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**REPORT FROM THE COMMISSION TO THE COUNCIL AND THE EUROPEAN
PARLIAMENT**

**on the implementation of Council Regulation (EEC) No 259/93 of 1 February 1993 on
the supervision and control of shipments of waste within, into and out of the European
Community**

**Generation, treatment and transboundary shipment of hazardous waste and other waste
in the Member States of the European Union, 2001-2006**

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SUMMARY REPORT:
DEVELOPMENTS CONCERNING THE GENERATION, TREATMENT AND SHIPMENT
OF HAZARDOUS WASTE AND OTHER WASTE IN THE EU MEMBER STATES,
2001-2006

1. INTRODUCTION

Waste exports and imports are governed at international level by the Basel Convention of 22 March 1989 on the control of transboundary movements of hazardous wastes and their disposal. The European Community is a party to this Convention and has transposed it by Council Regulation (EEC) No 259/93¹, known as the Waste Shipment Regulation. The purpose of this regulation is to organise the supervision and control of shipments of wastes in a way which takes account of the need to preserve, protect and improve the quality of the environment and of human health.

Based on the guiding principles of the Community's strategy on waste management, the Regulation lays down a series of rules which should enable the Community as a whole to dispose of its own waste and also enable the Member States individually to move towards that goal, taking into account geographical circumstances and the need for specialised installations to handle certain types of waste.

The Regulation has introduced a number of measures for achieving control of the shipments of waste within, out of and into the Community. In particular:

- it establishes common definitions and terminology concerning shipments of waste;
- it lays down rules for the export, import and transit of wastes for disposal or recovery;
- it specifies the information which the Member States and the Commission must supply.

Article 41 of the Regulation states the following:

- (1) "Before the end of each calendar year, Member States shall draw up a report in accordance with Article 13(3) of the Basle Convention and send it to the Secretariat of the Basel Convention and a copy thereof to the Commission.
- (2) The Commission shall, based on these reports, establish every three years a report on the implementation of this Regulation by the Community and its Member States. It may request to this end additional information in accordance with Article 6 of Directive 91/692/EEC."

A first Commission report on the transboundary shipment of wastes covering the years 1997-2000² was published in 2006. Most of the Member States had sent their annual reports for 2001-2006 to the Commission by end of 2008. The table in the general introduction of the

¹ Of 1 February 1993 on the supervision and control of shipments of waste within, into and out of the European Community, OJ L 30, 6.2.1993, p. 1, repealed by the new Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste, applicable since 12 July 2007. This new regulation is extraneous to this survey.

² Report from the Commission to the Council and the European Parliament on the implementation of Council Regulation (EEC) No 259/93 of 1 February 1993 on the supervision and control of shipments of waste within, into and out of the European Community. Generation, treatment and transboundary shipment of hazardous waste and other waste in the Member States of the European Union, 1997-2000 {SEC(2006) 1053}, 1.8.2006.

accompanying working document contains a list of the Member States (EU-25; without Bulgaria and Romania). This table reflects the Member States' reactions to their reporting obligations.

The questionnaire of the Basel Convention Secretariat includes questions on legal provisions, implementation and measures of environmental protection. On the basis of Article 41(2), the Commission in 1999 adopted a Decision³ requiring additional information to be supplied by Member States in the form of a questionnaire. The Commission questionnaire mainly includes questions on shipment restrictions, monitoring, measures against illegal shipments, and financial coverage. Unlike the first Commission report, the current report already includes information from the said questionnaire (cf. Working Document, General Introduction).

Section 2 of the report is an analysis of both the form and the content of the Member States' replies. More detailed information on the Member States' comments on both questionnaires can be found in sections B and E of the working document. Subsequently the main conclusions will be drawn from the Member States' quantitative data on waste generation, treatment and shipment. The underlying data are to be found in section A of the working document.

It should be noted that the Basel Convention uses the terms "import" and "export" for every shipment into and out of an individual country that is Party to the Convention. Under EU law these terms apply only to shipments into and out of the European Union as a whole; therefore they are not used in this report to refer to shipments between Member States. However, in the interest of readability, they appear between quotes, and are used occasionally for waste shipments in general. Both terms do appear, however, in the working document in the sense in which they are used in the Basel Convention.

2. REPORTING BY MEMBER STATES

For this report, all of the Member States' replies to both the Basel and Commission questionnaires for the years 2001-2006 were utilised. 2004 was selected as the reference year, as some important reports for 2005/2006 were still missing at the end of 2008. Due to their relevance, however, all quantitative data were incorporated, and aggregates were also given for 2005 where possible. Out of 300 potential replies 219 replies containing yes/no answers, verbal explanations and figures were received. This feedback proved sufficient for the purposes of a qualitative and quantitative analysis.

The response rate to the Basel questionnaire was 73%, and the response to the Commission questionnaire was 67%. A further 4% of the collected replies to the more complex Basel questionnaire were incomplete or unusable. The quantitative analysis of data on waste requires that primary data should be supplied in a consistent format. Most replies were submitted electronically, although in some cases only following a specific enquiry. In the synoptic table, all of the fully completed and usable questionnaires are marked with the letter "Y", whereas the remainder of the returned questionnaires are marked with a "P" (cf. Working document, General Introduction).

Most of the reports were supplied one to two years after the reference year. In many cases Member States corrected their own data in later reports. As regards the 31% of Commission questionnaires that were categorised as "missing", it should be pointed out that, prior to 2004, the "new" EU Member States (EU-10) were not obliged to reply. Quantitative data for Malta are missing from this report, since no Basel report was available from Malta. Greece did not

³ Commission Decision 1999/412/EC of 3 June 1999, OJ L 156, 23.6.1999, p. 37.

supply the Commission questionnaire for the years in the period 2001-2006. In a very few cases, gaps were filled using information from adjacent years.

The quality of responses was variable. Reporting on specific incidents/accidents and/or stopped illegal waste shipments was inconsistent and presumably not realistic. It was sometimes unclear whether or not there had been an occurrence of an illegal shipment or whether the state of knowledge was considered insufficient. Detailed statements from Member States such as Finland, Germany, Ireland and the United Kingdom suggest that this is an important point for future improvements (cf. Section B, Table 9).

All of the responding Member States reported extensively on measures to prevent waste generation. Measures focused primarily on legislation, followed by national strategies (cf. Section B, Question 5). Measures taken to reduce waste shipment were less frequent (cf. Section B, Question 6, and Section E). Essential administrative data were complete and accurate throughout (cf. Section B, Questions 4, 7, Tables 1, 2, 3, Section C, and Section E).

The survey revealed no significant differences between EU-15 (the 15 "old" Member States) and EU-10 with regard to completeness, timeliness and quality of their annual reports.

3. GENERATION OF HAZARDOUS WASTES

The Basel Convention questionnaire asks all countries to provide information on the total amount of hazardous wastes and "other wastes" generated. "Other wastes" in this context means wastes collected from households, and residues arising from the incineration of household wastes - which are two categories of wastes requiring special consideration and being subject to similar controls as hazardous wastes under the Basel Convention (Annex II to the Convention, entries Y46 and Y47)⁴. Hazardous wastes are defined according to a list of waste streams and/or constituents (entries Y1-18 and Y19-45) and certain hazard characteristics (Annex III). However, if waste is considered as hazardous by the domestic legislation of an export, import or transit state, it also falls under that definition for the purposes of the Convention.

All Member States except for Malta have supplied information on total generation of hazardous waste. Compared to the first Commission report, data on waste generation have improved (cf. Section A, Table 1); supplementary data and extrapolations were largely avoided.

As in previous years, Germany had the largest quantities of hazardous waste. The noticeable increase up to a steady annual amount of about 19 million tonnes since 2002 is related to the implementation of the new European waste list. During the period 2001-2006, Germany, Estonia, France, Italy and the United Kingdom produced the largest amounts, while quantities rose significantly in the Netherlands and Belgium (cf. Section A, Table 1). In terms of waste generation per capita Belgium and the Netherlands were once again on top in 2005; taken over a longer period, Germany and Finland are in the lead. The lowest quantities per capita were recorded in Latvia, Lithuania, Portugal and Greece (cf. Section A, Table 2).

The chronological development is difficult to assess, since some Member States reported major increases in 2001-2006. Such developments do not necessarily reflect a real growth in waste production; they can also be related to changes in waste legislation. The arithmetical increase in the amount of hazardous waste generated by EU-15 between 2000 and 2005 is 22% (corresponds to 4% p.a.), whereas it is only 10% for the Community (EU-25) as a whole.

⁴ See Section D of the accompanying working document

The available data also indicate that the amount of hazardous waste generated within EU-25 was not significantly greater than in 2002. The EU-25's hazardous waste generation per capita was approximately 140 kg per year (complete tables are available for 2003 and 2005 only), with a higher average in the new Member States.

The Y-codes for waste under the Basel Convention were used very differently by Member States; an international comparison is therefore not meaningful (cf. Section A, Table 3, for selected examples). Some Member States, such as Denmark and Lithuania, almost exclusively reported wastes collected from households (Y46) and residues arising from the incineration of household wastes (Y47).

4. SHIPMENT OF HAZARDOUS WASTES OUT OF MEMBER STATES

Transboundary shipment of waste has to cope with the potentially conflicting principles of proximity of waste generation and treatment, self-sufficiency at Community and national levels, and reliable waste disposal. Not all Member States have sufficient capacity to deal with their own waste (cf. Section B, Tables 2 and 3). Some specific waste streams require specialised treatment facilities for environmentally sound recovery or disposal. Therefore, data on transboundary shipment of hazardous waste between the EU Member States are an indicator of the level of waste management within the Community.

All Member States apart from Malta have submitted information on outbound shipment ("exports" within the meaning of the Basel Convention) of hazardous waste for at least four years within the period 2001-2005; data for 2005 are complete. The data now available for 1997-2000 indicate that the corresponding figures in the first Commission report were too high. This can be explained by the more comprehensive data pool, as well as corrections made by the Member States.

Shipment of hazardous waste out of Member States shows a clear trend. From 1997 to 2001 the quantity doubled, and it almost doubled again from 2001 to 2005. The total amount for the EU-25 was 5.6 million tonnes in 2005, with the share shipped out of the EU-10 being only a marginal 3% (cf. Section A, Table 4).

In 2005, the biggest "exporter" by far was the Netherlands, which saw its "exports" rising from 241,000 tonnes in 1997 to 2.6 million tonnes in 2005. Second was Belgium, followed by Italy, France and Ireland. Germany, which was ranked first in 1997 with 601,000 tonnes, has recently reported steady or even slightly decreasing amounts. Shipments out of Germany in 2005 were 70% lower than in 1997. The Netherlands is also in the lead regarding outbound shipment of waste in kg per capita; runners-up are Luxembourg, Belgium, Ireland and Lithuania (cf. Section A, Table 5).

The first Commission report stated that smaller countries would ship more of their hazardous waste abroad, as they did not have sufficient treatment facilities. However, the last few years have not shown any kind of clear trend for the EU-25. The Czech Republic, Estonia, Greece, Latvia, Poland and Slovakia shipped significantly low per capita quantities in 2005, while Italy's "exports" have been steadily increasing.

In 2005, 91% of the Community's hazardous waste was treated in the country of origin. The countries with a very high "export" rate of approx. 50% were Luxembourg, the Netherlands, Belgium, Ireland (cf. Section A, Figure 6), and potentially Portugal (cf. Section A, Table 1 for the years 2001 and 2003).

Unlike the findings of the previous Commission report for the period 1997-2000, the period from 1997 to 2005 indicated that the share of notified shipments out of both EU-15 and EU-

25 for "other waste" within the meaning of the Basel Convention (i.e. mixed household waste and incineration residues) ranged between 40% and 50% (cf. Section A, Tables 4 and 7).

As regards the categories of waste in terms of the Y-codes under the Basel Convention, it must be pointed out that many Member States specified their "exported" wastes more exactly than in previous years. The mixture of Y-codes ("mix") remained virtually unused. Waste without a specification ("not classified") was shipped out of Germany and Ireland (accounting for over 50% of their shipments in 2005), the Netherlands, France, Italy and Denmark (cf. Section A, Figure 9 and Table 9).

Specific data from ten EU-15 countries on outbound waste shipments assigned to Y-codes show that the temporary increase of "not classified" waste between 1997 and 2000 did not continue and was even reversed, whereas the group Y1-18 has increased steadily since 1997, and in 2004/2005 already represented the biggest "export" fraction (cf. Section A, Figure 10 and Table 10).

The bulk of the hazardous waste and other waste shipped out of Member States (both EU-15 and EU-25) was treated in a recovery operation (cf. Section A, Tables 11 and 12). In 2004 and 2005, 78% of the EU-15's shipped waste was recovered. High percentages and total amounts of waste shipped abroad for recovery came from the Netherlands, Germany, Belgium and France. In 2005, Portugal, Greece, Slovenia and Denmark shipped their wastes predominantly for disposal, although only the large quantities from Denmark are relevant for EU statistics. Italy shipped more than 1 million tonnes of waste abroad, 45% of it for disposal. However, the share of "exported" waste for recovery vs. disposal is not a direct indicator of a Member State's level of waste management, as most of the waste is treated in the country of origin (e.g. Italy 2005, 90%).

As already mentioned in the first Commission report, shipment of hazardous waste out of Member States is restricted. Exports of waste for disposal to non-EU/EFTA countries and of hazardous waste for recovery to non-OECD countries are prohibited under the new Waste Shipment Regulation⁵. In their reports to the Basel Convention Secretariat, the Member States provided information on the country of destination for the exported hazardous waste. According to these reports, the vast majority of the hazardous waste and other waste shipped across borders from 1997 to 2005 went to other EU Member States. In the period 2000-2005, more than 90% of the shipped waste remained within the EU-15; at least 98% of the EU-15's shipments since 2001 were destined for EU-25 and EFTA countries (cf. Section A, Table 14). This means that the principles of proximity and self-sufficiency have grown in popularity during the past few years.

The situation in the new Member States is difficult to assess because of the considerably smaller amounts of shipped waste (cf. Section A, Table 7), and the shorter monitoring period. Although on average the majority of shipments out of the EU-10 in 2000-2005 went to EU-15 countries, a remarkably high percentage of shipments also went from EU-10 to non-OECD countries. Future analyses will show whether there has been a reverse trend since the EU-10's accession (as 2004/2005 data indicate) and whether waste shipment to the EU-25 is on the increase.

5. SHIPMENT OF HAZARDOUS WASTES INTO MEMBER STATES

All Member States apart from Cyprus, Lithuania and Malta have submitted information on inbound shipment ("imports" in the Basel sense) of hazardous waste, although the overall data

⁵ See footnote 1.

quality was clearly lower than for the "exports" level. Little information is available for the new Member States, although the data for 2005 are complete (except aforementioned countries). In parallel to the shipments out of Member States, the quantity of hazardous waste shipped into Member States also increased. Reported total amounts of "imports" were always one third below "exports", although a comparison of the data indicates that the available "import" data are plausible. As in the case of outbound shipments, the EU-10 countries play a lesser role (cf. Section A, Table 15). In 2005, 3.5 million tonnes of hazardous waste were reported as shipped to the EU-25.

Over the period 2000-2005, the EU countries with the largest quantities of hazardous waste taken from abroad were Germany, Belgium, France and the Netherlands. Their share of the total waste shipped to the Community in 2005 was 80%. In 2004, German "imports" exceeded 1 million tonnes for the first time. Belgium is in the lead as regards inbound shipment of hazardous waste per capita; it is followed by the Netherlands, Sweden, Germany and Denmark (cf. Section A, Table 16). Amongst Member States with lower "import" quantities, the smaller countries predominate, presumably due to a lack of capacity for disposal.

The shipments of "other waste" into the Community have taken the lion's share since 1999 (cf. Section A, Tables 15 and 17). Some 78%, i.e. 4.6 million tonnes, of all waste shipments to Germany in 2005 were classed as "other waste". Unlike the EU-25 figures for "imports" and "exports" of hazardous waste alone, the corresponding figures for hazardous waste and "other waste" combined compare very closely with each other (cf. Section A, Tables 5 and 15 vs. Tables 7 and 17).

As regards the Y-codes of waste shipped to Member States, waste without specification ("not classified") predominated; the mixture of Y-codes ("mix") again remained virtually unused. Waste without specification was shipped mainly to Germany, Italy, France, Sweden and the United Kingdom. In 2005, "not classified" waste made up approx. 60% of all shipments to the Community, Y1-18 20%, Y19-45 13%, and Y46-47 6% (cf. Section A, Table 19). The large quantity of "not classified" waste suggests that the Y codes contained in Annex I to the Basel Convention are not sufficient to describe every possible stream of hazardous waste. For this reason, the Conference of the Parties to the Basel Convention considered in its Decision IV/9 that the codes in list A of Annex VIII and in list B of Annex IX to the Basel Convention provide an efficient means of facilitating the implementation of the Convention, while the Basel questionnaire provides the possibility of reporting these codes. Moreover, in their Decision VIII/15, the Parties to the Convention agreed on a procedure for the review, or adjustment, of the aforementioned lists, if necessary.

Data from ten Member States on inbound waste shipments assigned to Y-codes show a relatively steady increase for all groups in the years 1997-2005. The largest increase was seen in the "not classified" waste group. This group accounted for more than half of all "imports" since 2001, mainly due to the amounts of not classified waste shipped to Germany.

The major part of the waste shipped into Member States was treated in a recovery operation. In 2001-2005, the recovery rate was even higher than in previous years; on average, 85% of waste shipped into the EU-15 was recovered, adding up to a total amount of about 40 million tonnes (cf. Section A, Table 21). The inbound shipments of waste for disposal likewise increased, although starting from a much lower level.

The available data show significant differences between Member States as regards the percentage of recovery vs. disposal (cf. Section A, Figure 22). In 2005, approx. 38% of the waste shipped to Austria was intended for disposal, whereas in Finland, Luxembourg and Spain the figure was actually in excess of 50%. Germany, with 631,000 tonnes, reported the highest amount of "imported" waste for disposal, although this accounted for only 13% of

Germany's waste "imports" in 2005. The aforementioned high figures for disposal may be due to particular treatment facilities in the "importing" countries.

As mentioned in the first Commission report, shipment of hazardous waste into Member States is subject to certain restrictions, although these are less rigorous than the restrictions on exports. In their reports the Member States provided information on the country of origin of the imported hazardous waste.

According to these reports, in the years 1997-2005 by far the majority (89% average for EU-15) of waste shipped to the Member States came from other Member States. This rate changed only marginally over the period as a whole. At least 96% came from EU-25 and EFTA countries, while only 1% came from non-OECD countries (cf. Section A, Table 24). This is in line with the principles of proximity and self-sufficiency at Community level.

6. SUMMARY AND RECOMMENDATIONS

On the basis of the reports received from the Member States, the following conclusions can be drawn:

• Reporting

Member States have generally submitted sufficient information on waste shipments within, out of and into the Community. The response rate for both questionnaires was around 70%. A relatively large number of replies to the Basel questionnaire were flawed. Most of the reports were supplied 1 to 2 years after the reference year. Apparently, Member States did not regard Article 41(1) of the Regulation as a statutory time limit.

The problems encountered with the transmission and evaluation of the quantitative data point to a need for a more standardised approach to collection and transmission, comparable to the requirements of the Waste Statistics Regulation. There were no major differences between EU-15 and EU-10 with regard to their reporting, although very little information on inbound shipments is available for EU-10.

• Data quality

The quality of responses was variable. With a few exceptions, reporting on incidents/accidents and/or illegal shipments was inadequate. Future improvements in this field seem to be vitally necessary.

The overall data quality for waste "exports" was higher than for "imports"; however, a comparison of the data indicates that "import" data are also feasible. Data for 2001-2006 are significantly better than for the previous period.

• Waste classification

Member States used the Y-codes for waste under the Basel Convention very differently, and a significant amount of "not classified" waste was reported. Member States used codes from the two different systems of waste classification interchangeably (European waste legislation vs. Basel Convention).

• Waste generation

The chronological development over the period 2001-2006 is difficult to assess, since some Member States reported major increases due to changes in waste legislation. The amount of hazardous waste generated by EU-15 rose by 22% in 2000-2005, i.e. by 4% per annum. Available data indicate that the amount of waste generated within EU-25 has not increased significantly since 2002.

- **Waste shipment**

From 1997 to 2001, shipments of hazardous waste out of Member States doubled and from 2001 to 2005 they almost doubled again. The total amount for the EU-25 in 2005 was 5.6 million tonnes. Despite this increase, 91% of the Community's hazardous waste in 2005 was treated in the country of origin. Inbound shipments increased in similar fashion. According to their reports, the EU-10 countries play a minor role in waste shipment.

The major part of the shipped waste was treated in a recovery operation. In 2001-2005, an average of 85% of the waste shipped into the EU-15 was recovered, i.e. approx. 40 million tonnes. The few major EU-15 "imports" for disposal were due to the existence of particular treatment facilities in the "importing" countries.

From 1997 to 2005, the vast majority of waste shipments took place within the EU's borders. In 2000-2005, more than 90% of the shipped waste remained within the EU-15; at least 98% of the EU-15 shipments since 2001 went to EU-25 and EFTA countries. The data for inbound shipments indicate that 96% of all EU-15 "imports" came from EU-25 and EFTA countries, while only 1% came from non-OECD countries.