third party to collect the ship generated waste. The further the management of the waste landing goes from the vessel, the more possibility there is for faux play (recyclable materials not collected separately, increased costs).
- * Who is in charge? The vessel? The port? The waste handler?
- * Not always feasible for each port to collect several different fractions, not cost efficient.

Port of Helsinki – waste cost efficiency study 2016

Using evolution® by EQI



Opportunities

- * A vessel does not need all services in one port. A vessel needs a chain of services during her voyage.
- * Create a regional waste management area for PRF, as guided by the directive:
 - * *Article 5.2: “The waste reception and handling plans referred to in paragraph 1 may, where required for reasons of efficiency, be developed in a regional context with the appropriate involvement of each port, provided that the need for, and availability of, reception facilities are specified for each individual port.”*

Example: all ports collect “burnable waste or energy-fraction”, one port collects metal, the other one glass, the next one plastic, the next one wood, the last one paper and cardboard and so on and so on...
- * Increase recycling on a regional basis → lower fees for user of the PRF.

Opportunities

- * Create a common platform to inform (landing documents, procedures for exemptions, contact information)
www.prf.eu 😊
- * Due to the potential in regional waste management areas, common possibilities can be found by communicating (which port has the best possibilities to recycle xx fraction).
- * Allow open dialogue with the customers (vessels and their operators) to achieve environmental and cost efficiency.

Opportunities

Fraction	Weights	Original cost	Potential cost
Mixed burnable waste	16 940 kg – 14 819 kg = 2 121 kg	2315,08	256,8 €
	2121 x 0,7 = 1484,7 kg		With energy fraction 30 % 179,7 €
Office paper			
Cardboard (compacted, 200 kg/ m ³)	1694 kg (8,5 m ³)		119,8 €
Pet bottles	20 m ³ x 125 = 2500 kg		281,8 €
Plastic wrap	5 m ³ x 125kg = 625 kg		70,45 €
Glass (1 m ³ = 1 ton)	5 m ³ = 5000 kg		395 €
Metal (1 m ³ = 1 ton)	5 m ³ = 5000 kg		70,45 €
Food waste	9 540 kg / 21 m ³	1 354,68 €	1 354,68 €
Energy fraction 30 %	2121 x 0,3 = 636,3 kg		56,6 €
Total cost		4375,4 €	2549 €
			With energy fraction 30 % 2528,6 €

Threats

- * Monitoring administration is too fragmented → original goals are lost in the system, costs are not controlled.
- * Too costly, not enough flexibility, bureaucratic → more exemptions than users of PRF.
- * Vessels are already taking specific fractions to their preferred landing places → not possible to plan on utilizing specific facilities in vicinity of specific ports.
- * Vessels do not use the possibility to report un-sufficient PRF's.

Threats

- * Annex V \leftrightarrow Waste Hierarchy
- * ESPO (Statement of the ESPO to mark the Maritime Year of the European Union 3rd May 2017):
 - * Aiming at addressing existing gaps and shortcomings, ESPO supports the alignment of the directive with MARPOL
- * If aligning with MARPOL, would the solid waste be collected as Annex V waste? If so, what about EU goals for in the 7th Environment Action Programme?
 - * Maximise recycling and re-use
 - * Limit incineration to non-recyclable materials
 - * Phase out landfilling to non-recyclable and non-recoverable waste

Threats

- * ESPO:
- * ESPO believes however that **the review should safeguard the flexibility of the different fee systems while addressing the problem of delivery of an “unreasonable” amount of waste in a given port.**
- * Vessels will preferably not carry on-board “unreasonable” amounts of waste – fire hazard. Also space on a vessel is valuable and scarce.
- * If the amount of waste landed into PRF is restricted, could it be said that the ideal of the 2000/59/EC is lost?
- * The waste is not a cost for the port, for the port invoices the visiting vessels for the PRF and the port can decide the amount of the fee.

Threats

- * What can be included in the costs, which the port can include in the “waste fee”?
 - * Work hours?
 - * Administration?
 - * Maintenance of pier space for waste containers?
 - * Snow work / sand on pier in winter time?
- * How do ports calculate the appropriate fee?
- * No incentive for a port to seek for improved cost efficiency due to vessels required to cover the cost.

2018/12/EU

- * PSC resources for conducting audit on this might be limited.
- * Collecting all waste fractions in all ports:
 - * Costs?
 - * Working hours on-board?
 - * End-of-waste fractions?
- * Not taking into consideration local possibilities for waste handling.

2018/12/EU

- * If all information regarding the waste landings (receipts etc) is collected centrally in the EU, why do we still need the PRF?
 - * Use the “administrative costs” to keep up the PRF system to create a EU level watch dog → more flexibility for vessels to find their own level of recycling (keep in mind that cost and environmental efficiency in this subject go hand in hand). Can be included into already existing digital systems used by PSC.
 - * Chain of custody process with receipts.
 - * Certified / approved waste handlers

Impact of 2000/59 on operations and R&D and new building

- * Does a fixed fee for landing of ship generated waste give incentive for usage and/or development of environmental technology on-board?
- * If new technology is taken into use for on-board treatment of waste, how does the PRF react to that?

What does the customer say?

- * Cruise line XX mentioned that their aim is to recycle and repurpose as much as possible of their waste. To be able to do that, they are seeking if possible and if necessary their own contracts for waste landings, instead of using the PRF offered by a port.
- * Cruise line XXX stated that they are in the process of developing their on-board waste handling → will PRF be ready for this in a “sufficient” manner?

NECA – success via regional coordination

- * ”This is a good example of how close co-operation between the Baltic and North Seas can help us achieve something bigger than what would be possible in one region alone”, adds Ditte Kristensen on behalf of Denmark, co-lead of the North Sea NECA application together with the Netherlands
- * Have NO_x related incentives in all ports – cruise lines might be more likely to send vessels to the Baltic Sea, which would benefit from this incentive → benefits possible in a short time period compared to requirements of IMO Annex VI



Thank you

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