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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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37 **1. PROCEDURAL ISSUES AND CONSULTATION OF INTERESTED PARTIES**

38 **1.1. Procedural issues**

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

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

57 **1.2. External expertise and consultation of interested parties**

58 *Public consultation*

59 The preparation of this impact assessment has been preceded by a public consultation in line
60 with the minimum standards for consultation. The public consultation was open to all
61 stakeholders for eleven weeks, accessible via the single access point on the Internet² and
62 followed up with the publication on the Internet of the responses.³ 65 contributions were
63 received from 18 Member State authorities, one EEA country authority, 25 industry
64 organisations, five private companies, two public organisations, three NGOs and 11
65 individuals. Moreover, the EU "network for the implementation and enforcement of
66 environmental law, trans-frontier shipments of waste-cluster" (IMPEL-tfs, see Annex III for
67 details), authorities in Member States and various groups of stakeholders were closely
68 involved in the preparation of the studies that were conducted to support this Impact
69 Assessment.

70 *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>.

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

83 **2. POLICY CONTEXT, PROBLEM DEFINITION AND SUBSIDIARITY**

84 **2.1. Policy context**

85 Comprehensive EU legislation (regulations, directives and decisions) has been adopted in
86 order to ensure that waste in the EU is managed in an environmentally sound manner. As can
87 be seen from Table 1 below, there are several pieces of legislation covering a framework,
88 different waste treatment options and specific waste streams: the Waste Framework Directive
89 2008/98/EC ("WFD"); the Waste Shipment Regulation 1013/2006 ("WSR"); the Landfill
90 Directive 1999/31/EC; the Industrial Emissions Directive 2010/75/EC; the Mining Directive
91 2006/21/EC; and a number of directives governing waste from e.g. packaging, electrical and
92 electronic equipment ("WEEE") and end-of-life vehicles ("ELVs").

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

101

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>.

102 Table 1: Overview of EU waste legislation



103

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

119 The WSR contains a general provision on enforcement in its Article 50. This provision
 120 stipulates that Member States shall provide for inspections of establishments and undertakings
 121 in accordance with the inspection requirements in the Waste Framework Directive, and that
 122 Member States may check transports by road, in ports etc. or at a later stage when the waste
 123 has already arrived at a recovery or disposal facility. Controls are otherwise left to Member
 124 States' discretion. There are no specific provisions on how the inspections shall be carried out.
 125 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

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

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

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

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

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

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

⁷ OJ L 118, 27.4.2001, p. 41.

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

167 In 2011-2012, the Commission therefore proposed to improve the prevention of illegal waste
168 shipments in its Roadmap to Resource Efficiency⁹ and the Raw Materials Strategy Initiative¹⁰.

169 **2.2. Problem definition**

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

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

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

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

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

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

182 *2.2.1. Frequency of illegal shipments*

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

187 Nevertheless, very high rates of non-compliance with WSR due to illegal waste shipments are
188 clearly shown by the IMPEL-tfs joint inspections. These were organised by IMPEL with the
189 support of the Commission. 22 Member States checked and reported on transports by road and
190 in ports (over 20,000 transport inspections and over a hundred company inspections) during
191 the period October 2008-November 2010.¹² They showed that the frequency of illegal
192 shipments varies significantly between Member States: non-compliance rates vary between
193 14-100% of the inspected waste shipments (see Annex I). 95 cases of illegal exports were
194 found during 120 company inspections. Taking into account the total number of inspected
195 waste shipments from and within the EU during the period (3,454) and the number of
196 violations (863), the overall non-compliance rate can be estimated to be 25%.

197 Under the WSR, Member States shall report on cases concerning illegal waste shipments,
198 (Article 51(2) and Annex IX). The most recent Commission report on WSR implementation
199 covers the period 2007-2009¹³. In this report, most Member States state that there had been

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>.

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

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

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

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

218 Registered annual export of waste: 75 million tonnes total (40 million tonnes export outside
219 the EU)
220 + Registered additional annual export of hazardous waste: 6 million tonnes
221 + Registered annual export based on relevant customs classification codes: 200 million tonnes
222 (45 million exports outside the EU)
223 = In total, 281 million tonnes of waste shipments per year of which 2,8 million tonnes would
224 be illegal (1%).

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

226 2.2.2. *Main shipment routes*

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

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.

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

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

244 Problems relating to illegal waste shipments have also arisen *between* Member States. The
245 2011 Europol study concludes that hazardous waste is often shipped from southern to south-
246 east Europe (e.g. from Italy to Romania and Hungary).

247 2.2.3. *Environmental and health impacts*

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

261 - *Example 1: the Probo Koala-case*

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

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

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_environment_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'affrèteur du Probo Koala aurait proposé un accord aux victimes ivoiriennes, 16/09/2009, available at : http://www.lemonde.fr/afrique/article/2009/09/16/1-affreteur-du-probo-koala-auroit-propose-un-accord-aux-victimes-ivoiriennes_1241483_3212.html.

269 WEEE is often shipped illegally from the EU to developing countries (see Annex V for more
270 details). A study completed by EMPA²¹ on open-air WEEE burning in Delhi, India, indicated
271 the possibility for a higher-than-average risk of cancer and immune toxicological problems
272 due to increased levels of chlorinated dioxins and furans in the air. Inhalation by children and
273 food preparation near the burning sites were cited as the most problematic forms of
274 contamination which could lead to long-term health risks.

275 2.2.4. *Economic costs and benefits*

276 Effective enforcement and inspections of waste shipments would not only prevent the serious
277 environmental and health impacts stemming from illegal waste shipments, but also save high
278 costs and result in direct economic benefits for Member States and industry. Financial
279 benefits stemming from better enforcement include avoided clean-up costs (example 1 below)
280 and repatriation costs (example 2 below). A recent study shows that stricter enforcement in
281 the port of Rotterdam resulted in increased quality and quantity of waste recycled due to that
282 waste was routed via legal channels to facilities with better treatment techniques (example 3
283 below). It led to creation of 22 jobs – in customs, inspections and waste treatment plants.²²
284 The same study compares two scenarios for the period 2008-2020 – one involving no progress
285 in waste management and the other involving full implementation of eight pieces of EU waste
286 legislation, including the WSR - and concludes that full implementation would mean cost
287 savings of €72 billion/year across the EU. Other benefits include 72% increase in material and
288 113% in energy recovery. Improved enforcement throughout the EU would also create a level
289 playing field for economic operators and eliminate current internal market distortions
290 (example 4 below).

291 - *Example 1: Clean-up costs*

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

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

305

²¹ Swiss federal laboratories for material science and technology (EMPA),
http://www.empa.ch/plugin/template/empa/*/59242/---/1=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.

306 - *Example 2: Repatriation costs*

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

314 - *Example 3: Loss of valuable resources*

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

322 The current "leakage" of waste via illegal shipments to sub-standard treatment inside or
323 outside the EU also hinders the access to valuable raw materials. Access to resources has
324 become a major strategic economic concern. Europe has the world's highest net imports of
325 resources per person, and its open economy relies heavily on imported raw materials.²⁵ The
326 competitiveness of European industry requires efficient and secure access to raw materials, as
327 further developed by the Commission's Communication on Commodity Markets and Raw
328 Materials of 2 February 2011²⁶. Higher quantities of waste routed through legal channels for
329 recovery and treatment, would lead to optimised processes and better sorting techniques and
330 consequently better quality of waste and, ultimately increased access to high quality raw
331 materials.

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

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

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

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.

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

348 **2.3. What are the underlying causes of the problem?**

349 The following drivers of illegal waste shipments have been identified:

350 *2.3.1. Differences in costs for waste treatment and disposal between the EU and third* 351 *countries*

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

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

364 *2.3.2. Organised crime in the waste sector*

365 Organised environmental crime is particularly serious and wide-spread with regard to waste.
366 According to Europol, illegal waste shipments "are driven by an exceptional low risk-high
367 profit margin" and are organised by sophisticated networks of criminals with a clear division
368 of roles (e.g. collection, transportation, recovery or legal expertise). The Europol report³⁰
369 states that "illicit waste trafficking is often facilitated through cooperation with legitimate
370 businesses, including those in the financial services, import/export and metal recycling
371 sectors, and with specialists engaged in document forgery to acquire permits". Permits are
372 also obtained by means of corruptive influence on issuing bodies. Europol has found evidence
373 of corruption in both public and private sectors. The conclusion is drawn that while mafia-
374 type structures have sufficient resources to participate in large scale illegal waste
375 management, there is evidence that lower level groups are engaged in illegal shipments of
376 hazardous waste.

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.

377 2.3.3. *The current gaps in enforcement in some Member States*

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

385 - *Lack of inspection planning and risk assessments*

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

390 The studies carried out for the Commission and recent report by the IMPEL-tfs³² show that
391 planning of waste shipment inspections is crucial to effectively prevent illegal waste
392 shipments. Targeting inspections based on prior planning allows to focus the inspections on
393 routes, times and vehicles that are most frequently involved in illegal shipping. This results in
394 higher detection rates. Risk-based, regular inspection planning also puts the authorities in
395 better position to establish the adequate capacity needed for effective inspections.

396 *Best-practice examples: inspection planning*

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

402 With regard to inspection planning it can also be noted that some EU legislation contain
403 detailed inspection requirements. The Industrial Emissions Directive 2010/75/EU³³ contains
404 such provisions in the directive itself. The Mining Waste Directive 2006/21/EC delegates
405 powers to the Commission to adopt such provisions³⁴. See Annex IV for further details.

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

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

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).

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

415 The recast Directive on waste electrical and electronic equipment (WEEE) adopted on 7
416 June 2012³⁵ and the EU waste shipment correspondents guideline on shipments of end-of-life
417 vehicles (ELVs) already contain such provisions reversing the burden-of-proof. The new
418 WEEE Directive includes specific provisions to this effect and an annex on inspections of
419 waste shipments. The exporter has to test the items for functionality and provide the necessary
420 documents to the authorities before export takes place. The EU guidance document on
421 inspections of shipments of ELVs has been agreed by the Commission and all Member States.
422 While many other waste categories than WEEE and ELVs are subject to high rates of illegal
423 shipments, including paper (poorly sorted), metal, plastic and municipal waste, as shown by
424 the IMPEL-tfs enforcement actions in Annex I, there is a lack of inspection requirements or
425 guidance concerning these waste streams.

426 *Best-practice examples: burden-of-proof*

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

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

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

³⁵ OJ L 197, 24.7.2012, p. 38.

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

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

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

467 *Best-practice examples: "Up-stream" inspections*

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

477 - Lack of training for inspectors

478 Dealing with waste inspections requires solid knowledge and experience due to legal and
479 technical complexity and the fact that several authorities are involved: customs, police and
480 environmental. The 'Study on inspection requirements for WS Inspections' as well as the
481 IMPEL Threat Assessment report³⁷ concluded that there is a lack of focused, targeted training
482 for authorities on waste shipment inspections. Such training should relate to issues that have
483 been identified as specifically complex or where otherwise training is needed in order to
484 follow legal, technical and scientific developments. One example is the classification of waste
485 vs. non-waste and hazardous waste vs. non-hazardous waste in connection with shipments.
486 The need for training was also confirmed by awareness-raising events and a high-level
487 inspectors' meeting.³⁸

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.

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

490 2.3.4. *Existing guidelines are not complete*

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

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

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

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

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

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/>

523 **2.4. How will the problem evolve?**

524 *2.4.1. Increase in frequency of illegal waste shipments*

525 The overall trend in waste generation, including hazardous waste, is upwards (albeit most
526 recent figures show a decline that is probably connected to the economic downturn in
527 Europe).⁴⁴ The more waste that is produced, the higher is the risk that more waste will be
528 shipped illegally through for example, wrongful labelling of paper and plastic waste.

529 The 2009 EEA report⁴⁵ showed that the total amounts of shipped hazardous and non-
530 hazardous waste have increased significantly in the EU. According to the most recent reports
531 received from Member States, the total amount of all notified waste shipped out of the EU in
532 2009 was about 11,4 million tonnes, of which about 7,2 million tonnes was hazardous
533 waste.⁴⁶ Shipments of notified waste out of Member States have steadily increased. From
534 2001 to 2009, the increase in the amount of all notified waste shipped out of Member States
535 was 80%. For shipments of hazardous waste alone, an increasing trend is observed until 2007.
536 From 2001 to 2007, the increase in the amount of hazardous waste shipped out of Member
537 States was 150%. Since 2007, the quantities of hazardous waste shipped out of Member States
538 have slightly decreased (9% drop from 2007 to 2009).

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

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

547 *2.4.2. Effectiveness of Member States' inspection systems*

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

554 **2.5. Who is affected and how?**

555 Better enforcement of the WSR concerns several actors:

- 556 • Member States' authorities which undertake waste shipment inspections at national,
557 regional or local level.
- 558 • Legal waste traders and shippers who comply with WSR requirements.

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.

- 559 • Illegal waste shippers and other criminals, who use the enforcement and inspection
560 gaps in MS to circumvent the WSR at the expense of environmental and health
561 issues.
- 562 • Recyclers and recovery operators who collect and monitor the amounts of waste
563 collected for recycling and recovery.
- 564 • Citizens and operators within and outside the EU who either suffer health effects
565 from treatment of illegal WEEE or profit from the illegal trade.

566 **2.6. The EU's right to act and justification**

567 *Treaty base*

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

579 *The ‘necessity test’*

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

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

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

⁴⁷ See footnotes 4-5 above.

⁴⁸ Ibid.

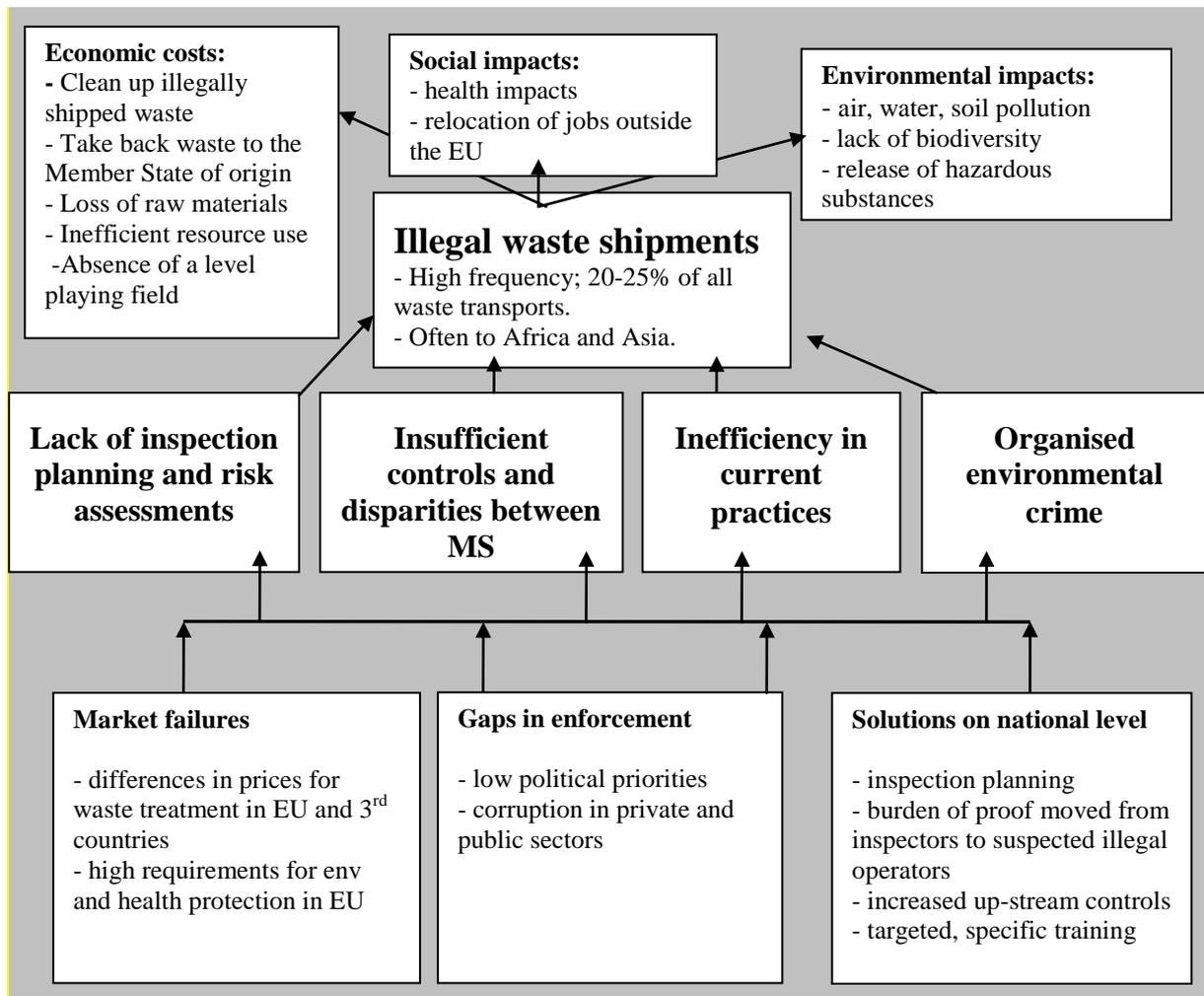
597 IMPEL is very active in organising co-ordinated inspections and joint enforcement actions in
598 many Member States and provides guidance and documents to improve the enforcement and
599 implementation of the WSR. The IMPEL network identified important disparities between
600 Member States in terms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

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

606 **2.7. Summary**

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

615



617

618 **3. OBJECTIVES**

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

621 General objectives

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

623 Specific objectives

- 624 • Improving the implementation and enforcement of the EU waste shipment
625 regulation, thus contributing to the fulfilment of the Commission’s task in Article
626 17(1) of the EU Treaty.
- 627 • Cutting costs in Member States, related e.g. to clean-up and repatriation of waste.
- 628 • Increasing access to raw materials and contributing to resource efficiency.

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

630 Operational objectives

- 631 • Strengthen and improve the effectiveness of waste shipment inspections.

- 632 • Harmonise the criteria used in different Member States for inspections.

633 **4. POLICY OPTIONS**

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

641 **4.1. Option 1 - No action at EU level**

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

646 In the EU, the generation of both hazardous and non-hazardous waste is expected to further
647 increase (see section 2.4.1). So far this increase has gone hand in hand with increasing waste
648 shipments, including illegal shipments, and this trend is expected to continue in the future.
649 According to the latest available data, in 2009 about 74 million tonnes of hazardous waste
650 were generated in the EU-27, representing a 28% increase since 2000. Non-hazardous waste
651 generation is expected to follow a similar trend. For example, the generation of packaging
652 waste in the EU is growing (stabilisation during 2006-2009 and then a continued increase in
653 2010).⁴⁹

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

658 **4.2. Option 2 - Specific requirements and criteria for waste shipment inspections in**
659 **EU legislation**

660 This option involves the introduction of new EU legislative requirements supplementing the
661 existing provisions of the WSR. This could be done by amending Article 50 of the WSR to
662 include more specific requirements needed to effectively prevent illegal waste shipments.
663 Such an amendment would have to address the concrete enforcement gaps identified in
664 section 2.2: (1) lack of inspection planning and risk assessments; (2) insufficient provisions
665 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.

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

670 *1. Establishing inspection plans*

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

672 *- How does it work in practice?*

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

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

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

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

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

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

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

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

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

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

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

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

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

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

724 - *How does it work in practice?*

725 Suspected illegal exporters would be required to provide evidence that:

- 726 • The item is not waste as defined by the EU waste framework directive, but a product,
727 e.g. "used", "repairable", "operational" or similar.
- 728 • Waste shipped will be treated in third countries under environmental protection
729 standards that are broadly equivalent to EU legislation (see section 2.1 about the
730 WSR's requirements).

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

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

734 - *How does it work in practice?*

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

742

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

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

745 *- How does it work in practice?*

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

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

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

755 *- Identical application to all waste types and destinations*

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

759 **4.3. Option 3 - Guidance for waste shipment inspections at EU level**

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

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

764 Guidance should cover the following issues:

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

767 b) How waste can be differentiated from used goods.

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

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

771 Guidance on this issue should include:

772 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.

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

775 *3. Promoting the traceability of waste by technical means*

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

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

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

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

795 **4.4. Option 4 – Combination of EU legislative requirements and guidance**

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

800 A combination of guidelines and binding EU legislation is therefore examined as a fourth
801 option. This also corresponds to the approach of EU legislation in other similar areas (section
802 2 above and Annex IV). This option will thus include the specific legislative requirements in
803 Option 2 and in addition, the items for guidance described in Option 3.

804 **4.5. Discarded options**

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

813 25% of the respondents found a need for such measures while 49% did not find any need for
814 such measures at EU level.

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

826 **5. ANALYSIS OF IMPACTS**

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

829 **Option 1 - No action at EU level**

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

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

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

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

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

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

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

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

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

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

871 **Option 2 - Specific requirements and criteria for waste shipment inspections in EU** 872 **legislation**

873 *Costs for Member States*

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

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

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

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

891 (1) Costs for hiring additional inspectors

892 The precise amount would depend on the Member State and experience of the inspector. The
893 study estimates this yearly cost to €40,000-€80,000, i.e. on average €60,000 per inspector and
894 year. Assuming that on average at least two additional inspectors per Member State would be
895 necessary, this would make the total average cost per Member State: $2 \times €60,000$ per year =
896 €120,000 per year/Member State. Total yearly cost for the EU27: €3,240,000.

897 (2) Costs for preparing and executing inspections

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

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

909 Based on the above estimates, the total yearly cost for increasing inspection capacities and
910 infrastructure (cost for hiring additional inspectors and preparing and executing inspections)
911 and the one-time investment costs (soft- and hardware) in the whole EU could be estimated at
912 €4,000,000.

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

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.

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

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

937 *Costs for economic operators*

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

948 *Economic benefits*

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

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

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

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

968 *Employment impacts*

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

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

978 *Proportionality with regard to legally shipped waste*

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

985 *Internal market implications*

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

994 *Stakeholder consultation*

995 The stakeholder consultation showed broad support for new EU legislation strengthening the
996 inspection requirements (89% of respondents). Of these stakeholders 12 were Member State
997 authorities, one EEA country authority, 25 industry organisations, two public organisations,
998 three NGOs, five companies and ten individuals. Six Member State authorities and one
999 individual were against EU legislative requirements. Those favouring EU legislative
1000 requirements found the criteria and requirements proposed by the studies as either fully (38%)
1001 or partly (51%) appropriate for legislation. 85% of the respondents wanted minimum
1002 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>.

1003 States is not waste. 81% wished to have minimum requirements for exporters to show that
1004 waste to be shipped to a third country will be treated there in compliance with EU legislation
1005 and under environmental protection standards that are equivalent to EU legislation. The
1006 stakeholder consultation also showed that 61% of respondents wish to see strengthened
1007 controls of "up-stream" facilities where the waste is produced, collected or managed.

1008 *Form of legislative measures*

1009 Criteria and requirements for waste shipment inspections could be implemented through a
1010 legally binding instrument such as a directive or regulation.

1011 If the criteria for waste shipment inspections were implemented through a directive, it would
1012 leave a margin of interpretation to the national authorities to adapt the criteria to their national
1013 context. However, in this case issues of interpretation between the Member States could arise
1014 and the uniformity of application of the criteria could be undermined. On the other hand, the
1015 use of a Directive would provide Member States with a delay (normally 2 years depending on
1016 the complexity of the transposition) allowing them to prepare for the implementation of the
1017 criteria.

1018 The criteria could also be set by means of a regulation. Contrary to a directive, the provisions
1019 of a regulation are self-executing and do not require any transposition although
1020 implementation measures are generally necessary. If this solution was preferred, it should be
1021 ensured that the criteria are robust enough and self-standing in order to be applied directly by
1022 Member States authorities.

1023 One possibility to introduce inspection requirements is to amend Article 50 of the WSR. Such
1024 requirements could cover waste shipment inspections plans, controls of "up-stream" facilities,
1025 training requirements and burden-of-proof provisions. An amendment of Article 50 could be
1026 combined with a possibility for the Commission to adopt delegated acts on certain of the
1027 elements that are technically or scientifically related and therefore may need future
1028 adjustment e.g. taking into account technical and scientific progress.

1029 There could be several advantages of amending the existing WSR rather than creating a new
1030 Directive or Regulation. For example, this would avoid a "piecemeal approach" with several,
1031 different acts cross-referring to each other and ensure coherency with existing substantive
1032 provisions of the WSR.

1033 *Environmental impacts*

1034 The severe, negative impacts on human health and the environment resulting from illegal
1035 shipments, both outside and inside the EU would be reduced significantly.

1036 **Option 3 - Guidance for waste shipment inspections at EU level**

1037 Guidance documents can provide useful support to national authorities and stakeholders on
1038 key issues relating to the implementation and enforcement. However, the non-binding nature
1039 of guidelines leaves full freedom to Member States to follow, partly follow or not follow at all
1040 the guidelines. The flexibility of Member States is thus left at the maximum.

1041 Therefore, it is unlikely that this option *alone* could contribute to improvements of waste
1042 shipment inspections in all Member States. An abundance of guidance on waste shipments

1043 and inspections already exists at EU level (published by the Commission or the IMPEL
1044 network) and at international level (published by the United Nation's Basel Convention
1045 secretariat). Nevertheless, very large disparities remain between Member States. The non-
1046 binding nature of guidelines currently represents a major challenge to achieve the objective of
1047 better enforcement of the WSR. If guidance is not followed by some Member States, “port
1048 hopping” continues. In spite of the guidelines and tools available at EU level for waste
1049 shipment inspection planning, there is a lack of regular planning of waste shipment
1050 inspections in many Member States. Only nine Member States have reported on having
1051 regular and consistent inspection planning for waste shipment inspections (see section 2.3.3).

1052 Nevertheless, four main areas have been identified as relevant for guidance to clarify the legal
1053 provisions designed to prevent illegal shipments and support authorities and economic
1054 operators when applying the relevant WSR provisions (section 4.3). The impacts of
1055 developing, implementing and applying such guidance are therefore assessed below.

1056 *Economic impacts*

1057 The development of guidance does not require significant budget and the administrative
1058 burden could be regarded as limited. The majority of the start-up costs for developing
1059 guidance falls at EU level (both in terms of one-off costs and time spent), and also on the lead
1060 Member States coordinating the guidance document and for all Member States contributing to
1061 the guidance.

1062 Guidance on topics 1 to 3 would not entail additional costs for authorities or economic
1063 operators since it only offers tools to help them apply legal obligations. The guidance on topic
1064 4 could mean that authorities decide to increase their efforts to co-ordinate inspections and co-
1065 operate with other authorities. Such co-ordination and co-operation has already taken place at
1066 European level within IMPEL-tfs in the form of its on-going project on the organisation of
1067 enforcement actions for waste shipments. The costs of such co-ordination and co-operation
1068 have been specified in the terms of reference for this project.⁵⁴ In summary, the project
1069 costs/resources required were estimated to amount to €125,620 (total over 2012, 2013 and
1070 2014).

1071 *Environmental and social impacts*

1072 This option has no impact on employment apart from the additional human resources needed
1073 for authorities to develop and implement the guidance.

1074 *Stakeholder consultation*

1075 Guidelines as sole option were discarded by a vast majority of stakeholders during the
1076 consultation (89% of respondents favoured binding EU legislation on inspections). They
1077 nevertheless considered it useful to adopt guidance in specific areas e.g. for customs in order
1078 to facilitate the identification and differentiation of used goods and waste (90% of
1079 respondents in favour). 79% considered there is scope for further improving coordination of
1080 waste shipment enforcement activities at EU level.

1081

⁵⁴ <http://impel.eu/projects/impel-tfs-enforcement-actions-iii/>

1082 **Option 4 - Combination of EU legislative requirements and guidance**

1083 *Impacts*

1084 This option will have the same costs and benefits of options 2 and 3 together. This means that
1085 the additional costs, cost savings and economic benefits of binding legislation would be the
1086 same as in in option 2, with very small additional costs for guidance as in option 3. In view of
1087 the net costs and benefits of options 2 and 3, these options could be considered as mutually
1088 reinforcing.

1089 *Stakeholder consultation*

1090 The vast majority of stakeholders were in favour of binding EU legislation (89%), many also
1091 considered it useful to adopt guidance in certain areas e.g. for customs in order to facilitate the
1092 identification and differentiation of used goods and waste (90%), coordination of waste
1093 shipment enforcement activities at EU level (79%), and additional measures at EU level in
1094 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 |
|---|--|---|--|---|
| <u>How does the option solve the problem?</u> | 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. |

| | | | | |
|--------------------------|--|--|--|--|
| | | <p>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.</p> | | |
| Cost savings | <p>---</p> <p>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”.</p> | <p>+++</p> <p>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.</p> | <p>+/-</p> <p>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.</p> | <p>+++</p> <p>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.</p> |
| <u>Economic impacts:</u> | 0 | +++ | +/- | +++ |

| | | | | |
|--|--|--|---|---|
| Level playing field for enterprises/Access 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. |
| <u>Social impacts:</u> 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. |
| <u>Environmental impacts:</u> 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 shipment 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%202012%20FINAL%20REPO RT.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§ion=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 criteria⁵⁷ 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.

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 directive⁵⁸ 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 arising⁵⁹, 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 Hamburg⁶⁰ and findings that 28% of businesses (collectors and exporters) were found to be exporting WEEE illegally from the Netherlands⁶¹. 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 Europe⁶² 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

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.