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COMMISSION STAFF WORKING PAPER

IMPACT ASSESSMENT_Accompanying document to a legislative proposal and additional non-legislative measures strengthening the inspections and enforcement of Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste

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This report commits only the Commission's services involved in its preparation and does not prejudge the final form of any decision to be taken by the Commission.

INTRODUCTION

Inspections at sea-ports, on roads and in companies have shown that around 25% of shipments containing waste in the EU do not comply with the EU waste shipment regulation, "WSR" (see Annex I for further details). Numerous reports of NGOs, media and studies published during 2007-2011 have shown that large amounts of waste originating in the EU are illegally exported to developing countries in Africa and Asia (see Annex II for more information). The problem of illegal waste shipments was brought to light by the ship Probo Koala's dumping incident in Ivory Coast in 2006, in which the dumping of hazardous waste led to the deaths of 17 people and the poisoning of several hundred others.

Requirements for inspections and enforcement are formulated in the WSR in a general way (Article 50). As a result, there are huge differences between Member States: some have developed thorough, well-functioning inspection systems targeting either waste shipments in ports or at the sites of waste producers and collectors, while others have significant problems with enforcement and lack adequate structures and resources to control waste streams and carry out inspections. This situation leads to "port hopping", i.e. waste exporters choose to send their waste through Member States with the least controls. If enforcement in one Member State increases, the exporters move their exports to another Member State. The objective to prevent illegal waste shipments could therefore only be achieved if sufficient controls are carried out in all Member States.[1]

This Impact Assessment report examines options to strengthen the inspections and enforcement of the WSR in order to effectively prevent illegal waste shipments.

[1] Practicability and Enforceability of the Waste Shipment Regulation, IMPEL, Final Report, December 2011

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1. PROCEDURAL ISSUES AND CONSULTATION OF INTERESTED PARTIES

1.1. Procedural issues

The impact assessment process was steered by the inter-service group on waste shipments which acted as an Impact Assessment Steering Group. This group was created on 11 November 2010, chaired by DG ENV and with members from the Secretariat-General, the Legal Service and Directorate-Generals ESTAT, MOVE, ENTR, SANCO, HOME, JUST, TAXUD, DEVCO and TRADE. Meetings on the draft Impact Assessment report were held with the inter-service group on 11 April, 27 April and 24 May 2011. The Impact Assessment Board gave its first opinion on the draft Impact Assessment report on 8 July 2011 and after resubmission, a second opinion on 30 March 2012.

This report has been revised to take into account the Board's opinions in the following ways: the problems and experience with implementation, compliance and enforcement of the EU waste shipment regulation (WSR) have been further explained (section 2); the policy context and baseline scenario have been developed (section 2); the rationale for the measures considered under the policy options have been further explained and the contents of the options more extensively described, including examples from Member States' best practices (sections 2-4); the assessment of impacts, including costs and benefits, have been extended (sections 5-6) and the monitoring and evaluation arrangements have been clarified (section 7). This revised report also takes into account new studies and reports from the Commission, Europol and IMPEL.

1.2. External expertise and consultation of interested parties

Public consultation

The preparation of this impact assessment has been preceded by a public consultation in line with the minimum standards for consultation. The public consultation was open to all stakeholders for eleven weeks, accessible via the single access point on the Internet[2] and followed up with the publication on the Internet of the responses.[3] 65 contributions were received from 18 Member State authorities, one EEA country authority, 25 industry organisations, five private companies, two public organisations, three NGOs and 11 individuals. Moreover, the EU "network for the implementation and enforcement of environmental law, trans-frontier shipments of waste-cluster" (IMPEL-tfs, see Annex III for details), authorities in Member States and various groups of stakeholders were closely involved in the preparation of the studies that were conducted to support this Impact Assessment.

The Commission's studies

[2] "Your Voice in Europe" website: http://ec.europa.eu/yourvoice/consultations/index_en.htm.

[3] http://ec.europa.eu/environment/waste/shipments/news.htm.

The Directorate-General for the Environment (DG ENV) conducted two studies examining the feasibility and impact of EU legislation to strengthen the enforcement of the WSR.[4] The first study identified a large number of possible criteria and requirements for determining how to ensure a sufficient frequency and quality of waste shipment inspections. The study listed in total 174 criteria and requirements for waste shipment inspections concerning: the capacity of competent authorities; enforcement strategy and risk profiling; waste inspection planning and programming; preparation, carrying out and follow-up of waste shipment inspections; training and competence requirements; and co-operation between authorities.[5] The follow-up study contained a detailed assessment of the environmental, economic and social impacts of the criteria considered as the most appropriate. The Impact Assessment builds also on a large number of studies and reports that were commissioned to external contractors to support waste policy implementation (see Annex II for further details).

2. POLICY CONTEXT, PROBLEM DEFINITION AND SUBSIDIARITY

2.1. Policy context

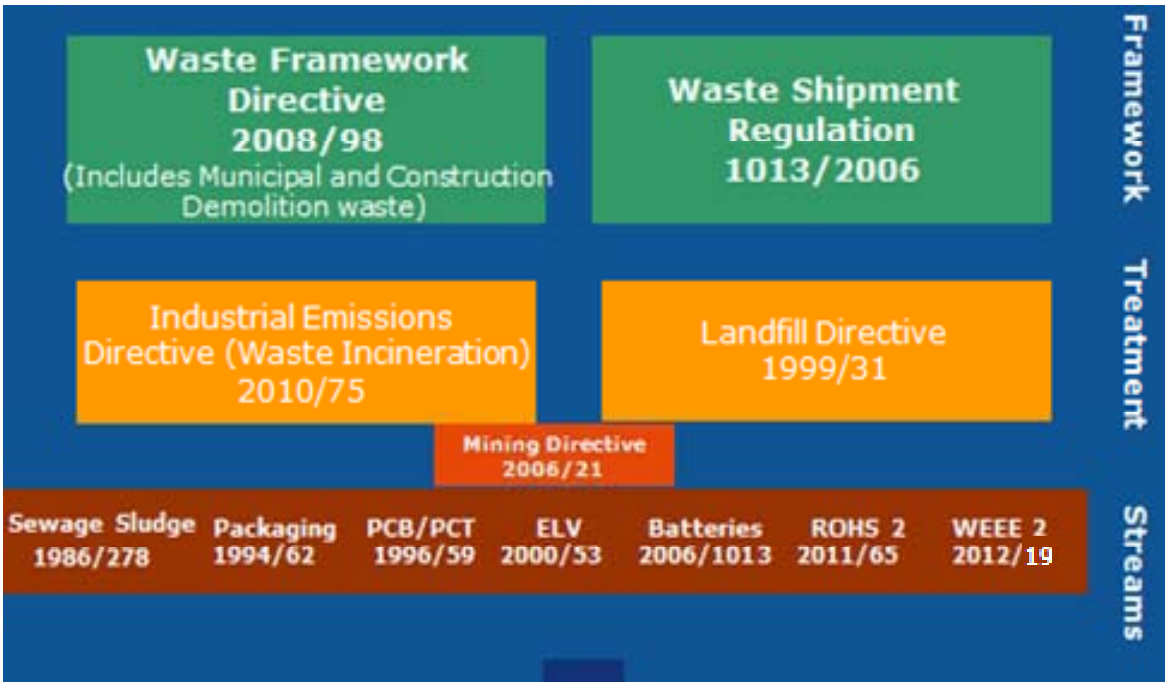
Comprehensive EU legislation (regulations, directives and decisions) has been adopted in order to ensure that waste in the EU is managed in an environmentally sound manner. As can be seen from Table 1 below, there are several pieces of legislation covering a framework, different waste treatment options and specific waste streams: the Waste Framework Directive 2008/98/EC ("WFD"); the Waste Shipment Regulation 1013/2006 ("WSR"); the Landfill Directive 1999/31/EC; the Industrial Emissions Directive 2010/75/EC; the Mining Directive 2006/21/EC; and a number of directives governing waste from e.g. packaging, electrical and electronic equipment ("WEEE") and end-of-life vehicles ("ELVs").

The WFD lays down a "waste hierarchy" with prevention as the preferred option and then in descending order, preparing for reuse, recycling, recovery and disposal. This legislation contains standards and targets to be achieved by waste management in the EU. Its aim is to move the EU towards a recycling society with increasing amounts of waste going to recycling and less to landfills. The directives dealing with specific waste streams ensure the efficient and environmentally sound management of specific categories of waste and share the same basic design in terms of substance restrictions, extended producer responsibility as well as collection and recycling targets.

[4] Study 'Environmental, social and economic impact assessment of possible requirements and criteria for waste shipment inspections, controls and on-the-spot-checks', final report 4 June 2010, Biointelligence SA http://ec.europa.eu/environment/waste/shipments/reports.htm.

[5] Study "Inspection requirements for waste shipments', final report 12 August 2009, Biointelligence http://ec.europa.eu/environment/waste/shipments/reports.htm.

Table 1: Overview of EU waste legislation



The WSR fulfils a vital role in this legislative system by ensuring that the requirements, standards and targets of EU waste legislation are not circumvented by operators who wish to send EU's waste to low-standard, polluting and hazardous facilities in developing countries. The WSR controls shipments of waste both within the EU and between the EU and third countries. The WSR prohibits all exports of hazardous waste to countries outside the OECD and all waste for disposal outside the EU/EFTA (Articles 34 and 36 of the WSR). The WSR's ban on exports of hazardous waste outside the OECD implements the UN Basel Convention's export ban from 1995. In addition, the WSR contains rules for different types of shipments requiring either prior written notification and consent or fulfilment of general information requirements (Titles II-IV of the WSR). Specific obligations are laid down concerning a duty to take back waste shipments which are found to be illegal or which cannot be completed as envisaged (Articles 22-25 of the WSR). The WSR allows non-hazardous waste to be exported for recovery operations outside the OECD but requires national authorities to verify that it will be treated in an environmentally sound manner that is in a way which is broadly equivalent to rules applied in the EU.[6]

The WSR contains a general provision on enforcement in its Article 50. This provision stipulates that Member States shall provide for inspections of establishments and undertakings in accordance with the inspection requirements in the Waste Framework Directive, and that Member States may check transports by road, in ports etc. or at a later stage when the waste has already arrived at a recovery or disposal facility. Controls are otherwise left to Member States' discretion. There are no specific provisions on how the inspections shall be carried out. The regulation only refers to that "Checks on shipments shall include the inspection of

[6] Articles 18, 49 and Annex VII of the WSR. See also Commission Regulation (EC) No 674/2012 of 23 July 2012 amending Regulation (EC) No 1418/2007 concerning the export for recovery of certain waste to certain non-OECD countries

documents, the confirmation of identity and, where appropriate, physical checking of the waste."

In practice, the above export bans under the WSR are often circumvented by illegal exports. Exports of hazardous waste are often labelled as second-hand goods and waste for disposal as waste going to recovery. The authorities at many of the EU's exit points do not make the necessary inspections to check this. Furthermore, the required environmentally sound management of waste and destinations outside the EU are often not verified in spite of the requirements in the WSR.

In 2001, the European Parliament and Council adopted a Recommendation on minimum criteria for environmental inspections in the Member States (2001/331/EC)[7] containing non-binding criteria for the planning, carrying out, following up and reporting on environmental inspections. Its objective is to strengthen compliance with EU environmental law and to contribute to its more consistent implementation and enforcement in all Member States. This recommendation covers inspections of facilities, including waste management facilities, but not waste shipments. The Commission's 2007 Communication on the review of the Recommendation on minimum criteria highlighted that indeed *"the recommendation does not contain criteria for the inspection of waste shipments."*[8]

For this reason, the Communication concluded that *"in addition to the general criteria for environmental inspections set out in the recommendation, specific legally binding requirements for the inspection of certain installations or activities should be included in sectoral pieces of legislation. Legally binding requirements are necessary to ensure that a higher political priority is given to inspections and that environmental legislation is better enforced throughout the Community. Defining the inspection requirements in each legislative act has the advantage that the requirements can be adapted to the specific nature and risks of the installations or activities covered and can be more precise and better targeted than general criteria. These sectoral inspection requirements can be complementary to the Recommendation or they can concern installations or activities that are not covered by the Recommendation."* The Communication stated that *"The Commission is considering proposing specific legally binding rules for inspections of waste shipments. Unlike inspections of installations, inspections of waste shipments are carried out in different spots, such as sea ports, roads or border crossings and they usually involve many different authorities, such as customs, police and environmental authorities. Specific criteria should be defined to ensure sufficient quality and frequency of inspections and provide for appropriate training and co-operation among authorities."*

Council conclusions of 3 June 2010 invited the Commission to consider strengthening EU requirements on inspections and spot checks carried out under the WSR, in order to fight illegal waste shipments. The Commission was also invited to suggest the development of additional measures to support Member States in enforcing the WSR.

While the mismanagement of waste could lead to disastrous consequences which need to be prevented the issue also has a resource angle. The EU's waste policy and legislation also contributes to boosting resource efficiency and securing important supplies of raw materials.

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[7] OJ L 118, 27.4.2001, p. 41.

[8] Communication 2007/707/EC on the review of the recommendation on minimum criteria.

In 2011-2012, the Commission therefore proposed to improve the prevention of illegal waste shipments in its Roadmap to Resource Efficiency[9] and the Raw Materials Strategy Initiative[10].

2.2. Problem definition

The problem which needs to be addressed is the high frequency of illegal waste shipments from the EU to certain destinations violating the WSR. An illegal shipment is defined in Article 2(35) of the WSR by listing the specific situations in which it would contravene WSR, for example:

a) hazardous waste is sent from the EU to a non-OECD country;

b) any type of waste is sent from the EU for disposal in a non-EU or non-EFTA country;

c) waste is sent without being notified in advance in accordance with the WSR; and

d) waste is sent without the consent of the competent authorities pursuant to the WSR.

This problem results in severe, negative implications for the environment and health, high costs for Member States and industry, an uneven playing field for waste management industry, loss of raw materials and an inefficient use of resources. See an overview of the problem in Table 2 below.

2.2.1. Frequency of illegal shipments

Information about precise numbers of illegal waste shipments is not possible to obtain precisely due to their illegal nature. The significant problems to compile reliable data on waste shipments also result from insufficient reporting by national authorities and the lack of harmonisation with custom codes.[11]

Nevertheless, very high rates of non-compliance with WSR due to illegal waste shipments are clearly shown by the IMPEL-tfs joint inspections. These were organised by IMPEL with the support of the Commission. 22 Member States checked and reported on transports by road and in ports (over 20,000 transport inspections and over a hundred company inspections) during the period October 2008-November 2010.[12] They showed that the frequency of illegal shipments varies significantly between Member States: non-compliance rates vary between 14-100% of the inspected waste shipments (see Annex I). 95 cases of illegal exports were found during 120 company inspections. Taking into account the total number of inspected waste shipments from and within the EU during the period (3,454) and the number of violations (863), the overall non-compliance rate can be estimated to be 25%.

Under the WSR, Member States shall report on cases concerning illegal waste shipments, (Article 51(2) and Annex IX). The most recent Commission report on WSR implementation covers the period 2007-2009[13]. In this report, most Member States state that there had been

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9 Roadmap to a Resource Efficient Europe, 20 September 2011, COM(2011)571final

10 Tackling the Challenges in Commodity Markets and on Raw Materials, 2 February 2011, COM(2011)25final

11 Illegal Trade in Environmentally Sensitive Goods, OECD Trade Policy Studies, 2012

12 IMPEL's detailed report from the joint inspections is available on: http://impel.eu/wp-content/uploads/2012/01/IMPEL-TFS-EA-II-Project-_Final-report-adopted-v1-4.pdf.

13 Report of 7 August 2012, published on http://ec.europa.eu/environment/waste/shipments/reports.htm.

cases of illegal shipments of waste during the period concerned. While some Member States reported a large number of cases, others reported only a few or none. The countries reporting the highest numbers of cases were Germany, the Netherlands, Belgium, United Kingdom and Austria (representing more than 70% of the reported cases for the period 2007-2009).

For 2009, Member States reported around 400 cases of illegal shipments of waste (with some of the cases probably having been reported in duplicate, once by the country of destination and once by the country of dispatch). For 2009, about half of the illegal shipments reported by Member States were shipments between Member States while the other half involved shipments into or out of the EU. The most common reasons for illegality were that the shipment of waste was effected without notification to the relevant competent authorities or contrary to a prohibition on shipments under the WSR.

Moreover, a 2009 report by the European Environment Agency on waste concluded that the reported cases represent a fraction of the actual number and that the number of illegal shipments is considerable.[14]

Finally, in 2011 a study estimated the tonnage of illegal shipments based on available information about the total amount of waste shipments within and out of the EU.[15] The study concluded that if only 1% of all waste shipments would be illegal, the total tonnage of illegal waste shipments would amount to 2,8 million tonnes per year:

Registered annual export of waste: 75 million tonnes total (40 million tonnes export outside the EU)
+ Registered additional annual export of hazardous waste: 6 million tonnes
+ Registered annual export based on relevant customs classification codes: 200 million tonnes (45 million exports outside the EU)
= In total, 281 million tonnes of waste shipments per year of which 2,8 million tonnes would be illegal (1%).

More information on the specific waste streams WEEE and ELVs can be found in Annex V.

2.2.2. Main shipment routes

Illegal waste shipments appear to a large extent to stem from uncontrolled collection, storage and sorting facilities in Member States, where illegal operators get hold of the waste in order to illegally ship it to developing countries. A 2011 Europol study concludes that intermediate storage sites are often used to disguise the ultimate destinations of waste and to frustrate law enforcement efforts to identify source companies. The ports in north-west EU (Antwerp, Hamburg, Le Havre and Rotterdam) play an important role in the export of waste (e-waste, end-of-life vehicles, plastics, paper and various types of hazardous waste) to third countries in Africa and Asia. Due to the fact that many of these ports have large tonnages of waste (both lawfully and illegally) shipped out of the EU, they have relatively more frequent controls and for this reason probably detect more illegal waste shipments. So-called 'port hopping'[16]

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[14] Waste without borders in the EU? Transboundary shipments of waste, EEA report, 1/2009, page 11-12.

[15] Assessment and guidance for the implementation of EU waste legislation in Member States, BiPRO, 16 November 2011, http://ec.europa.eu/environment/waste/shipments/reports.htm.

[16] "Port hopping" means that the waste exporter chooses to export from the Member State with the least controls, which undermines the enforcement of EU waste legislation.

frequently steers waste over to ports with less controls. Italy has also become a transit point for e-waste to Africa and Asia.[17]

In terms of destinations, a large part of illegal waste shipments from the EU detected during the IMPEL-tfs enforcement actions were destined to African and Asian countries. Ghana, Nigeria and other West-African countries appear to be the most common destinations in Africa. In Asia, illegal waste shipments seem often to go through the port of Hong Kong into China or other Asian countries.[18]

Problems relating to illegal waste shipments have also arisen *between* Member States. The 2011 Europol study concludes that hazardous waste is often shipped from southern to south-east Europe (e.g. from Italy to Romania and Hungary).

2.2.3. Environmental and health impacts

The dumping or substandard treatment of waste following an illegal shipment usually has severe implications for the environment and health. Inadequately disposed or untreated waste may cause serious environmental and health problems for populations surrounding the disposal area. Leaks from the discarded waste also harm soils and water streams, and produce air pollution, through emissions of e.g. heavy metals and persistent organic pollutants. If recycling standards and capacity are not adequate in the country of destination, potential environmental and health hazards are simply being exported to other parts of the world.[19] In addition to the long-term health risks for citizens and workers, this also contributes to global warming and ozone depletion The extent of these impacts is closely linked with the usage of proper or improper waste treatment techniques. The already toxic nature of hazardous substances can often become an augmented risk due to a lack of personal protection equipment or pollution control measures used in waste treatment in those countries receiving illegal waste shipments. Two examples illustrate these impacts:

- *Example 1: the Probo Koala-case*

The Probo Koala case is an illustrative example of harm that may be caused by the inappropriate discharge of hazardous waste. In September 2006, the Probo Koala discharged toxic waste in Ivory Coast. Estimations of the health impacts caused vary, but some newspapers indicated that it caused the death of 17 persons, while intoxicating thousands. Court proceedings have taken place in several countries, including in the Netherlands where in 2009, the national court found the company liable for infringements of the WSR. [20]

- *Example 2: WEEE burning in Delhi, India*

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17 Europol's "EU organised crime assessment", 28 April 2011, p. 30. https://www.europol.europa.eu/.

18 Study on the role of customs in the enforcement of EU legislation governing the environment, http://ec.europa.eu/taxation_customs/resources/documents/common/publications/studies/customs_environt_en.pdf.

19 Study "Feasibility of a waste implementation agency", final report 7 December 2009, Milieu, AmbienDura, FFact.

20 See for further details, study 'Environmental, social and economic impact assessment of possible requirements and criteria for waste shipment inspections, controls and on-the-spot-checks', final report 4 June 2010, Biointelligence SA http://ec.europa.eu/environment/waste/shipments/reports.htm, and Le Monde (2009) L'affréteur du Probo Koala aurait proposé un accord aux victimes ivoiriennes, 16/09/2009, available at : http://www.lemonde.fr/afrique/article/2009/09/16/l-affreteur-du-probo-koala-aurait-propose-un-accord-aux-victimes-ivoiriennes_1241483_3212.html.

WEEE is often shipped illegally from the EU to developing countries (see Annex V for more details). A study completed by EMPA[21] on open-air WEEE burning in Delhi, India, indicated the possibility for a higher-than-average risk of cancer and immune toxicological problems due to increased levels of chlorinated dioxins and furans in the air. Inhalation by children and food preparation near the burning sites were cited as the most problematic forms of contamination which could lead to long-term health risks.

2.2.4. Economic costs and benefits

Effective enforcement and inspections of waste shipments would not only prevent the serious environmental and health impacts stemming from illegal waste shipments, but also save high costs and result in direct economic benefits for Member States and industry. Financial benefits stemming from better enforcement include avoided clean-up costs (example 1 below) and repatriation costs (example 2 below). A recent study shows that stricter enforcement in the port of Rotterdam resulted in increased quality and quantity of waste recycled due to that waste was routed via legal channels to facilities with better treatment techniques (example 3 below). It led to creation of 22 jobs – in customs, inspections and waste treatment plants.[22] The same study compares two scenarios for the period 2008-2020 – one involving no progress in waste management and the other involving full implementation of eight pieces of EU waste legislation, including the WSR - and concludes that full implementation would mean cost savings of €72 billion/year across the EU. Other benefits include 72% increase in material and 113% in energy recovery. Improved enforcement throughout the EU would also create a level playing field for economic operators and eliminate current internal market distortions (example 4 below).

- *Example 1: Clean-up costs*

The subsequent clean-up of waste that has been illegally shipped and dumped is an economic burden, especially for developing countries with inadequate waste facilities. The clean-up of contaminated sites, including illegal and poorly managed landfills, can entail significant costs. For example, in the Probo Koala-case clean-up costs in Ivory Coast where waste was shipped and dumped was paid by the operator at €152 million. A settlement of €33 million to 31,000 citizens of Ivory Coast for health concerns was also paid by the operator.

An example from within the EU is the financial impacts of the waste-crisis in Naples as a result of long-term waste management below the standards set by EU waste legislation. The clean-up costs were estimated to €400,000 per day since 2007 (for e.g. sending waste for incineration to Germany), €2 million for staff in charge of waste management, €36,000 daily spending since 2007 on leachate waste disposal due to inadequate draining systems at landfill and treatment sites, and required annual spending of €1.2 million to protect the natural diversity of surrounding areas from the impacts of waste dumping.[23]

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[21] Swiss federal laboratories for material science and technology (EMPA), http://www.empa.ch/plugin/template/empa/*/59242/---/l=2.

[22] Study "Implementation of EU waste legislation for green growth, BioIntelligence Service, 2011, http://ec.europa.eu/environment/waste/studies/pdf/study%2012%20FINAL%20REPORT.pdf.

[23] Ibid.

- *Example 2: Repatriation costs*

If waste has been illegally shipped, the WSR requires repatriation of the waste. This repatriation or "take-back" has primarily to be paid by those arranging for the shipment. In cases where such persons are not available or insolvent, the country of origin has to pay the bill. This can be very costly. Repatriation costs are made up of shipment fees, container rental and required treatment activities following on the return of the waste to its country of origin. An example is a case of repatriation of hazardous waste destined for Nigeria via the United States back to the port of Rotterdam costing €1.2 million.[24]

- *Example 3: Loss of valuable resources*

There are several strong reasons for Member States to ensure that inspections of waste shipments are carried out properly and that illegal shipments contravening the WSR are prevented. If waste is recycled according to EU environmental requirements instead of being illegally exported, this would reduce the necessity of using virgin materials and preserve the environment at the same time as reducing energy consumption and greenhouse gas emissions. Illegal waste shipments to destinations where waste is subject to ineffective, substandard recycling lead to a significant loss of resources.

The current "leakage" of waste via illegal shipments to sub-standard treatment inside or outside the EU also hinders the access to valuable raw materials. Access to resources has become a major strategic economic concern. Europe has the world's highest net imports of resources per person, and its open economy relies heavily on imported raw materials.[25] The competitiveness of European industry requires efficient and secure access to raw materials, as further developed by the Commission's Communication on Commodity Markets and Raw Materials of 2 February 2011[26]. Higher quantities of waste routed through legal channels for recovery and treatment, would lead to optimised processes and better sorting techniques and consequently better quality of waste and, ultimately increased access to high quality raw materials.

- *Example 4: Distortions of the internal market; lack of a level playing field for industry*

The WSR ensures the proper functioning of the internal market through specific provisions (Article 12 of the WSR). However, the proper functioning of the internal market also requires that inspections and enforcement of the WSR are carried out effectively throughout the EU. The current lack of a level playing field due to wide disparities in enforcement practices put law-abiding businesses at an economic disadvantage. The high rates of illegal waste shipments undermine the legitimate waste treatment and disposal industries. If the WSR was applied properly throughout the EU, this would reinforce confidence and trust in the waste shipment system among economic operators. Companies in the recycling and waste management sector would find incentives to invest and create new jobs. The relocation of jobs in waste management outside the EU could be avoided.

The EU's recycling and waste management industry is a dynamic sector with a huge potential. It has a turnover of €95 billion, provides between 1,2 and 1,5 million jobs and represents

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[24] Ibid.

[25] European Environment Agency, "State and Outlook 2010", 2011.

[26] Tackling the Challenges in Commodity Markets and on Raw Materials, 2 February 2011, COM(2011)25final.

around 1% of GDP. A recent study shows that full compliance with eight pieces of EU waste legislation, including the WSR, by 2020 would increase the turnover of waste management and recycling industries by €42 billion/year and create over 400,000 new jobs.[27]

2.3. What are the underlying causes of the problem?

The following drivers of illegal waste shipments have been identified:

2.3.1. Differences in costs for waste treatment and disposal between the EU and third countries

The significantly lower costs in developing countries for waste treatment and disposal are an important economic driver for illegal waste shipments. These lower costs are mainly a result of less stringent environmental and health regulation than in the EU. Illegal traders seek to avoid the higher costs within the EU by shipping waste illegally to cheaper, poor quality facilities in developing countries. This is illustrated by concrete examples in several Member States where closure of landfills have resulted in illegal exports and dumping, e.g. Estonia and the United Kingdom.

A recent estimate suggested that it was four times more expensive to incinerate waste in the Netherlands than it was to ship it to China.[28] Another estimate suggested it might be 400 times cheaper simply to dump hazardous waste rather than dispose of it legally in the EU.[29] In addition, precious metals such as gold, silver, platinum or rhodium can be recovered from WEEE at lower prices in third countries.

2.3.2. Organised crime in the waste sector

Organised environmental crime is particularly serious and wide-spread with regard to waste. According to Europol, illegal waste shipments "are driven by an exceptional low risk-high profit margin" and are organised by sophisticated networks of criminals with a clear division of roles (e.g. collection, transportation, recovery or legal expertise). The Europol report[30] states that "illicit waste trafficking is often facilitated through cooperation with legitimate businesses, including those in the financial services, import/export and metal recycling sectors, and with specialists engaged in document forgery to acquire permits". Permits are also obtained by means of corruptive influence on issuing bodies. Europol has found evidence of corruption in both public and private sectors. The conclusion is drawn that while mafia-type structures have sufficient resources to participate in large scale illegal waste management, there is evidence that lower level groups are engaged in illegal shipments of hazardous waste.

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[27] Study "Implementation of EU waste legislation for green growth, BioIntelligence Service, 2011, http://ec.europa.eu/environment/waste/studies/pdf/study%2012%20FINAL%20REPORT.pdf.

[28] Article "Smuggling Europe's Waste to Poorer Countries", *New York Times*, 26 September 2009; available online at http://www.nytimes.com/2009/09/27/science/earth/27waste.html?_r=2&hp

[29] "From toxic waste to toxic assets, the same people always get dumped on", *The Guardian*, 21 September 2009; available online at http://www.guardian.co.uk/commentisfree/cif-green/2009/sep/21/global-fly-tipping-toxic-waste

[30] See footnote 17 above.

2.3.3. *The current gaps in enforcement in some Member States*

Political priorities towards resources and organisation of inspections vary significantly between Member States. Some Member States have introduced measures in order to solve the problem of illegal waste shipments while others have not. Evidence shows that if the enforcement pressure in one port increases, companies move their export activities quickly to an adjacent port in another Member States. Thus, the weakest link in the EU – Member States with the least controls – determines the success of the whole system. The gaps in enforcement in some Member States relate to the following key instruments.

- *Lack of inspection planning and risk assessments*

There are large differences in performance of inspection planning in Member States. Most of the Member States have no regular or consistent planning of waste shipment inspections. In total, only nine Member States appear to have some type of regular and consistent planning for waste shipment inspections.[31]

The studies carried out for the Commission and recent report by the IMPEL-tfs[32] show that planning of waste shipment inspections is crucial to effectively prevent illegal waste shipments. Targeting inspections based on prior planning allows to focus the inspections on routes, times and vehicles that are most frequently involved in illegal shipping. This results in higher detection rates. Risk-based, regular inspection planning also puts the authorities in better position to establish the adequate capacity needed for effective inspections.

Best-practice examples: inspection planning

As stated above, nine Member States have reported on having regular and consistent inspection planning for waste shipment inspections: Austria, Belgium, the Czech Republic, Germany (at Länder level), Denmark, Finland, France, the Netherlands and the UK. In these Member States, inspection planning has helped to establish the structures needed in order to effectively target and detect illegal waste shipments.

With regard to inspection planning it can also be noted that some EU legislation contain detailed inspection requirements. The Industrial Emissions Directive 2010/75/EU[33] contains such provisions in the directive itself. The Mining Waste Directive 2006/21/EC delegates powers to the Commission to adopt such provisions[34]. See Annex IV for further details.

- *Insufficient provisions on the burden-of-proof*

Member States have diverse provisions as regards the burden of proof they place on operators wishing to ship items while declaring that these are not "waste" but "products" and therefore outside the scope of the WSR, or that the waste to be shipped will go to environmentally

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31 Assessment and guidance for the implementation of EU waste legislation in Member States, BiPRO, 16 November 2011, http://ec.europa.eu/environment/waste/shipments/reports.htm.

32 IMPEL-tfs document, "Doing the right things for waste shipment inspections (DTRT-TFS)", Step-by-step guidance book for waste shipment inspections, 2012.

33 Directive 2010/75/EU on industrial emissions (integrated pollution prevention and control), OJ L 334, 17.12.2010, p. 17, see Article 23.

34 Directive 2006/21/EC on the management of waste from extractive industries, OJ L 102, 11.4.2006), see Article 17 and 22(1)(d).

sound facilities in third countries. This creates an uneven playing field across the EU and leads to port-hopping (see Section 2.2.2 above). Reversing the burden-of-proof from the inspection authorities to an exporter is a means of enforcement, where the exporter alleging that items to be shipped are not waste and thus not needing any inspection, has to prove that they are not waste if the authorities have suspicions to the contrary.

The recast Directive on waste electrical and electronical equipment (WEEE) adopted on 7 June 2012[35] and the EU waste shipment correspondents guideline on shipments of end-of-.life vehicles (ELVs) already contain such provisions reversing the burden-of-proof. The new WEEE Directive includes specific provisions to this effect and an annex on inspections of waste shipments. The exporter has to test the items for functionality and provide the necessary documents to the authorities before export takes place. The EU guidance document on inspections of shipments of ELVs has been agreed by the Commission and all Member States. While many other waste categories than WEEE and ELVs are subject to high rates of illegal shipments, including paper (poorly sorted), metal, plastic and municipal waste, as shown by the IMPEL-tfs enforcement actions in Annex I, there is a lack of inspection requirements or guidance concerning these waste streams.

Best-practice examples: burden-of-proof

In the WEEE directive (Annex VI) the evidence to be requested from the exporter could be, for example, a copy of the invoice and contract relating to the sale and/or transfer of ownership of the product which states that the equipment is destined for direct re-use and fully functional; evidence of evaluation or testing in the form of a copy of the records (certificate of testing, proof of functionality) on every item within the consignment and a protocol containing all record information; a declaration made by the holder who arranges the transport of the items that none of them is waste; appropriate protection against damage during transportation, loading and unloading in particular through sufficient packaging or appropriate stacking of the load. Member States could also require certain, prescribed steps for testing and record keeping for "products".

In the absence of a proof that an object is a "product" and not "waste" through the appropriate documentation required and of appropriate protection against damage during transportation, loading and unloading in particular through sufficient packaging and appropriate stacking of the load, Member State authorities shall consider that an item is "waste" and presume that the load comprises an illegal shipment.

Article 15 of the Batteries Directive (2006/66/EC) provides that exports of waste batteries may only count towards the fulfillment of the obligations and efficiencies laid down in Annex III to this Directive (containing the recycling targets) if there is sound evidence that the recycling operation takes place under conditions equivalent to the requirements of the EU Directive. Member States must thus require sound evidence that the recycling takes place under conditions equivalent to those set out in Batteries Directive, including recycling efficiencies. In accordance with Article 15(3) of the Batteries Directive, rules and criteria to assess whether recycling operations outside the EU take place under conditions equivalent to the requirements of the EU Directive may be laid down through a comitology procedure.

[35] OJ L 197, 24.7.2012, p. 38.

- *Lack of "up-stream" inspections to detect planned illegal exports*

A large proportion of the illegal export market is made up of numerous individual, rather small operators which often collect and store waste at facilities in the country before illegally exporting it to third countries. The WSR provides in Article 50(2) that "Member States shall by way of measures for the enforcement of this regulation, provide, *inter alia*, for inspections of establishments and undertakings, in accordance with Article 13 of the EU waste framework directive 2006/12/EC" (now: Article 34 of Directive 2008/98/EU).

Specific inspections of "up-stream facilities", i.e. waste producers, collection points, interim storage, recovery and disposal operators, are useful with a view to identify and eliminate future illegal waste exports further down the chain. It appears that those "up-stream" inspections are not generally carried out throughout the EU. If controls are not well-performed at an early stage, it creates a burden to be borne by Member States performing inspections at a later stage, i.e. during the transit or at the destination point. Several Member States are transiting countries for waste, thus they are very much dependant on inspections performed by Member States from which the waste was produced or through which the waste first transited for ensuring these shipments are legal or not.

Best-practice examples: "Up-stream" inspections

In some Member States, e.g. the UK, successful inspections have been carried out "up-stream" at facilities in order to prevent illegal waste shipments. Through intelligence gathering by UK authorities specific high-risk waste streams subject to illegal shipments were identified. For the relevant waste categories, the UK successfully carried out operations during 2011 and previous years targeting suspected up-stream small and dispersed sources of illegal exports from the UK to third countries (e.g. certain tyre fitters and WEEE collectors, storing and afterwards illegally exporting the waste to third countries in order to avoid the recycling costs in the EU). The UK's system of controls "up-stream" has shown to be a successful instrument in order to prevent illegal waste shipments from the UK.[36]

- *Lack of training for inspectors*

Dealing with waste inspections requires solid knowledge and experience due to legal and technical complexity and the fact that several authorities are involved: customs, police and environmental. The 'Study on inspection requirements for WS Inspections' as well as the IMPEL Threat Assessment report[37] concluded that there is a lack of focused, targeted training for authorities on waste shipment inspections. Such training should relate to issues that have been identified as specifically complex or where otherwise training is needed in order to follow legal, technical and scientific developments. One example is the classification of waste vs. non-waste and hazardous waste vs. non-hazardous waste in connection with shipments. The need for training was also confirmed by awareness-raising events and a high-level inspectors' meeting.[38]

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[36] http://www.environment-agency.gov.uk/news/126796.aspx, http://www.guardian.co.uk/technology/2009/jul/08/recycling-electronic-waste-crime

[37] Environment Agency England and Wales, Jill Dando Institute of Crime Science, University College London (2006) IMPEL-TFS Threat Assessment Project: The illegal shipment of waste among IMPEL Member States.

[38] The organisation of awareness-raising events on the application of EU legislation, Final report by BiPRO, http://ec.europa.eu/environment/waste/shipments/pdf/report_131209.pdf.

EU waste legislation does not currently specify requirements for training of Member State officials.

2.3.4. Existing guidelines are not complete

Guidance concerning waste shipments and inspections already exists at EU level. The Commission has published nine specific guidance documents agreed by Member States as well as a set of frequently asked questions and answers on waste shipments.[39] Specific guidance as regards inspections of shipments of WEEE was published in 2007. The Commission decided in 2008 to propose the main parts of this guidance document to become binding EU legislation in the WEEE recast directive. A similar guidance document concerning inspections of shipments of ELVs was agreed by Member States during 2011.

Tools and guidance on waste shipments and inspection planning have also been developed within the IMPEL network.[40] For example, a guidance document with a harmonised planning format was developed following the IMPEL-tfs joint enforcement actions.[41] A manual for preventing illegal shipments, including tools, guidance and format for the planning of inspections has been published.[42] To support the inspectors, IMPEL-tfs has developed several specific tools. This includes, for example, manuals which explain different inspection and detection methods; waste watches to identify and classify waste streams; a methodology for threat assessments which will facilitate competent authorities in setting enforcement priorities, tools to increase the awareness of persons who are subject to the controls of the TFS legislation, such as brochures. Where illegal movements of waste are detected, IMPEL-tfs has drafted a guidance manual on the return of these shipments back to the country of dispatch.

At international level, the United Nation's Basel Convention on the Control of Transboundary Movement of Hazardous Waste was adopted 1989 and is in force since 1992. A number of guidance documents have been published by the convention's secretariat, for example concerning environmentally sound management (ESM).[43]

Despite the above guidance documents, a number of gaps have been identified by stakeholders and national authorities (stakeholder consultation of 2011):

- Facilitation of control of shipments by custom authorities, in particular as regards the identification and differentiation of used goods and waste.
- Verification of environmentally sound management at treatment and recycling plants in third countries.
- Promotion of the traceability of waste by technical means.
- Co-operation and co-ordination of waste shipment inspections and monitoring at EU level.

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39 http://ec.europa.eu/environment/waste/shipments/index.htm.
40 http://impel.eu/cluster-1#achievements.
41 http://impel.eu/projects/enforcement-actions-ii.
42 http://impel.eu/cluster-2
43 http://www.basel.int/

2.4. How will the problem evolve?

2.4.1. Increase in frequency of illegal waste shipments

The overall trend in waste generation, including hazardous waste, is upwards (albeit most recent figures show a decline that is probably connected to the economic downturn in Europe).[44] The more waste that is produced, the higher is the risk that more waste will be shipped illegally through for example, wrongful labelling of paper and plastic waste.
The 2009 EEA report[45] showed that the total amounts of shipped hazardous and non-hazardous waste have increased significantly in the EU. According to the most recent reports received from Member States, the total amount of all notified waste shipped out of the EU in 2009 was about 11,4 million tonnes, of which about 7,2 million tonnes was hazardous waste.[46] Shipments of notified waste out of Member States have steadily increased. From 2001 to 2009, the increase in the amount of all notified waste shipped out of Member States was 80%. For shipments of hazardous waste alone, an increasing trend is observed until 2007. From 2001 to 2007, the increase in the amount of hazardous waste shipped out of Member States was 150%. Since 2007, the quantities of hazardous waste shipped out of Member States have slightly decreased (9% drop from 2007 to 2009).

Europol has also identified an increase in the volume of illegal waste shipments across borders. According to Europol, illegal waste shipments have become "one of the fastest growing areas of organised crime" (Europol report, p. 30, press release 30 August 2011).

It is probable that waste will continue to be treated at lower costs in third countries and if so, economic incentives to circumvent the WSR and ship waste illegally, in particular to third countries, would remain. The rates of illegal waste shipments would even increase as the total waste amounts in the EU increase and more waste is diverted from disposal to recycling and recovery.

2.4.2. Effectiveness of Member States' inspection systems

The evolution of the problem of illegal waste shipments also depends on the effectiveness of Member States' inspection systems. As already discussed, enforcement of the WSR is currently a low priority in many Member States. This situation is due to geographical location, size and number of ports, specific waste streams, waste routes (i.e. whether the waste originates in the country or if the country is the last stop in the EU before being shipped away), political agendas and priorities.

2.5. Who is affected and how?

Better enforcement of the WSR concerns several actors:

- Member States' authorities which undertake waste shipment inspections at national, regional or local level.

- Legal waste traders and shippers who comply with WSR requirements.

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[44] The EEA, 'The European Environment – State and Outlook 2010, update 2012', Materials, resources and waste, p. 4.
[45] See footnote 14 above.
[46] See footnote 13 above.

- Illegal waste shippers and other criminals, who use the enforcement and inspection gaps in MS to circumvent the WSR at the expense of environmental and health issues.

- Recyclers and recovery operators who collect and monitor the amounts of waste collected for recycling and recovery.

- Citizens and operators within and outside the EU who either suffer health effects from treatment of illegal WEEE or profit from the illegal trade.

2.6. The EU's right to act and justification

Treaty base

The EU has the right to act based on Article 191 Treaty on the Functioning of the European Union (TFEU). Current EU legislation, including Article 50 of the WSR, contains certain provisions on enforcement aiming to ensure that effective inspection systems are put in place in Member States. However, several studies (such as the 'Study on inspection requirements for WS Inspections')[47] and the projects and co-ordinated inspections carried out by IMPEL-tfs have shown that enforcement of the WSR is patchy and significant levels of different types of illegal waste are continuing to be exported from the EU. A major problem seems to be that the WSR currently lacks specific criteria related to the planning of inspections, burden-of-proof, up-stream inspections and training. In other parts of EU waste legislation as well as EU environmental legislation more detailed provisions on inspections have been adopted (see Annex IV).

The 'necessity test'

Waste shipments are by nature international and require the implementation and enforcement of regulations in the same way by all Member States to ensure a level playing field and limit unlawful shipments of waste which hamper EU and international trade and create a danger for human health and the environment. Therefore, EU action appears necessary.

Inspection requirements are not detailed in the current legislation (Article 50 of the WSR), leading to poor and uneven implementation and enforcement throughout the EU. The policy objectives of the WSR cannot therefore currently be achieved.

As underlined in the 'Study on inspection requirements for waste shipment inspections'[48], Member States have a strong interest in the effective enforcement of the WSR in other Member States. Indeed, waste shipped to third countries is often initially moved within the EU. Thus, poor enforcement in certain Member States leads to further work by inspection authorities in other Member States. Furthermore, companies trying to avoid Member States where the WSR is well implemented may transport waste to Member States where the WSR is less implemented, reducing their chances of being caught. In order to address these problems, action at the EU level is essential, as the EU as a whole needs to reduce the impacts of its waste in third countries but its action is limited by the weakest link in the inspection chain. Therefore, harmonised inspection procedures appear necessary in the EU.

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[47] See footnotes 4-5 above.

[48] Ibid.

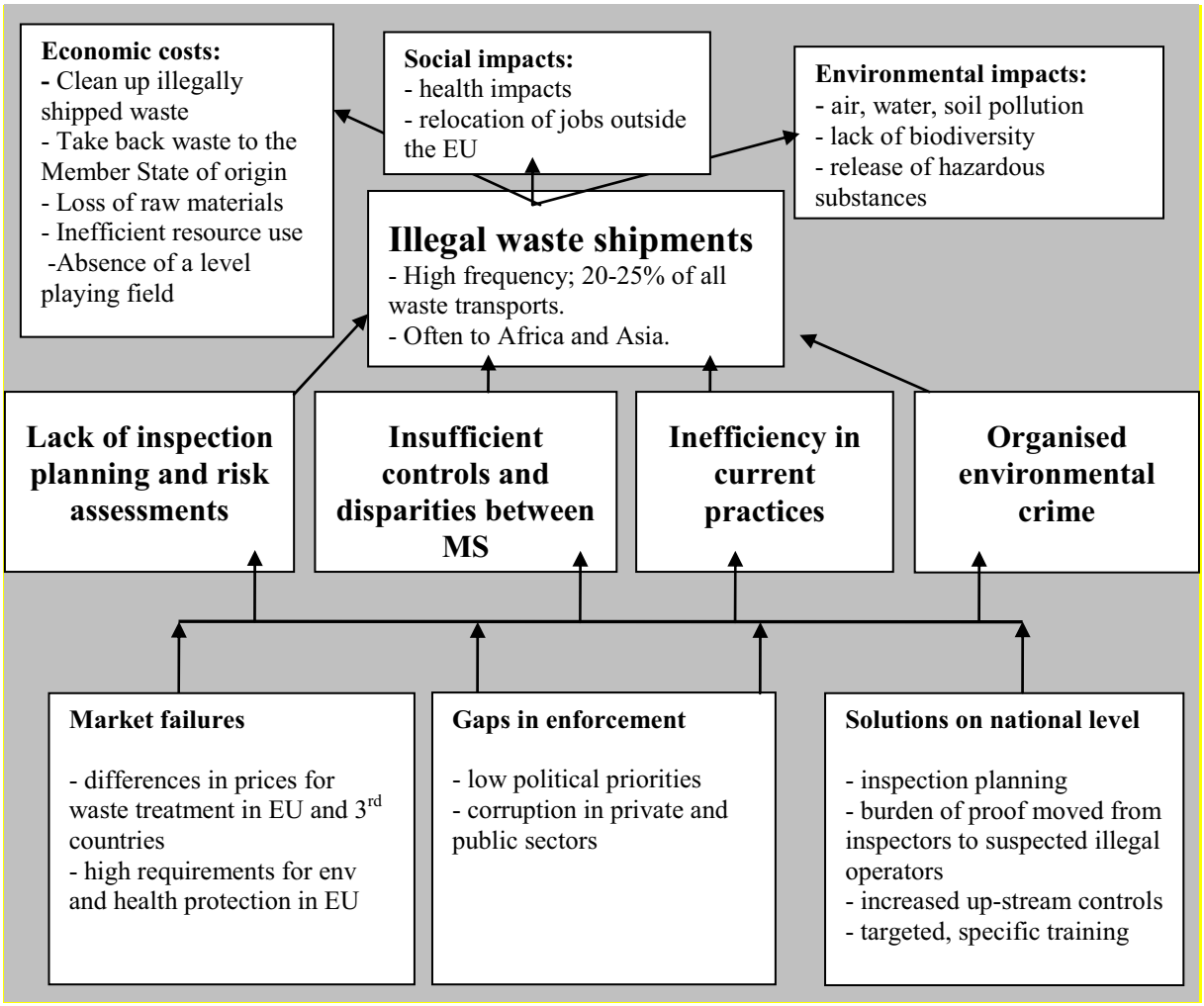
IMPEL is very active in organising co-ordinated inspections and joint enforcement actions in many Member States and provides guidance and documents to improve the enforcement and implementation of the WSR. The IMPEL network identified important disparities between Member States in terms of enforcement of the WSR, but has a limited supporting capacity.

The IMPEL network has no powers to make compulsory any guidance or participation in enforcement actions and the participation of Member States in the programmes organised by IMPEL-tfs is voluntary. A limitation of the effectiveness of IMPEL's actions is that several Member States do not participate at all or only rarely in IMPEL's actions and projects relating to waste shipments.

2.7. Summary

This Section has explained the problem of illegal waste shipments, what the illegal activities consist of (section 2.2) and how frequently they occur (section 2.2.1). It has also presented the main shipment routes, the impacts which illegal shipments have on the environment and health, the cost savings and economic benefits that could be made if these illegal operations are effectively prevented, the specific causes of the problem and how it might evolve in the future (sections 2.2-2.4). These impacts, costs, gaps and market failures resulting from illegal waste shipments as well as existing solutions at national level are summarised in Table 2 below.

613 Table 2



614

615 **3. OBJECTIVES**

616 The main objectives of the implementation of the proposed legal requirements on inspections
617 of waste shipments are to achieve the following goals:

618 *General objectives*

619 • The protection of the environment and health by reducing illegal waste shipments.

620 *Specific objectives*

621 • Improving the implementation and enforcement of the EU waste shipment
622 regulation, thus contributing to the fulfilment of the Commission's task in Article
623 17(1) of the EU Treaty.

624 • Cutting costs in Member States, related e.g. to clean-up and repatriation of waste.

625 • Increasing access to raw materials and contributing to resource efficiency.

- Ensuring a level playing field across the EU for those dealing with waste.

Operational objectives

- Strengthen and improve the effectiveness of waste shipment inspections.
- Harmonise the criteria used in different Member States for inspections.

4. POLICY OPTIONS

The policy options analysed in this section aim at addressing the problems described in section 2.1. Options were subject to stakeholder and public consultations and were extensively commented on during this process. They range from possible amendments of EU legislation to non-legislative measures. They are not mutually exclusive and can be combined in order to strengthen enforcement of the WSR. Four main policy options have been identified and will be assessed with regard to their economic, social and environmental impacts. Discarded options are discussed in section 4.5.

4.1. Option 1 - No action at EU level

In this scenario, the current WSR would remain in place without any changes. No new EU legislation would be proposed and no additional guidance would be developed. The current, general provisions on enforcement of the regulation in the WSR remain (Article 50, see section 2.1).

In the EU, the generation of both hazardous and non-hazardous waste is expected to further increase (see section 2.4.1). So far this increase has gone hand in hand with increasing waste shipments, including illegal shipments, and this trend is expected to continue in the future. According to the latest available data, in 2009 about 74 million tonnes of hazardous waste were generated in the EU-27, representing a 28% increase since 2000. Non-hazardous waste generation is expected to follow a similar trend. For example, the generation of packaging waste in the EU is growing (stabilisation during 2006-2009 and then a continued increase in 2010).[49]

As waste is treated at lower costs in third countries and will probably continue to do so, economic incentives to circumvent the WSR by exporting waste illegally remain strong. The currently high rates of illegal waste shipments are therefore expected to increase parallel to the expected increase in the EU's waste generation (see sections 2.2.1 and 2.4.1).

4.2. Option 2 - Specific requirements and criteria for waste shipment inspections in EU legislation

This option involves the introduction of new EU legislative requirements supplementing the existing provisions of the WSR. This could be done by amending Article 50 of the WSR to include more specific requirements needed to effectively prevent illegal waste shipments. Such an amendment would have to address the concrete enforcement gaps identified in section 2.2: (1) lack of inspection planning and risk assessments; (2) insufficient provisions on the burden-of-proof; (3) lack of up-stream inspections to detect illegal exports; and (4) lack

[49] The EEA, 'Movements of waste across the EU's internal and external borders', No 7/2012.

of training for inspectors. The necessary measures are currently in place in some Member States and have shown to be effective and proportionate to address the problem of illegal waste shipments. These best practice examples (described in section 2.2) can be used as a basis for the actions under option 2.

1. Establishing inspection plans

This is the most important of the proposed measures under option 2.

- How does it work in practice?

Based on the existing national inspection plans in nine Member States, some basic requirements can be developed for drawing up inspection plans. Member States should:

(1) *Carry out a risk assessment*. Effective waste shipment inspections require that competent authorities focus on certain, high-risk waste streams and important sources of illegal waste shipments. The inspection planning therefore needs to contain a control- and enforcement strategy based on thorough risk assessments. Risk assessments should take into account, *inter alia*, police investigations and intelligence-based data.

(2) *Set the objectives* which the inspecting authorities want to achieve with inspections.

(3) *Draw up a control- and enforcement strategy* which the inspecting authorities have adopted for performing their inspection activities based on risk assessments and analyses of criminal activity. The strategy should aim to ensure sufficient capacity (staff and resources) of the competent authorities and explicitly state the basis for capacity determination.

(4) *Describe the conditions for the inspection activities.* These should cover policy, environmental, legal, organizational, financial, human resources and other relevant conditions under which the inspecting authority has to perform its inspection activities.

(5) *Set priorities for inspection activities.* These should include a description of how these priorities have been selected taking into account the objectives, control- and enforcement strategy and conditions.

(6) *Cover all relevant aspects of shipment controls.* Up-stream as well as down-stream inspections must be covered by the plan. The tasks assigned to each authority involved must be clearly defined.

(7) *Cover the whole of the Member State's territory* either by a plan established at national level or by several plans established at regional or local levels. For instance in Germany, each federal region (Land) is in charge of establishing its own inspection plan.

(8) *Communicate the plan to the general public and to the Commission.* To make the plan available to the public requires only its publication on the Internet, on the Ministry of the Environment's website for instance. Stakeholders have commented that the availability of the plan to the public could hamper police authority. In order

to address this problem, the inspection plan could be separated from the more detailed programming and scheduling of specific inspections to be carried out during the planning period. The inspection plan could be seen as a strategic plan and would not in this case contain operational information. For example, it would not include names of traders, companies, facilities or the planned type/dates of inspections.

(9) *Ensure that the plans are effectively put into practice,* for example, the plans have to take into account the risk assessment and be used by the authorities carrying out the inspections.

(10) *Review the plan on a regular basis.* This could possibly involve different stages: in itinere and ex-post, in order to define precisely how far elements of the plan have been implemented and what its strengths and weaknesses are. The plans should be flexible and quickly adapted to any change of context. The period for review of the inspection plan should be specified, possibly on an annual basis.

2. Shifting "burden of proof" regarding the distinction between "waste" and "product" and the environmentally sound management (ESM) in third countries on to suspected illegal exporters

This is also a key element to effectively prevent illegal waste shipments. The reversal of burden-of-proof should only be applied in cases where the authorities have reasonable grounds to suspect that the shipment is illegal.

- How does it work in practice?

Suspected illegal exporters would be required to provide evidence that:

- The item is not waste as defined by the EU waste framework directive, but a product, e.g. "used", "repairable", "operational" or similar.

- Waste shipped will be treated in third countries under environmental protection standards that are broadly equivalent to EU legislation (see section 2.1 about the WSR's requirements).

3. Introducing a requirement for controls of "up-stream facilities".

Such controls are successfully carried out in some Member States and would be an important complementary measure to the other proposed measures.

- How does it work in practice?

The WSR contains a reference in Article 50(2) to that *"Member States shall by way of measures for the enforcement of this regulation, provide, inter alia, for inspections of establishments and undertakings, in accordance with Article 13 of the EU waste framework directive 2006/12/EC"* (now: Article 34 of Directive 2008/98/EU). Specific requirements for such "up-stream facilities", i.e. waste producers, collection points, interim storage, recovery and disposal operators, could be laid down with a view to identify and eliminate future illegal waste exports further down the chain.

4. Introducing provisions on training of environmental inspectors, police and customs

This is also an important complementary measure to the other proposed measures.

- *How does it work in practice?*

- Inspectors carrying out controls of waste shipments take part in specific, targeted training on waste-related issues (such as classification of waste vs. non-waste and hazardous waste vs. non-hazardous waste).

- Training programmes for waste shipment inspections are established regularly and updated by national authorities taking into account an assessment of the training needs.

- The specific requirements are determined by Member States and either incorporated in the waste shipment inspection plans to be drawn up by Member States (see sub-option above) or as a separate, specific provision in the legislation.

- *Identical application to all waste types and destinations*

All the measures in Option 2 would apply identically to all types of waste, hazardous and non-hazardous, and for shipments to all possible destinations, within the EU/OECD and outside the EU/OECD.

4.3. Option 3 - Guidance for waste shipment inspections at EU level

The following four main areas were identified by stakeholders and national authorities for guidance (stakeholder consultation of 2011, see section 2 above):

1..Facilitation of control of shipments by customs authorities, in particular as regards the identification and differentiation of used goods and waste

Guidance should cover the following issues:

a) Linking waste codes (as contained in the annexes to the WSR) to customs nomenclature (CN) codes.

b) How waste can be differentiated from used goods.

c) Where appropriate, differentiation of used goods from new goods to allow customs better identify high risk consignments.[50]

2. Ensuring ESM at treatment and recycling plants in third countries

Guidance on this issue should include:

a) Possible systems for verification of ESM in countries where green waste is received; and

[50] Study carried out for DG TAXUD on "Support to Implementation of the WSR requirements in the customs nomenclature and tariff", 23 December 2010, Arcadis, BioIntelligence.

b) instructions on how operators should fill in Annex VII when shipping green waste and how this document should be circulated.

3. Promoting the traceability of waste by technical means

National authorities should be able to follow where waste finally ends up for either disposal or recovery and in a position to verify that waste is managed according to acceptable environmental standards. Different technical ways to track waste being shipped should be promoted and applied by national authorities. Guidance could be considered in order to facilitate for national authorities.

4. Co-operation and co-ordination of waste shipment inspections and monitoring at EU level

All Member States should co-operate and co-ordinate activities, where such co-ordination engages not just waste enforcers but also customs and police. Co-ordination is currently hampered by the fact that some authorities are more active in combating illegal shipments than others. As waste shipments are only as strong as their weakest link, the participation of all relevant authorities from all Member States is necessary. How to improve co-operation and co-ordination of waste shipment inspections and monitoring, including also other waste related activities should be examined.

The above four topics for guidance are outside the specific scope of the proposed legislative measures (option 2) but would be supplementary measures to prevent illegal waste shipments. During the consultation process, it was considered appropriate to give guidance on these topics to strengthen inspections and enforcement of the WSR. Such guidance would enhance legal clarity and support authorities and economic operators when applying the relevant provisions.

4.4. Option 4 – Combination of EU legislative requirements and guidance

While the vast majority of stakeholders were in favour of binding EU legislation on inspections and controls of waste shipments, many also considered it useful to adopt guidance in certain areas e.g. in order to facilitate the identification and differentiation of used goods and waste by customs.

A combination of guidelines and binding EU legislation is therefore examined as a fourth option. This also corresponds to the approach of EU legislation in other similar areas (section 2 above and Annex IV). This option will thus include the specific legislative requirements in Option 2 and in addition, the items for guidance described in Option 3.

4.5. Discarded options

It has been examined whether it would be appropriate to include specific technical requirements in EU legislation, in particular that waste shipments shall contain a tracking device, such as a microchip following the shipment to its destination ("electronic tagging"). An obligation to trace shipments is already addressed by the WSR in that an exporter has a duty to ensure environmentally sound management (ESM) throughout a shipment. Credible and reliable information on destinations applying appropriate treatment standards are essential in order to verify compliance with the WSR. Tools that support such information transfer and traceability would thus entail environmental benefits. During the stakeholder consultation,

25% of the respondents found a need for such measures while 49% did not find any need for such measures at EU level.

Several obstacles to legislate at EU level on such issues were clearly expressed. Firstly, a tracking device for waste shipments would fail to seize the actual illegal/criminal shipments as such activities do in most cases not take place under the label ‘waste’. This measure would thus not address the most frequent types of illegal shipments where waste is disguised as 'products'. Further, it was found that the requirement of a tracking device on each shipment would be expensive and liable to place additional burdens on the largely compliant but be ignored by the minority who flout the existing rules. The use of a tracking device would also be unworkable under certain national legislations where a conflict would arise with legislation covering surveillance issues. In view of these obstacles, the option of specific technical requirements in EU legislation, e.g. that waste shipments shall contain a tracking device, such as a microchip was discarded.

5. ANALYSIS OF IMPACTS

The analysis of impacts is based on the following assessment criteria: "How does the option solve the problem", "Costs" and "Benefits".

Option 1 - No action at EU level

The non-action option entails no changes. This option would not increase the burden borne by any of the actors involved in the waste shipment activities. Additionally, the non-action option leaves Member States free to arrange for inspections of waste shipments in their own way in order to address the specific national situation.

On the other hand, the non-action option does not solve any of the problems outlined above. The lack of precise EU-wide rules regarding inspections gives way to different interpretations and to an uneven implementation among Member States.

The current ineffectiveness and specific insufficiencies of waste shipment inspections in many Member States risk leading to increased rates of illegal waste shipments as set out above in section 2. The analysis made of current EU legislative provisions suggest that these provisions are not sufficient and need to be strengthened. Without any measure taken at EU level, it is unlikely that enforcement and inspections will improve in Member States. The high frequency of illegal waste shipments is thus likely to increase parallel to the expected increase in the EU's waste generation (see sections 2.2.1 and 2.4.1).

The leakage of waste by illegal shipments to substandard treatment facilities or mere dumping outside the EU undermines the further development of environmentally sound recycling and recovery operations within the EU. The available processes and sorting techniques in the EU are currently not used to their full potential. This affects access to high quality waste and recycled materials (see section 2.2.3). A large potential currently exists for an increase of high standard recycling and recovery within the EU.

Difficulties arising relative to waste shipment inspections are also linked to waste shipments’ multi-national aspect. Indeed, shipments originating in certain countries are transferred through other countries before reaching their final destination. A common level of

implementation of the WSR is therefore needed to avoid an uneven distribution of risks and costs.

The current problems of severe, negative implications for the environment and human health, high costs for Member States (clean-up of illegally shipped waste) and industry (lack of a level playing field) would remain. Access to raw materials would not improve and the current inefficient use of resources would remain.

Lastly, illegal shipments that are not detected in the EU can be detected by inspections in the destination country. In these cases, shipments may be sent back, thus inducing high financial burdens on enterprises but also on Member States which can be responsible in cases as set out by Articles 22 to 25 of the WSR (the requirements and criteria for taking back waste illegally shipped). Additionally, if third countries strengthened their enforcement regimes, illegal shipments would be discovered more often. Consequently, given that more shipments are returned, commercial relations could be hampered by letting many shipments leave the EU illegally. No information is, however, currently available as to whether any of the EU's waste destination countries plan to strengthen their inspections and enforcement as regards their illegal waste imports.

This option risks leading to relocation of jobs outside the EU (see Section 2.2.4).

The vast majority of stakeholders (89%) discarded this option during the consultation.

Option 2 - Specific requirements and criteria for waste shipment inspections in EU legislation

Costs for Member States

Member States whose inspection systems for waste shipments are already effective will incur little costs. In fact, their costs would be lower if adequate inspections are conducted at source in other Member States since illegal waste shipments often originate in one Member States and are exported through another (see section 2). This would release the pressure on the traditional points of exit of illegal waste shipments from the EU.

Member States lacking adequate inspection capacities and infrastructure would need to hire new inspectors and establish the necessary capacity to comply with new legal requirements. This would in particular apply to "inspection planning" and "upstream-inspections" as these would require the establishment of adequate inspection capacity, including the hiring of additional inspectors and adequate investments in soft- and hardware. Training would require the preparation and organisation of training events.

It is not possible to estimate how the costs for additional inspections would be shared between Member States since they would need to determine their own frequency of inspections based on their inspection plans and risk assessments, and will vary from country to country. The inspection frequencies need to be flexible over time since the risks identified may change.

A recent study of the Commission estimated the costs of increasing Member States' inspection capacities and infrastructure in the following way:[51]

(1) Costs for hiring additional inspectors

The precise amount would depend on the Member State and experience of the inspector. The study estimates this yearly cost to €40,000-€80,000, i.e. on average €60,000 per inspector and year. Assuming that on average at least two additional inspectors per Member State would be necessary, this would make the total average cost per Member State: 2x€60,000 per year = €120,000 per year/Member State. Total yearly cost for the EU27: €3,240,000.

(2) Costs for preparing and executing inspections

The study assumes this cost at €800–€1,600 for each inspection day, i.e. on average €1,200 per inspection day. Additional costs for travel of inspectors and laboratory analysis: €200 per inspection day. During the recent IMPEL-tfs joint enforcement actions around 25 inspections were carried out per day on average in all of the participating Member States (around 10,000 inspections per year).[52] This would make the total cost: €1,400/25=€56 per inspection. As a 'what if' scenario, IMPEL's inspections of in total around 10,000 inspections in a year across the EU could form the bulk of the current baseline number of inspections. If this number were to double, as one potential scenario, and thus assuming 20,000 inspections per year throughout the EU, then the yearly costs for carrying out the additional waste shipment inspections in EU27 would be: 10,000 x €56= €560,000.

(3) One-time investment costs for soft- and hardware: €10,000 for one inspectorate/body.

Based on the above estimates, the total yearly cost for increasing inspection capacities and infrastructure (cost for hiring additional inspectors and preparing and executing inspections) and the one-time investment costs (soft- and hardware) in the whole EU could be estimated at €4,000,000.

The costs for national authorities to organise additional inspections and hire inspectors would not in any event be passed on to legal businesses or consumers. The regulated activities – exports of waste – would not have any links with consumers. Instead the costs could be placed on the illegal exporters, in line with the so-called polluter pays principle. Costs for additional inspections and inspectors could be covered by potential revenues from fines or penalties imposed on the illegal operators. The WSR requires that Member States provide for penalties that are effective, proportionate and dissuasive (Article 50, para.1). The costs for additional inspections and inspectors could be balanced by fines and penalties in a dimension of €1,000-€100,000 (broad variety between Member States and type of violation) per illegal shipment identified. Thus, the additional inspections required by new EU legislation could be financed, directly or indirectly, by revenues from the fines and penalties collected, which would make the burden lighter for national authorities. The additional inspections would break even if less than one per cent of all the yearly additional inspections (10,000) would result in average fines (80 cases with fines of €50,000).

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[51] Assessment and guidance for the implementation of EU waste legislation in Member States, BiPRO, 16 November 2011, http://ec.europa.eu/environment/waste/shipments/reports.htm.

[52] See Section 2.2.1.

As regards training, this entails certain costs which depend on Member States risk assessments and the organisation of the training. These costs could therefore not be specifically estimated.

A reversal of burden-of-proof from authorities to suspected illegal operators entails no additional costs for authorities. On the contrary, the authorities would save the current costs they incur for demonstrating that an item is "waste" or that it will be shipped to a lawful facility outside the EU. The reversal of burden of proof is already part of the recently adopted recast WEEE Directive (see section 2.3.3) but the effects of the implementation of those specific provisions have not yet been assessed since transposition by Member States will only be due in 14 February 2014.

Costs for economic operators

There are no additional costs for economic operators, apart from the suspected illegal operators on which the burden of proof in specific cases would be reversed. The proportionality of a provision reversing the burden of proof to illegal operators will be ensured by strictly limiting its application to cases where the competent authority has "reasonable grounds" to suspect an illegal shipment. In addition, the information concerned (i.e. whether or not an item is "waste" or destined for lawful recovery operations outside the EU) is more easily accessible to exporters than to authorities. Exporters have an obligation to know what they intend to export and to which destination; authorities do not have this information unless provided by the exporter or following potentially resource-intensive investigations in third countries.

Economic benefits

The above costs for additional inspections and inspectors could also be outweighed by cost savings in terms of reduced repatriation- and clean-up costs. If 4 large repatriation cases or one serious case of clean-up costs could be avoided during one year in the whole EU, the additional inspections would lead to overall economic benefits for Member States. Further details are given above in Section 2 regarding repatriation cases (€1.2 million for waste destined for Nigeria sent back to the port of Rotterdam) or clean-up costs in the cases of the Ivory Coast (€152 million) or Naples (over €400,000/day).

A standardised, EU-wide enforcement of the WSR would contribute to creating a level playing field for the EU's recycling and waste management industry. As a result the market conditions for the sales and purchase of waste as a resource could be improved thus promoting innovation, growth and jobs in the EU. The waste management and recycling industry in the EU would benefit from this situation. Access to high-quality raw materials would be improved.

Inspections of waste will be implemented at an early stage, ensuring that Member States which are transit countries for waste streams are faced with less illegal waste coming from other Member States.

A recent study has estimated that full implementation of eight pieces of EU waste legislation by 2020, including the WSR, would mean cost savings of €72 billion/year and a turnover increase for the waste management and recycling sector at €42 billion/year.[53]

Employment impacts

Implementing the WSR better could increase jobs in the EU as more waste is expected to need treatment if not shipped abroad illegally. The EU waste industry would become more specialised towards sorting and/or treating specific types of waste. This would prevent the relocation of jobs outside the EU and further increase the number of jobs within the EU, both for unqualified workers and qualified workers, as the techniques for treating hazardous waste are rather complex. The precise effect on the waste sector will depend on the waste quantities being treated within the EU and could therefore not be assessed in more detail.

As an example, WSR enforcement in Rotterdam port alone brought 22 additional jobs (see section 2.2.4).

Proportionality with regard to legally shipped waste

Several Member States, for example the Netherlands and the UK, already have existing systems that function well and include many of the criteria identified by this report as necessary, including inspection planning, training, "burden-of-proof" rules and controls of "upstream facilities". National authorities in those Member States have not reported that these existing systems result in any disproportionate burden or costs for traders which ship waste legally.

Internal market implications

The internal market will not be negatively affected by measures to combat illegal waste shipments but, on the contrary, enjoy a number of benefits. The WSR harmonises the requirements for notification and information on waste shipments and contains safeguards for the internal market which will all remain in place (Article 12). However, the WSR's current lack of harmonised inspection planning, controls of up-stream facilities, "burden-of-proof" rules and training results in distortions of the internal market. Some Member States inspect waste shipments rigorously and others do not. The internal market would therefore benefit from a level playing field created for waste shipment inspections (see Section 2.1 above).

Stakeholder consultation

The stakeholder consultation showed broad support for new EU legislation strengthening the inspection requirements (89% of respondents). Of these stakeholders 12 were Member State authorities, one EEA country authority, 25 industry organisations, two public organisations, three NGOs, five companies and ten individuals. Six Member State authorities and one individual were against EU legislative requirements. Those favouring EU legislative requirements found the criteria and requirements proposed by the studies as either fully (38%) or partly (51%) appropriate for legislation. 85% of the respondents wanted minimum requirements for exporters to produce evidence that an item to be shipped from a Member

[53] Study "Implementation of EU waste legislation for green growth, BioIntelligence Service, 2011, http://ec.europa.eu/environment/waste/studies/pdf/study%2012%20FINAL%20REPORT.pdf.

States is not waste. 81% wished to have minimum requirements for exporters to show that waste to be shipped to a third country will be treated there in compliance with EU legislation and under environmental protection standards that are equivalent to EU legislation. The stakeholder consultation also showed that 61% of respondents wish to see strengthened controls of "up-stream" facilities where the waste is produced, collected or managed.

Form of legislative measures

Criteria and requirements for waste shipment inspections could be implemented through a legally binding instrument such as a directive or regulation.

If the criteria for waste shipment inspections were implemented through a directive, it would leave a margin of interpretation to the national authorities to adapt the criteria to their national context. However, in this case issues of interpretation between the Member States could arise and the uniformity of application of the criteria could be undermined. On the other hand, the use of a Directive would provide Member States with a delay (normally 2 years depending on the complexity of the transposition) allowing them to prepare for the implementation of the criteria.

The criteria could also be set by means of a regulation. Contrary to a directive, the provisions of a regulation are self-executing and do not require any transposition although implementation measures are generally necessary. If this solution was preferred, it should be ensured that the criteria are robust enough and self-standing in order to be applied directly by Member States authorities.

One possibility to introduce inspection requirements is to amend Article 50 of the WSR. Such requirements could cover waste shipment inspections plans, controls of "up-stream" facilities, training requirements and burden-of-proof provisions. An amendment of Article 50 could be combined with a possibility for the Commission to adopt delegated acts on certain of the elements that are technically or scientifically related and therefore may need future adjustment e.g. taking into account technical and scientific progress.

There could be several advantages of amending the existing WSR rather than creating a new Directive or Regulation. For example, this would avoid a "piecemeal approach" with several, different acts cross-referring to each other and ensure coherency with existing substantive provisions of the WSR.

Environmental impacts

The severe, negative impacts on human health and the environment resulting from illegal shipments, both outside and inside the EU would be reduced significantly.

Option 3 - Guidance for waste shipment inspections at EU level

Guidance documents can provide useful support to national authorities and stakeholders on key issues relating to the implementation and enforcement. However, the non-binding nature of guidelines leaves full freedom to Member States to follow, partly follow or not follow at all the guidelines. The flexibility of Member States is thus left at the maximum.

Therefore, it is unlikely that this option *alone* could contribute to improvements of waste shipment inspections in all Member States. An abundance of guidance on waste shipments

and inspections already exists at EU level (published by the Commission or the IMPEL network) and at international level (published by the United Nation's Basel Convention secretariat). Nevertheless, very large disparities remain between Member States. The non-binding nature of guidelines currently represents a major challenge to achieve the objective of better enforcement of the WSR. If guidance is not followed by some Member States, "port hopping" continues. In spite of the guidelines and tools available at EU level for waste shipment inspection planning, there is a lack of regular planning of waste shipment inspections in many Member States. Only nine Member States have reported on having regular and consistent inspection planning for waste shipment inspections (see section 2.3.3).

Nevertheless, four main areas have been identified as relevant for guidance to clarify the legal provisions designed to prevent illegal shipments and support authorities and economic operators when applying the relevant WSR provisions (section 4.3). The impacts of developing, implementing and applying such guidance are therefore assessed below.

Economic impacts

The development of guidance does not require significant budget and the administrative burden could be regarded as limited. The majority of the start-up costs for developing guidance falls at EU level (both in terms of one-off costs and time spent), and also on the lead Member States coordinating the guidance document and for all Member States contributing to the guidance.

Guidance on topics 1 to 3 would not entail additional costs for authorities or economic operators since it only offers tools to help them apply legal obligations. The guidance on topic 4 could mean that authorities decide to increase their efforts to co-ordinate inspections and co-operate with other authorities. Such co-ordination and co-operation has already taken place at European level within IMPEL-tfs in the form of its on-going project on the organisation of enforcement actions for waste shipments. The costs of such co-ordination and co-operation have been specified in the terms of reference for this project.[54] In summary, the project costs/resources required were estimated to amount to €125,620 (total over 2012, 2013 and 2014).

Environmental and social impacts

This option has no impact on employment apart from the additional human resources needed for authorities to develop and implement the guidance.

Stakeholder consultation

Guidelines as sole option were discarded by a vast majority of stakeholders during the consultation (89% of respondents favoured binding EU legislation on inspections). They nevertheless considered it useful to adopt guidance in specific areas e.g. for customs in order to facilitate the identification and differentiation of used goods and waste (90% of respondents in favour). 79% considered there is scope for further improving coordination of waste shipment enforcement activities at EU level.

[54] http://impel.eu/projects/impel-tfs-enforcement-actions-iii/

Option 4 - Combination of EU legislative requirements and guidance

Impacts

This option will have the same costs and benefits of options 2 and 3 together. This means that the additional costs, cost savings and economic benefits of binding legislation would be the same as in in option 2, with very small additional costs for guidance as in option 3. In view of the net costs and benefits of options 2 and 3, these options could be considered as mutually reinforcing.

Stakeholder consultation

The vast majority of stakeholders were in favour of binding EU legislation (89%), many also considered it useful to adopt guidance in certain areas e.g. for customs in order to facilitate the identification and differentiation of used goods and waste (90%), coordination of waste shipment enforcement activities at EU level (79%), and additional measures at EU level in general (85%).

6. COMPARING THE OPTIONS

The comparative table below lists the conclusions of the impact assessment. The first criterion is to identify whether the option solves the problems identified in the Impact Assessment (Section 2.2). The second criterion is to assess the net costs, i.e. the estimated difference between economic costs and benefits. In applying these criteria, Option 4 would be the only option which solves all the problems identified in the Impact Assessment and has also the lowest net costs. This option has also the most positive economic, social and environmental impacts. Within Option 2, inspection planning is the most important of the proposed measures as the foremost contributor to solving the problem. The second most important is reversal of burden of proof, and then in descending order, controls of upstream facilities and training for authorities.

Main options

	Option 1 Baseline scenario/no action at EU level	Option 2 Binding EU legislative requirements	Option 3 Guidance	Option 4 Combination EU legislative requirements and guidance
How does the option solve the problem?	No improvement. Illegal shipments remain or even increase.	Solves the problems to a large extent. Harmonises the requirements necessary to prevent illegal waste shipments and ensures an even level of enforcement throughout the EU.	Partly addresses the problems. Supports and facilitates the implementation of legally binding instruments, but cannot guarantee Member States' prioritisation and establishment of effective inspection systems.	Solves the problems to the largest extent possible. Both the legislative requirements in Option 2 and guidance on issues identified in Option 3 are needed. Combines harmonisation of binding minimum requirements and flexibility where needed through non-binding guidance.
Implementation costs	**0** No implementation costs. MS free to choose way of inspections.	**-** Small or no costs for MS with already effective enforcement. Costs for MS lacking adequate inspection systems, e.g. for staff, infrastructure and inspections. These costs for	**+ +** Low implementation costs. Flexibility for MS to apply the non-binding guidance.	**-** Additional costs of binding legislation, but flexible non-binding support on other issues where this is needed. Same costs as in Option 2.

		hiring new inspectors and carrying out the additional inspections would be around €4 million/year for the whole EU. However, these costs could be outweighed by the benefits (see below) or financed by collected fines. The additional inspections required would break even if less than 1% of all the yearly inspections would result in average fines.		
Cost savings	**---** No costs due to administrative changes. However, costs for clean-up, repatriation etc after illegal shipments. Indirect costs for MS where waste transits, which have to step up implementation efforts and increase costs due to the low enforcement in other MS "up-stream".	+ + + Significant cost savings for clean-up, repatriation etc after illegal shipments. Indirect cost savings for MS where waste transits due to decreased pressure of illegal waste shipments. These cost savings outweigh the above costs for hiring new inspectors and carrying out additional inspections if three large repatriation cases or one serious case of clean-up costs could be avoided during one year in the whole EU.	+/- Guidance can save costs for authorities and economic operators. However, if guidance is not followed by all Member States, "port hopping" continues i.e. illegal shipments will go through ports and Member States where the level of enforcement is lower. Incentives to ship waste illegally and severe negative impacts remain, including costs for clean-up, repatriation etc after illegal shipments.	+ + + Significant cost savings for clean-up, repatriation etc after illegal shipments. Indirect cost savings for MS where waste transits due to decreased pressure of illegal waste shipments. Guidance can save costs for authorities and economic operators.
Economic impacts:	**0**	+ + +	**+/-**	+ + +

Level playing field for entreprises/Acccess to raw materials	Inconsistent enforcement leads to uneven playing field. Differentiated burdens for companies. Barriers to access to raw materials.	Harmonisation of inspection requirements create a level playing field, improving conditions for innovation, growth and jobs. Improved access to raw materials.	Industry benefits from guidance on the key issues identified in the IA report. However, on other key issues (inspection planning etc) where EU legislation is needed no harmonising effect is achieved.	Industry benefits from harmonisation on certain issues, while receiving support on others. Increased clarity and support via guidelines.
Social impacts: Jobs in the EU	**0** Does not increase jobs. Possible relocation outside EU.	+ + New jobs due to increased demand from waste treatment facilities within the EU and the hiring of additional inspectors.	- Unlikely to create additional jobs.	+ + Could create new jobs and avoid relocation of jobs due to increased waste treatment within the EU. Same job creation as in Option 2.
Environmental impacts: Pollution of soil, air, water etc. and climate change	**0** Incentives to ship waste illegally. Severe negative impacts remain.	+ + + Enforcement of the WSR would become a priority for all MS leading to less illegal shipments and reduced negative impacts.	+ If guidance is not followed by all Member States, incentives to ship waste illegally and severe negative impacts remain.	+ + + + Enforcement of the WSR would become a priority for all MS leading to less illegal shipments and reduced negative impacts. Increased clarity and support via guidelines.
Health conditions	**0** See above.	+ + + See above.	+ See above.	+ + + + See above
Resource-efficiency	**0** Large amounts of waste continue to be shipped and treated in an ineffective, sub-standard way.	+ + + Higher quantity of waste routed via legal channels lead to optimised processes, better sorting techniques and better waste quality.	+ If guidance is not followed by all Member States, large amounts of waste continue to be shipped and treated in an ineffective, sub-standard way.	+ + + + Higher quantity of waste routed via legal channels lead to optimised processes, better sorting techniques and better waste quality.

6.1 IDENTIFYING THE PREFERRED OPTIONS PACKAGE AND ITS IMPACTS

On the basis of the qualitative assessment of the options 1-4 conducted in section 6, option 4 (which is a combination of option 2 and 3) is the most appropriate.

7. MONITORING AND EVALUATION

Indicators of progress towards meeting the objectives

This impact assessment report has described the problem of high numbers of illegal waste shipments contravening the WSR and the negative environmental and health implications thereof. The report has presented which legislative and non-legislative measures would be needed in order to address this problem. The general conclusion has been drawn that although the formal requirements of the WSR function well in practice, the wide disparity in enforcement of the WSR needs to be addressed by effective measures. The effectiveness of these measures to solve the problem of illegal waste shipments should be monitored and evaluated in the following way:

(1) Establishment of adequate infrastructures, capacities and enforcement systems

The causes of the problem, i.e. disparities in Member States' approaches, political priorities, resources and organisation of inspections could, as proposed by this report, be solved by establishing clear criteria for inspection planning in EU legislation. The inspection planning would be considered successful in practice if it is carried out as foreseen by the detailed provisions, and results in the establishment of adequate infrastructures and capacities, well-functioning enforcement systems and improved inspections for waste shipments in the Member States.

(2) Reduction of illegal waste shipments

The effectiveness of the proposed measures could be measured by statistics showing reduced rates of illegal waste shipments. The IMPEL-tfs joint enforcement actions have been useful in order to estimate the rates of illegal waste shipments. During future actions such rates could be monitored, i.e. the percentage rates of detected illegal waste shipments in relation to total transports involving waste, in order to assess the impacts of legislative measures in terms of reducing illegal waste shipments.

(3) Monitoring by the Commission

The Commission examines the reports which Member States are required to submit annually on the implementation of the WSR (Article 51 and Annex IX WSR) on a regular basis. These reports include specific details concerning illegal shipments detected by national authorities. For example, they shall for each detected illegal shipment contain information on waste identification, quantity, country of destination, identification of the reason for illegality, the person responsible for the illegality and measures taken including possible penalties. When monitoring the information submitted by Member States, the Commission could assess and evaluate the impacts of legislative measures on inspections and illegal shipments, and take this into account as appropriate when drawing up its tri-annual report on the implementation of the WSR.

(4) On-the-spot projects

A further measurement tool would be to evaluate the specific non-compliant cases detected by inspections in terms of cost savings made, i.e. avoidance of repatriation, clean up etc. as well as the environmental improvements on-the-spot, i.e. at destinations currently receiving illegal waste shipments. This could in practice be carried out through projects with developing countries, such as those which have been put into place already by IMPEL-tfs and via the Basel Convention network.

(5) Estimates based on increased recycling rates

The rates of recycling of waste are being monitored within the EU as a result of EU and national legislation. Increases of the recycling rates could be used to indicate the success of the proposed requirements due to waste being recycled rather than illegal exported and dumped.

Annex I: Results of co-ordinated inspections in Member States 2003-2011 (IMPEL-tfs)

Seaport projects

The outcomes of the first enforcement project (IMPEL-tfs Seaport I), carried out in 2003 and 2004 showed the need to enlarge the network for an improved and effective enforcement of waste shipment regulations; about 20% of all inspected waste shipments were found to be illegal, http://impel.eu/projects/seaport-project-i.

The second enforcement project (IMPEL-tfs Seaport 2), was carried out from September 2004 till May 2006. During this project even higher numbers of illegal shipments were detected; 51% of the shipments containing waste were illegal, http://impel.eu/projects/seaport-project-ii.

Inspections 2009-2010 ("Enforcement actions")

In co-operation with IMPEL-tfs and with the support of the Commission, 22 Member States carried out and reported over 20,000 transport inspections and over a hundred company inspections from October 2008 till October 2010. Inspectors found illegal shipments in around 24 % of the cases in the EU involving waste shipments. Illegal waste exports not respecting the export bans and notification requirements in the WSR made up over a third of all waste transports (failure to respect export bans in Article 34 and 36 WSR or notification requirements). Among the most frequent other violations were failure to fill in the information form used to ensure environmentally sound management at the destination (Article 18, 49 and Annex VII).An evaluation was made with regard to the frequency of certain waste types involved in violations of the WSR. These were the following waste types (in descending order):
Paper and cardboard
Metal
Plastic
WEEE
Municipal waste
ELVs/vehicle parts
Textile waste
Wood
Bio-degradable/green waste
Organic chemicals / solvents
Construction and demolition

Reported numbers of inspected transports and violation rate from October 2008-November 2010

The non-compliance rates vary significantly between Member States (14.8-100%), see Table below. However, it has to be noted that also differences between Member States as regards reporting methods and types of inspection activities used, such as random or targeted inspections, may play a role in these percentages.

Participant	Total inspections	Admin. Inspections	Physical inspections	Waste Inspections	% of transp. containing waste	violations	%
Austria	2,453	2,453	2,283	179	7.8	33	18.4
Belgium	1,242	1,106	1,190	293	24.6	108	36.9
Bulgaria	13 1)	13 1)	13 1)	13 1)	100.0	13 1)	100.0

Croatia	61	60	61	60	98.4	5	8.3
Cyprus	13	13	13	13	100.0	7	53.8
Czech Republic	1,751	1,751	1,751	19	1.1	9	47.4
Denmark	467	355	438	110	25.1	34	30.9
Estonia	205	175	205	7	3.4	4	57.1
Finland	353	346	323	20	6.2	7	35.0
France	26	26	24	26	100.0 2)	13	50.0
Germany 3)	3,722	3,697	3,722	669	18.0	105	15.7
Hungary	639	639	216	13	6.0	9	69.2
Ireland	829	340	542	656	79.1 2)	181	27.6
Lithuania	180	180	180	1	0.6	1	100.0
The Netherlands	1,366	918	1,213	446	36.8	91	20.4
Norway	125	125	125	125	100.0	51	40.8
Poland	4,264	4,264	3,391	196	5.8	29	14.8
Portugal	5,541	4,555	3,734	272	7.3	47	17.3
Romania				Joint transport inspections were reported by Hungary			
Serbia	308	308	308	303	98.4	6	2.0
Slovakia	595	595	595	6	1.0	2	33.3
Slovenia	909	880	249	49	19.7	8	16.3
Spain				Joint transport inspections were reported by Portugal			
Sweden	216	184	216	13	6.0	11	84.6
Switzerland	69	69	69	69	100.0	3	4.3
Turkey	6	6	6	6	100.0	0	0.0
UK / England and Wales	24	24	19	24	100.0 2)	22	91.7
UK / Northern Ireland	1,157	1,099	754	308	40.8	33	10.7
UK / Scotland	171	171	30	1	3.3	1	100.0
Overall total (transports)	26,705	24,352	21,670	3,897	18.0	833	21.4
Overall EU transports	26,251		21,101	3,334		768	23,0
EU company inspections				120		95	79,1
Overall total EU				3,454		863	24,9

- A detailed report is available on: http://impel.eu/wp-content/uploads/2012/01/IMPEL-TFS-EA-II-Project-_Final-report-adopted-v1-4.pdf, http://europa.eu/rapid/pressReleasesAction.do?reference=IP/10/113&format=HTML&aged=0&language=EN&guiLanguage=en.

Annex II: Studies and reports (2007-2012)

The Commission

1. The organisation of information exchanges and awareness-raising events concerning the application of the EU waste shipoment regulation in Member States, final reports 30 November 2008 and 13 December 2009,
http://ec.europa.eu/environment/waste/shipments/reports.htm.

Awareness-raising events and information exchanges concerning the WSR were organised by the Commission in most Member States during 2007-2009. National authorities and stakeholders participated at these events. The final report, approved by the national authorities, concluded that major deficits and problems were experienced with regard to the enforcement of the WSR. In many Member States few and insufficient controls were carried out. The report also concluded that the enforcement situation is diverse with considerable differences between Member States. On this basis, the report recommended new EU requirements, criteria and increased guidance at EU level concerning waste shipment inspections. These reports also showed that other parts of the regulation function well in practice and that therefore no reason exists to amend the regulation to decrease administrative burden.

The specific gaps in enforcement identified during the awareness-raising events and information exchanges were, *inter alia*, inadequate inspections of waste shipments 'in situ', e.g. random on-the-spot checks without opening of containers; in-sufficient frequency of 'in situ' inspections; lack of clear criteria for inspections. Specific needs to ensure adequate controls of waste producers and collectors "up-stream" and an intelligence-led approach to prevent illegal shipments further down the chain were highlighted at the High Level Inspectors' meeting.

2. Feasibility of a waste implementation agency, final report 7 December 2009, Milieu,AmbienDura, FFact.

3. Inspection requirements for waste shipments, final report 12 August 2009

4. Environmental, social and economic impact assessment of possible requirements and criteria for waste shipment inspections, controls and on-the-spot-checks, final report 4 June 2010, Biointelligence SA, http://ec.europa.eu/environment/waste/shipments/reports.htm

The Directorate-General for the Environment (DG ENV) conducted two studies examining the feasibility and impact of EU legislation to strengthen the enforcement of the WSR. The first study identified a large number of possible criteria and requirements for determining how to undertake a sufficient frequency and quality of waste shipment inspections. IMPEL-tfs (see Annex III), authorities in Member States and other stakeholders were closely involved in the preparation of the study. The study listed in total 174 criteria concerning capacity of competent authorities; enforcement strategy and risk profiling; waste inspection planning and programming; preparation, carrying out and follow-up of waste shipment inspections; training and competence requirements; and co-operation between authorities. The follow-up study contained a detailed assessment of the environmental, economic and social impacts of the criteria considered as amongst the most appropriate. The study concluded: "implementing the criteria will ensure that improved inspections are undertaken, reducing the illegal shipments through both increased detection and prosecution and the deterrent effect that increased

prosecution is expected to have on illegal shippers. The choice of a legally-binding instrument seems adequate for many of the proposed criteria, as such a tool will ensure that all countries have to abide by the same rules and will implement the criteria in a harmonised way." IMPEL-tfs representatives provided written and oral contributions to the studies. During the first study, a specific workshop was organised at the IMPEL-tfs annual conference in Östersund, Sweden in March 2009. The workshop allowed for an in-depth discussion on key issues, such as how to meet criteria, drawing together experience from several Member States. The Commission presented at the IMPEL-tfs conference on 2-3 June 2010 in Basel, Switzerland the specific criteria and possible requirements for waste shipment inspections as identified by the studies.

5. Implementation of EU waste legislation for green growth, 29 November 2011, BioIntelligence Service, http://ec.europa.eu/environment/waste/studies/pdf/study%2012%20FINAL%20REPORT.pdf.

6. Assessment and guidance for the implementation of EU waste legislation in Member States, Report on Article 49-50 WSR, http://ec.europa.eu/environment/waste/shipments/reports.htm.

7. Support to Implementation of the WSR requirements in the customs nomenclature and tariff, 23 December 2010, Arcadis, BioIntelligence.

8. *Study on the role of customs in the enforcement of EU legislation governing the environment,* 31 March 2011 http://ec.europa.eu/taxation_customs/resources/documents/common/publications/studies/customs_envirnt_en.pdf.

National authorities

Final report of study carried out by the German authorities, April 2010: www.umweltsbundesamt.de/uba-info-presse-e/2010-012

Institutions and organisations

1. European Environment Agency (EEA), Waste without borders in the EU? Transboundary shipments of waste 2009, No 1/2009, the "2009 EEA report".

2. EEA, 'The European Environment – State and Outlook 2010, update 2012', Materials, resources and waste

3. Europol, "EU organised crime threat assessment", https://www.europol.europa.eu/.

4. Greenpeace, "Poisoning the Poor, Electronic Waste in Ghana, August 2008, and "Toxic ships, the Italian Hub, the Mediterranean and Africa, June 2010.

5. IMPEL, Doing the right things for waste shipment inspections, Step-by-step guidance book for Waste Shipment Inspections, 2012

6. IMPEL, Practicability and enforceability of the Waste Shipment regulation, Final Report, December 2011

7. OECD, Illegal Trade in Environmentally Sensitive Goods, OECD Trade Policy Studies, 2012

Media reports

Deutsche Umwelthilfe (2007) Hamburg – Gate to the world for illegal waste exports? Part 1, How Hanseatic City of Hamburg tries to get rid of its liability.

http://news.sky.com/skynews/Home/UK-News/Sky-Probe-Reveals-Recycling-Scandal-As-Broken-TVs-Are-Shipped-Over-To-West-Africa/Article/200902315224628?lpos=UK_News_News_Your_Way_Region_0&lid=NewsYourWay_ARTICLE_15224628_Sky_Probe_Reveals_Recycling_Scandal_As_Broken_TVs_Are_Shipped_Over_To_West_Africa.

http://www.letsrecycle.com/do/ecco.py/view_item?listid=37&listcatid=217&listitemid=51995&section=waste_management; http://www.cbsnews.com/stories/2008/11/06/60minutes/main4579229.shtml).

"Smuggling Europe's Waste to Poorer Countries", *New York Times*, 26 September 2009; http://www.nytimes.com/2009/09/27/science/earth/27waste.html?_r=2&hp

"From toxic waste to toxic assets, the same people always get dumped on", *The Guardian*, 21 September 2009; http://www.guardian.co.uk/commentisfree/cif-green/2009/sep/21/global-fly-tipping-toxic-waste

Annex III: IMPEL

The European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL) is an international non-profit association of the environmental authorities of the European Union Member States, acceding and candidate countries of the EU and EEA countries, http://impel.eu/.

The association is registered in Belgium and both its legal seat and its secretariat are in Brussels, Belgium. Currently IMPEL has 43 members from 32 countries including all EU Member States, Croatia, the former Yugoslav Republic of Macedonia, Turkey, Iceland and Norway. According to the IMPEL Statute, any local, regional or national environmental authority having legal status, and based in a Member State, an acceding or candidate country, or an EEA country, can apply for membership.

IMPEL was set up in 1992 as an informal Network of European regulators and authorities concerned with the implementation and enforcement of environmental law. The Network's objective is to create the necessary impetus in the European Community to make progress on ensuring a more effective application of environmental legislation. The core of the IMPEL activities concerns awareness raising, capacity building, exchange of information and experiences on implementation, international enforcement collaboration as well as promoting and supporting the practicability and enforceability of European environmental legislation. The Association undertakes its activities primarily within a project structure.

IMPEL has developed into a considerable, widely known organisation, being mentioned in a number of EU legislative and policy documents, e.g. the Decision No 1600/2002/EC of the European Parliament and of the Council of 22 July 2002 laying down the Sixth Community Environment Action Programme 6th EU Environment Action Programme, the Recommendation 2001/331/EC of the European Parliament and of the Council of 4 April 2001 providing for minimum criteria for environmental inspections in the Member States (RMCEI), the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on implementing European Community Environmental Law and the European Commission Impact Assessment Guidelines.

The IMPEL-tfs cluster

IMPEL has three clusters: Cluster Permitting, inspection and enforcement, Cluster Transfrontier Shipment of Waste and Cluster Better Regulation. These are informal fora for discussions on draft project proposals. Clusters also review ongoing projects and assess draft project reports. The Clusters inform and advise the General Assembly on these matters. Participation in the Clusters is open to experts, employed by Environmental Authorities. A Cluster is chaired by a National IMPEL Coordinator, a National IMPEL Representative or a representative of an IMPEL Member.

The IMPEL-tfs (transfrontier shipments cluster) has as its scope the practical implementation and enforcement of international and European waste shipment rules, http://impel.eu/cluster-2. This is done by awareness raising, capacity building, facilitating inter-agency and cross-border collaboration and operational enforcement activities. Members of the cluster represent environmental authorities, but also customs and police services and other authorities that play a role in the enforcement of the transfrontier waste shipments.

The core of the cluster is the **enforcement projects**, which aim to prevent and detect illegal movements of waste. It started with the Seaport I and Seaport II project and the Verification of waste projects I and II and are now being continued in the Enforcement Actions projects I and II. The main objectives of this projects are to work towards an adequate level of inspections in all Member States and at all exit points of the EU, to introduce complete measures in order to prevent and detect illegal waste shipments and to deter illegal waste exporters, to verify waste destination and the treatment at destination within or outside Europe, to set up training and exchange programmes for inspectors, and to maintain and improve the network and collaboration of front line inspectors and other competent authorities and enforcement partners by exchange of information and knowledge.

The cluster also conducts waste specific projects, such as the End-of-life vehicles project and the E-waste project.

To support the inspectors, IMPEL TFS has developed several **tools,** for example manuals which explain different inspection and detection methods; waste watches to identify and classify waste streams; a methodology for threat assessments which will facilitate competent authorities in setting enforcement priorities; and tools to increase the awareness of persons who are subject to the controls of the TFS legislation, such as brochures (example 1, example 2 and example 3). Where illegal movements of waste are detected, IMPEL TFS has drafted a guidance manual on the return of these shipments back to the country of dispatch.

IMPEL-tfs also facilitate **exchange programmes for inspectors**. These programmes enable inspectors from one country to attend an inspection in another country.

More information, http://impel.eu/about/organisation.

Annex IV: EU waste legislation containing provisions on inspections and monitoring of their application

The EU Waste Framework Directive contains provisions on inspections in Article 34(1-3).[55] Establishments and undertakings which carry out waste treatment operations, establishments or undertakings which collect or transport waste on a professional basis, brokers and dealers, and establishments or undertakings which produce hazardous waste shall be subject to appropriate periodic inspections by the competent authorities, Article 34(1). The relevant waste management operations, sites and facilities for which inspections are needed in order to verify compliance with the directive can be divided in two categories: **(i)** facilities and sites which have obtained permits and thus need to be inspected in order to verify compliance with the conditions laid down by those permits; and **(ii)** facilities and sites without any permits and therefore infringing Article 23 and/or the prohibition of illegal dumping in Article 36, unless derogations have been granted under Articles 24-25. Individual sites could also be in violation of the EU landfill directive, see below.

Article 34(2) of the waste framework directive provides that inspections concerning collection and transport operations shall cover the origin, nature, quantity and destination of the waste collected and transported. According to Article 34(3), Member States may take account of registrations obtained during the Community Eco-Management and Audit Scheme (EMAS), in particular regarding the frequency and intensity of inspections. In connection with the inspections an important role is played by the directive's permitting requirements (Articles 23-25), the contents and detail of permits issued and the classification of waste according to the European list of wastes in Commission decision 2000/532/EC.[56]

The EU Landfill Directive and the decision on waste acceptance criteria[57] impose strict requirements on, *inter alia*, the design, construction, operation, acceptance of waste in landfills and after-care of designated landfills. Certain waste (liquid, explosive, tyres, and waste that does not fulfil the waste acceptance criteria) are banned from landfills. All landfills must be classified as for inert waste, hazardous or non-hazardous waste. The directive also requires the pre-treatment of waste going to landfills and the reduction of biodegradable waste disposed of in landfills. The directive and the decision include specific provisions (Articles 8, 11-13 of the directive and Articles 2-3 and the Annex to the decision), concerning inspections and monitoring of designated landfills in order to ensure their compliance with EU requirements.

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55 Directive 2008/98 of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain directives, OJ L 312, 22.11.2008.

56 Commission Decision of 3 May 2000 replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous (2000/532/EC). A study on the review of this list has been performed by Ökopol GmbH and ARGUS GmbH, and the Commission is currently further discussing technical issues so as to prepare a decision on the necessary amendments to the List of Waste.

57 Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste, OJ L 182, 16.7.1999, p. 1, Council decision of 19 December 2002 establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 of and Annex II to Directive 1999/31/EC.

The WEEE directive[58] 2012/19/EU contains detailed provisions in Article 23 and Annex VI on what inspections and monitoring shall cover, including both shipments and facilities.

Other EU environmental legislation with provisions concerning inspections and monitoring of their application

Directive 2010/75/EU on industrial emissions (integrated pollution prevention and control, recast) – Articles 23

Seveso II Directive - Article 18

Directive 2009/31/EC on carbon capture and storage - Article 15

Regulation 1005/2009 on ozone depleting substances – Article 28

Directive 2010/63 on protection of laboratory animals for scientific purposes – Articles 34-35

[58] See footnote 38 above.

Annex V: Estimates on illegal waste exports

WEEE (waste electrical and electronic equipment)

As regards WEEE, the impact assessment accompanying the recast proposal estimates that 25,000 tonnes of WEEE is legally shipped out of the EU, based on trade data, which is significantly lower than the assumed total export. No estimation of illegally shipped amounts is made in the IA. The evidence and working assumptions made in the study would account for 58% of the WEEE arising[59], leaving 42% unaccounted for. The WEEE Directive impact assessment also suggests that according to various pieces of evidence, very large volumes of WEEE are shipped out of the EU illegally for sub-standard treatment in developing countries. These are often disguised as export of used equipments. Several investigations were able to detect such illegal shipments; however, due to the illegal nature of such shipments no data is available on overall volumes. Also, a UNU study mentions reports about shipments of WEEE disguised as goods from the port of Hamburg[60] and findings that 28% of businesses (collectors and exporters) were found to be exporting WEEE illegally from the Netherlands[61]. A study in the United Kingdom showed that about 10% of WEEE transports were shipped illegally to non-OECD countries. The study states that it is not possible to estimate the amounts of WEEE illegally shipped out of the EU, but in a worst-case scenario, WEEE separately collected, improperly treated in or out of the EU could be assumed to represent around 41% of the WEEE arising or 3.4 million tonnes.

ELVs (end-of-life vehicles)

Regarding ELVs, a report by the European Parliament examines the implementation of the ELV Directive in Europe[62] and also gives insights into the illegal exports of waste vehicles. The report states that the export of second-hand cars before they reach their end of life is an important (and possibly growing) feature of the European car market. Additionally, the legitimate second-hand trade masks some illegal activities, such as the export of wrecked or stolen cars. The study analyses several Member States. Details about illegal exports are mentioned for Belgium for instance. Belgium has a significant export market for second-hand vehicles. The major destinations for these exports are West Africa, the Middle East and some Member States. However, many of these exports are illegal, as many scrapped cars (wrecks) are exported under the guise of second-hand cars. The report states that although it is difficult to provide firm evidence of such activities, it has been reported that the legitimate second-hand trade masks some illegal activities, such as the export of ELVs for recycling outside Europe. This practice is illegal, as ELVs should be classified as hazardous waste and handled accordingly. It is also suggested that many stolen cars are moved across national frontiers and replated, in order to better avoid detection

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59 58% represents 33% reported, 2% reused, 10% probably treated in line with the Directive and an unsorted fraction of 13%.

60 Deutsche Umwelthilfe (2007) Hamburg – Gate to the world for illegal waste exports? Part 1, How Hanseatic City of Hamburg tries to get rid of its liability.

61 J.Vanhouten, VROM Netherland Environmental Inspectorate (2007) Let's join our forces to stop waste dumping!

62 ELV Directive, An assessment of the current state of implementation by Member States (European Parliament (2006) IP/A/ENVI/FWC/2006-172/Lot 1/C1/SC2).

Abbreviations

CN=Customs combined nomenclature established by Council Regulation (EEC) No 2658/87 of 23 July 1987 on the tariff and statistical nomenclature and on the Common Customs Tariff, based on the International Convention on the Harmonised Commodity Description and Coding System.

EEA=European Environment Agency, Copenhagen, Denmark. EEA may also refer to the 'European Economic Area' comprising EU-27, Iceland, Liechtenstein and Norway.

EFTA=European Free Trade Association comprising Iceland, Liechtenstein, Norway and Switzerland.

ELV=End-of life vehicle, see Directive 2000/53/EC of the European Parliament and of the Council of 18 September 2000 on end-of life vehicles, published in OJ L 269, 21.10.2000, p. 34.

ESM=Environmentally sound management of waste

IMPEL-tfs=European Union Network for the Implementation and Enforcement of Environmental Law - Transfrontier Shipment of Waste

TFEU=Treaty on the Functioning of the European Union

WEEE=Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment, published in OJ L 197, 24.7.2012, p. 38.

WSR=Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste, published in OJ L 190, 12.7.2006, p. 1.