

Waste without frontiers II

GLOBAL TRENDS IN GENERATION AND TRANSBOUNDARY MOVEMENTS OF HAZARDOUS WASTES AND OTHER WASTES

ANALYSIS OF THE DATA FROM NATIONAL REPORTING
TO THE SECRETARIAT OF THE BASEL CONVENTION
FOR THE YEARS 2007 - 2015



BASEL CONVENTION



environment



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Waste without frontiers II



Foreword



This second version of the publication Waste without frontiers, provides a story with numbers and their meaning in relation to the Basel Convention. It shows trends and provides an analysis of information provided by Parties to the Basel Convention, through their national reports, in the areas of transboundary movements (imports/exports) and generation of hazardous and other wastes.

Through this analysis, we can see that the generation of hazardous wastes has increased worldwide in recent years, and that most of the hazardous wastes generated are staying closer to or at their place of origin. At the same time, we can see the trends in imports and exports of hazardous and other wastes, with the latter having a relevant increase in the last years. Last but not least, the analysis also provides information on the movements of some relevant specific waste streams, such as ULAB, mercury waste and waste oils.

Analysis such as this one are important, to highlight efforts made by Parties to implement the Convention as well as their positive results towards achieving the objectives of the Convention.

If you would like to know who the main exporters and importers of hazardous wastes in the world are, and what is happening with household waste, all you need to do is turn over the page to find the answers in this publication. I hope you enjoy the reading.



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The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (hereafter the 'Convention') is the most comprehensive global environmental agreement on hazardous wastes and other wastes. The Convention entered into force on 5 May 1992 and had 186 Parties in June 2018. It aims to protect human health and the environment against the adverse effects which may result from the generation and management of hazardous wastes and other wastes.

Parties to the Convention have an obligation under its Article 13 to transmit information, on an annual basis, in a format adopted by the Conference of the Parties and through the Secretariat of the Convention (hereafter the 'Secretariat') to the Conference of the Parties. This is referred to as "national reporting". The Secretariat has developed procedures and processes to systematically collect, process and disseminate the data and information contained in these national reports. These procedures and processes have also been adopted and further revised by decisions of the Conference of the Parties.

This document is the second analysis of the data transmitted under Article 13 and covers the period between 2007 and 2015. The national reports submitted by Parties are available on the web site of the Convention (<http://www.basel.int/Countries/NationalReporting/NationalReports/tabid/4250/Default.aspx>). The previous analysis covered the period from 2004 to 2006 (which is available from page: (<http://www.basel.int/Countries/NationalReporting/Guidance/tabid/1498/Default.aspx>)).

The reports submitted by Parties to the Basel Convention, which are the basis of the analysis, show large gaps in the data on generation of hazardous and other wastes. In addition to the lack of data provided by about half of the Parties, the data between Parties are very difficult to compare, due to differences in national definition of hazardous waste and differences in measuring and reporting systems. Even the time series of the same Party can show extremely large differences over the years. In most cases Parties do not provide information about the background of such marked differences and these are therefore unexplained. To prepare the analysis of the data on generation, the information provided under the Basel Convention was complemented with data from the UN Statistics Division, the Organization for Economic Cooperation and Development (OECD) and Eurostat. By complementing the data in this manner, it was possible to develop an estimate of the amount of hazardous waste and other waste generated globally.

The dataset on transboundary movement is expected to cover the vast majority of the transboundary movements. However, in addition to the lack of data provided by about half of the Parties, the data between Parties are sometimes not comparable for instance because some include information on movements outside the scope of the Convention. An attempt has been made to exclude such



data from the analysis, but this is not always possible because Parties do not indicate the status of the information very clearly.

Nevertheless, there are some interesting conclusions that can be drawn from the analysis.

- Only 50% of the Parties fulfill their obligation and transmit their reports in a given year. Quantitative information on the generation of hazardous wastes and other wastes is provided in only 25-30% of these reports. These percentages have not increased significantly despite the calls of the subsequent meetings of the Conference of the Parties (COP), the efforts of the Committee administering the mechanism for promoting the implementation and compliance of the Basel Convention (hereafter the 'Implementation and Compliance Committee') and the Secretariat. The revised reporting format to be used as for the year 2016 provides that the submission of such information has become optional.
- The generation of hazardous waste is estimated to have increased from 256 – 259 metric ton (MT) in 2007 to 390 – 394 MT in 2015. The most significant increases were seen in lower middle income and higher middle income countries.
- The amount of household waste that is generated worldwide in 2015 is estimated to be around 1,6 billion MT¹. The amount has increased around 12%

in the period 2007 – 2015. In particular in upper-middle income countries the increase was large and these countries generated in 2015 nearly the same amount of household waste as the high income countries.

- Between 2007 and 2015 the volume of transboundary movements increased from 9,3 to 14,4 million MT. This growth is mainly driven by an increased transboundary movements of household waste. The flow of hazardous wastes is more or less stable over the period. The amount is also more or less the same as in 2004 – 2006, even though the data for that period are not totally comparable with the current data.
- Based on the comparison of data on generation and on transboundary movement per country it can be estimated that overall, 97% of all hazardous waste that is generated stays within the country where it is generated and this percentage remains stable over the years. The high income countries export a higher percentage of the hazardous waste generated as they export nearly 6 percent of it. In the lower-income countries, export represents less than 0,5% of the hazardous waste generated. The situation however differs considerably per country, with some countries exporting the majority of their hazardous waste. These are often small countries which may have more difficulties setting up infrastructure to treat their own hazardous waste.

¹. This analysis uses the comma ',' to indicate decimals and the point '.' as 1000 separator.

This document provides an overview and analysis of data Parties have submitted in their national reports under the Basel Convention concerning the years 2007 to 2015. In 2010 the Secretariat published a similar analysis on the data for the period 2004 to 2006. The current document follows the same structure as the previous analysis. It presents the results for the new reporting period and where possible compares these with the results of the previous analysis. It starts with a short overview of the Basel Convention and explains the most important concepts used.

The Basel Convention

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, which entered into force in May 1992 and in June 2018 had 186 Parties, aims to achieve the following principle objectives:

- **Reduce** transboundary movements of hazardous wastes and other wastes to a minimum, consistent with their environmentally sound management;
- **Dispose** of hazardous wastes and other wastes as close as possible to their source of generation;
- **Minimize** generation of hazardous wastes in terms of quantity and degree of hazard.

Parties commit themselves to, amongst other obligations, a control system regulating transboundary movements of hazardous wastes and other wastes. Its aim is to ensure that wastes are only moved across borders when necessary,

with the prior informed consent of all Parties involved and only when their environmentally sound management is assured. Parties also need to take appropriate legal, administrative and other measures to implement and enforce the Convention, including to minimize the generation of these wastes and ensure adequate facilities for their environmentally sound management.

Parties also cooperate and exchange information about the generation and transboundary movements of hazardous and other wastes. The Secretariat receives, processes, compiles and makes available this information to all interested stakeholders on an annual basis.

This analysis is based on the data that were reported by Parties and which are available on the website of the Convention in the section on national reporting. In some cases it was complemented with information from the UN Statistics Division, OECD and Eurostat².

Specifically, this summary and analysis addresses:

- trends and highlights relating to the generation of hazardous and other wastes, including indicators of waste generation;
- trends in the volume of hazardous and other wastes subject to transboundary movements;
- main countries of import and export;
- examples of patterns related to a selection of some specific types of hazardous wastes subject to transboundary movements;
- main types of disposal operations;
- flow analysis of hazardous wastes between different groups of countries according to their legal status within the Convention (Parties or non-Parties), between countries in specific regions and between countries with differing income levels;
- balances of hazardous wastes for countries and regions.

Prior to presenting the findings of this analysis, some key concepts and definitions are explained and some further information on the national reporting system under the Convention is provided.



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2. The datasets from these organizations were obtained in august 2017.

Chapter > 2 Key definitions, concepts and the reporting system

2.1 DEFINITIONS AND CONCEPTS USED

In this document, a number of definitions and concepts are used to describe patterns and trends in generation and transboundary movements of hazardous and other wastes. These definitions and concepts, as well as their basis, are briefly explained in this section.

● 'Hazardous wastes' and 'other wastes'

The Convention uses specific terminology when describing wastes that are covered by it. The most important terms are 'hazardous wastes' and 'other wastes'.

The Convention defines **hazardous wastes** in Article 1.1 as:

- (a) Wastes that belong to any category contained in Annex I, unless they do not possess any of the characteristics contained in Annex III; and
- (b) Wastes that are not covered under paragraph (a) but are defined as, or are considered to be, hazardous wastes by the domestic legislation of the Party of export, import or transit.

Hazardous wastes as defined in Article 1.1.a refers to specific categories of wastes (listed in Annex I of the Convention) such as waste pharmaceuticals, drugs and medicines (Y3) or waste mineral oils unfit for their originally intended purpose (Y8). Unless wastes from these categories do not possess any of the hazardous characteristics (listed in Annex III), such as being toxic or flammable, they are considered to be hazardous wastes under the Convention. This is therefore the globally harmonized part of the definition of hazardous wastes. In this document, these wastes are referred to as 'Article 1.1.a. wastes'. These wastes are also further clarified, detailed and defined within the Annexes VIII and IX of the Convention.

Article 1.1.b indicates that wastes other than those described above and which are defined or considered under national legislation as hazardous wastes are also hazardous wastes under the Convention. These wastes are not necessarily considered as hazardous by all Parties, but once a Party notifies the Secretariat of national legislation with such provisions or definitions, the control procedures of the Convention are applied in an adjusted manner to all transboundary movements involving the notifying Party e.g. notifications and consents for transboundary movements of such 'national' hazardous wastes. This inclusion of nationally defined hazardous waste provides for an additional safeguard for protection of human health and the environment under the Convention. For the interpretation of the data submitted to the Secretariat, this means that different Parties which apply different definitions may report different data on 'hazardous wastes' that may not be totally comparable. When interpreting these data, therefore, some caution must be applied. These wastes are hereafter referred to as 'Article 1.1.b wastes'.

For **other wastes** Article 1.2 specifies that wastes that belong to any category contained in Annex II that are subject to transboundary movement shall be 'other wastes' for the purposes of the Convention. Annex II contains two categories of waste: wastes collected from households and residues arising from the incineration of household wastes. These 'other wastes' are not (necessarily) hazardous wastes, that is, they do not necessarily fall within the abovementioned definitions of hazardous wastes.

Disposal

Disposal refers to the operations that are specified in Annex IV of the Convention. This Annex consists of two parts:

- Annex IV A lists the operations which do not lead to the possibility of resource recovery, recycling, reclamation, direct re-use or alternative uses. These operations are identified with codes D1 - D15. In this document, these operations are referred to as **final disposal** operations.
- Annex IV B lists the operations which may lead to resource recovery, recycling, reclamation, direct re-use or alternative uses. These operations are identified with codes R1 - R13. In this document, these operations are referred to as **Recovery** operations. **Recycling and reuse** are specific forms of recovery that are identified with the codes R2 - R11.

● Parties and countries

In June 2018 there were 185³ countries and one 'Political and/or economic integration organization' that are Parties to the Convention. In 2007 at the beginning of the period covered in the analysis, the number of Parties was 170 and in 2015 183. As a general rule, only Parties are bound by the Convention's provisions and therefore only Parties have obligations to transmit data. However, the datasets on transboundary movements also contain information concerning countries that are not Parties to the Convention, e.g. if a Party authorized to do so has imported waste from or exported waste to such countries. In this analysis, the term 'countries' is used to refer to states regardless of whether or not they are Parties to the Convention at the time of publication. The term 'Parties' is only used if a specific reference is made to those that are bound by the Convention.

● Annex VII countries and non-Annex VII countries

Annex VII is an integral part of the amendment to the Convention adopted by the third meeting of the Conference of the Parties (hereafter the 'Ban Amendment') which is yet to enter into force at the time of the publication of this analysis. The Ban Amendment provides that Parties listed in Annex VII (members of the Organisation for Economic Cooperation and Development (OECD), European

Union (EU), Liechtenstein) prohibit all transboundary movements of hazardous wastes to States not listed in Annex VII. During the period covered in this document, both the OECD and the EU have welcomed additional member States, therefore the geographical coverage of the Annex has changed.

A number of Parties, including the EU and its member States, are already implementing the Ban Amendment under measures adopted at the national or regional levels. These Parties apply the Ban Amendment when they receive notifications of proposed transboundary movements of hazardous wastes.

For this analysis, an overview was made of transboundary movements amongst and between these Annex VII and non-Annex VII countries. Countries that changed status during the period covered in the analysis were considered to be part of Annex VII from the year following their accession to the OECD or the EU.

● Regional groups of countries

For the purpose of analysing geographical patterns of transboundary movements while also taking into account countries according to Annex VII (OECD and EU), this analysis will present information based on the table 1 below.

There are two other international Conventions that relate to transboundary movement of hazardous waste. The Bamako Convention⁵ is a treaty of African

Table 1 Delimitation of regions as used for the regional analysis of transboundary movements

Region	Remarks
Africa	All African countries
America OECD	United States of America, Canada, Mexico and Chile (for the data from 2011 onwards)
America non OECD	Non-OECD members in Latin-America and the Caribbean
Asia OECD	Japan, Republic of Korea and Israel (for the data from 2011 onwards)
Asia non OECD	Non-OECD Asian countries with the exception of the countries that previously were part of the former Soviet Union ⁴
Europe EU/OECD	EU and OECD members in Europe and Turkey
Europe non EU / OECD	Non-EU or OECD European members, and the countries that previously were part of the former Soviet Union
Pacific OECD	Australia and New Zealand
Pacific non OECD	Non-OECD countries in the Pacific

3. The European Union approved the Convention and therefore is also a Party.

4. Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Republic of Moldova, Russian Federation, Tajikistan, Turkmenistan, Ukraine and Uzbekistan.

5. Bamako Convention on the Ban of the import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa (<https://www.unenvironment.org/explore-topics/environmental-governance/what-we-do/strengthening-institutions/bamako-convention>)

nations prohibiting the import into Africa of any hazardous (including radioactive) waste. In the South Pacific region, the Waigani Convention⁶ has implemented a control regime for hazardous waste modelled on the regime established by the Basel Convention and also establishes an importation ban for hazardous waste and radioactive waste into the region.

Units

The amounts as reported to the Secretariat are reported in metric tons in the report abbreviated with MT. For the numbers the point '.' is used as 1000 separator and the comma ',' to indicate decimals.

Country groups according to level of income

The patterns of transboundary movements based on the income level of the countries involved were also studied. The countries were classified according to the categories of income level established by the World Bank⁷. Economies are divided according to Gross National Income (GNI) per capita data, calculated using the World Bank Atlas method. In this analysis the categories based on the GNI data of 2016 are used. The groups are: low income, GNI per capita was USD 1.005 or less; lower-middle income, GNI per capita was USD 1.006 - USD 3.955; upper-middle income, GNI per capita was USD 3.956 - USD 12.235; and high income, GNI per capita was USD 12.235 or more. For the analysis of transboundary movements, the high income countries were split between Annex VII and non-Annex VII countries.

A list of countries with the different classifications that have been used for them in this analysis are included in Annex 1.

2.2 REPORTING SYSTEM AND COVERAGE

One of the obligations of the Parties to the Convention is to transmit certain information related to the implementation of the Convention. Pursuant to paragraph 3 of Article 13, Parties are required to transmit annual national reports to the Conference of the Parties through the Secretariat. Parties are required to include the following information in these reports on:

- competent authorities and focal points that have been designated by them;

- transboundary movements of hazardous and other wastes in which they have been involved;
- measures adopted by them in implementation of the Convention;
- available qualified statistics which have been compiled by them on the effects on human health and the environment of the generation, transportation and disposal of hazardous or other wastes;
- bilateral, multilateral and regional agreements and arrangements entered into;
- accidents occurring during the transboundary movement and disposal of hazardous and other wastes and on the measures undertaken to deal with them;
- disposal options operated within the area of their national jurisdiction;
- measures undertaken for development of technologies for the reduction and/or elimination of production of hazardous and other wastes; and,
- such other matters as the Conference of the Parties shall deem relevant.

Parties complete a questionnaire, the format and content of which was adopted by the sixth meeting of the Conference of the Parties, and enhanced in further COPs, on an annual basis. After carrying out basic quality control, the Secretariat compiles the information transmitted and makes it available on the Convention website (<http://www.basel.int/natreporting/index.html>). The online reporting database of the Convention provides access to data and information contained in the national reports and is also accessible through the Convention website (<http://www.basel.int/Countries/NationalReporting/NationalReports/tabid/4250/Default.aspx>)⁸

This present analysis is limited to consideration of the following elements of the national reporting as they contain quantitative information:

- Information on the generation of hazardous and other wastes;
- Information on transboundary movements of hazardous and other wastes.

Generation of hazardous and other wastes

The amount of information on the generation of hazardous and other wastes received via national reporting is limited. It consists only of information on the total amount of wastes generated for the following categories:

- The total amount of hazardous wastes according to Article 1.1.a of the Convention, as well as amounts of the categories of wastes as specified in Annex I to the Convention;
- The total amount of hazardous wastes according to Article 1.1.b of the Convention;
- The total amount of 'other wastes' according to Annex II to the Convention, as well as of the categories of wastes as specified in this Annex.

The data as transmitted by Parties on generation of hazardous and other wastes

in tables 8A and 8B of the reporting format valid until the year 2015⁹ are largely incomplete. Furthermore, as the Parties that report may differ from year to year for the reporting period 2007-2015, the total amounts reported cannot be compared as such. How this was addressed in this analysis will be explained in the next section.

Transboundary movements of hazardous and other wastes

Reporting of information on transboundary movements is mandatory under the Convention (Article 13). This information contains a number of elements:

- Geographical information: the state of export and import and, if applicable, states of transit;
- Information about the hazardous and other wastes: type, quantity, category and characteristics;
- Disposal: the type of disposal operation the hazardous and other wastes underwent in the state of import;
- Other: Disposals which did not proceed as intended, efforts to reduce the amount of wastes subject to transboundary movements.

The format in which these data are transmitted is standardized. However, a number of aspects of these data have to be taken into account when analysing them. The main issues are:

- Not all Parties report;
- There are differences in national definitions of hazardous wastes;
- There are differences in national reporting systems at the domestic level.

These issues are explained in more detail in Annex 3 of this document.

This analysis focuses on information reported by Parties in tables 6 and 7 of the reporting format valid until the year 2015. Information transmitted by Parties within the reports on transboundary movements that did not proceed as intended and statistics on human health or the environment has not been analysed.

6. Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movement and Management of Hazardous Wastes within the South Pacific Region (<https://www.sprep.org/convention-secretariat/waigani-convention>)

7. Information on the Country Classification as used by the World Bank can be found on the website of the Bank: www.worldbank.org in the section 'Data and statistics'. The latest rankings of countries according to this classification can also be found on that section of the website on page <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups>.

8. National reports are also linked with the transmission of other notifications of legal information in accordance with Parties' obligations under the Convention and which can be communicated at any time through the Secretariat, however these notifications go beyond the scope of this analysis.

9. The National report format has been changed at COP-12, which implies that data submitted for the years 2016 and onwards are organized in a different way than for the years covered in this analysis.

Chapter > 3 Level of reporting by Parties

Transmitting an annual report is an obligation under the Convention. However, there is a significant number of Parties that do not report or that transmit incomplete reports. In the context of this analysis, the coverage of data on generation and transboundary movements of hazardous wastes and other wastes is a key issue. Table 2 provides an overview of the number of Parties that transmitted a report in the given year and how many of these reports contained quantitative information on generation and transboundary movement. It is likely that the figures for 2015 will still increase because some Parties transmit their reports very late.

As mentioned above, on average only around 50% of the Parties meet their obligation to report. There are some signs of improvement in the last 2 years, but the level of reporting is still very low.

The level of reporting on waste generation is the lowest with only 25 – 30% of the Parties providing information in their national reports. The level of reporting has also not increased significantly, despite the calls from the COP and the efforts of the Implementation and Compliance Committee and the Secretariat. In light of these gaps, the coverage of the data in the dataset does not allow for a meaningful analysis of the global trends and therefore this analysis also uses additional data sources, as specified below, to complement the dataset presented in the next section.

For transboundary movement it is possible that Parties would not have any imports and exports and therefore do not report on this. The level of reporting in this respect has been increasing over the last 3 years, after a decrease in the level reporting to the lowest observed in 2012. The efforts of the Implementation and Compliance Committee will have contributed to this increase, but significant progress is still needed. The number of Parties reporting imports is lower than the number of Parties reporting exports. This reflects the situation that a lot of Parties either have prohibited imports or do not have facilities for environmentally sound management for certain waste types. The level of coverage of the data is such that it does not allow for a meaningful analysis of the global trends and patterns.

Table 2 Overview of the number of Parties that transmitted reports and quantitative data included in these reports

Status	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total number of Parties*	169	171	171	174	177	178	179	180	182
Number of reports transmitted	102	84	96	88	89	89	90	98	87
Reporting generation of hazardous wastes	56	52	52	48	38	50	50	57	50
Reporting generation of other wastes	42	43	46	38	38	42	45	47	44
Reporting imports	40	37	47	42	34	30	38	43	41
Reporting exports	71	63	68	65	56	50	68	63	68

* The number of Parties that are required to transmit a report in the given year; the member states to the EU that are Parties are included but the EU is not counted in addition to those member states.



The information regarding hazardous wastes has been analysed separately from the information on other wastes.

4.1 GENERATION OF HAZARDOUS WASTES

Generation of hazardous wastes is a reflection of the production and consumption patterns within a country: the industrial processes resulting in wastes that contain hazardous substances and the consumption of goods containing such substances. Data on the generation of hazardous and other wastes are provided to the Secretariat in national reports transmitted by Parties as their obligation under the Convention. Table 3 presents the data as reported for the years 2007 to 2015.

The reported amounts in 2007, 2009 and 2010 are dominated by the data from one Party that reported very high amounts in these years (146 million MT in 2007, 453 million MT in 2008 and 665 million MT in 2009). The reported amounts in 2014 are dominated by the data reported by one Party that reported very high amounts in these years (over 5 billion MT in 2014). The same Party also reported very small amounts in 2011 and 2012 (4 and 5 thousand MT respectively) and did not report in the other years.

Due to the relatively limited number of Parties reporting and the apparent differences in classification systems and reporting frequency of Parties it is not possible to rely exclusively on the data as reported for estimating the total amount of hazardous waste generated globally or for detecting any trends over the years. Additional sources of information were needed to identify and analyse possible trends in the generation of hazardous wastes.

4.2 COMPLEMENTARY INFORMATION ON THE GENERATION OF HAZARDOUS WASTES

To allow for a better analysis, the dataset obtained from the Basel Convention national reports was complemented with other data sources. This was done in 4 steps:

1. Inclusion of data from other data sources;
2. Filling gaps in the years of reporting via interpolation and extrapolation and assessing the trends per country to identify implausible data;
3. Calculation of indicators per group of countries, based on income level and population;
4. Estimation of the amounts generated by countries not included in the dataset based on the indicators of item 3, above.

Additional data sources

Three sources of authoritative international data were used to complement the dataset:

Table 3 Generation of hazardous wastes (in million MT) as reported to the Secretariat for the years 2007 to 2015.

	2007	2008	2009	2010	2011	2012	2013	2014	2015
Hazardous waste generated (Million MT)	284	119	668	771	115	116	105	5.328	268
Number of Parties reporting	56	52	52	48	38	50	50	57	50

Table 4 Average generation of hazardous waste in countries from different categories of income level (in kg per year per inhabitant)

Category of income level	2007	2008	2009	2010	2011	2012	2013	2014	2015
Low Income	20	19	19	19	19	18	17	12	13
Lower-middle income	21	19	20	21	24	24	29	41	41
Upper-middle income	17	20	26	39	42	42	41	42	42
High income	139	148	140	138	134	142	140	135	136
Global average	41	43	45	50	52	53	54	58	58

- Data reported to the Eurostat, the statistical office of the EU (covering both hazardous wastes and other wastes)¹⁰;
- Data reported to the OECD secretariat (covering other wastes only)¹¹;
- Data reported to the UN Statistics Division (covering hazardous wastes and other wastes)¹².

The Basel Convention dataset had information on generation of hazardous waste for 96 Parties. Only 15 of those have reported data for each year within the period considered. For others the data for one or several years were missing. Using data from the other sources allowed mainly to fill a number of gaps in the dataset for Parties that had reported information in certain years, but not in other years. In particular the dataset of the United Nations Statistics Division also allowed the introduction of data for 12 Parties that had never reported such information to the Secretariat. Finally, additional data for one non-Party was included from other sources, given that this country was involved in transboundary movements with Parties¹³.

Filling data gaps and trend analysis

The second step was to produce a dataset for all countries covering the full period of the analysis. The years when no data was available, estimates were made through interpolation or extrapolation. For some countries this was not possible because they had only reported for one year. In that case the amount was considered to be the same for the whole period. The assumption that a Party has generated the same amount of hazardous waste as reported for a certain year is always a better estimate than assuming the Party did not generate any waste at all in the year in which it did not report. This addition produced an overview of data for the full period of 2007 to 2015 covering data from 108 countries.

The trends per country were analysed to identify data that were not plausible and that would have a significant impact on the interpretation of the global trend. Apart from the data from the two Parties mentioned in section 4.1 of the analysis, data from 2 other Parties were also removed from the dataset because they differed too much from one year to the other. One Party reported generation of 108 million MT of waste in 2009 and between 38.000 MT and 341.000 MT in other years in which it reported. Another Party reported 52 million MT for 2015 and between 127.000 MT and 12 million MT for other years. These differences are not explained by the Parties and including them could have significantly affected the reliability of the analysis of trends and total amounts. The data of 104 countries were retained for further analysis.

Calculating indicators per group of countries

In principle there are two drivers for the generation of hazardous waste: production and consumption. To compare the level of generation of hazardous waste between Parties often indicators are used that reflect these drivers: generation in kg per inhabitant (table 4) and per unit of Gross domestic product (GDP) in table 5. These indicators were calculated on the basis of the dataset for 104 of the countries mentioned above. The average for all countries was calculated and also the average per group of countries according to income level from the classification used by the World Bank.

10. <http://ec.europa.eu/eurostat/data/database>

11. <https://data.oecd.org/waste/municipal-waste.htm>

12. <https://unstats.un.org/unsd/envstats/qindicators.cshhtml>

13. <https://rcrainfo.epa.gov/rcrainfoweb/action/modules/br/summary/view>

Table 5 Average generation of hazardous wastes in countries from different categories of income level (in kg per year per million USD of GDP)

Category of income level	2007	2008	2009	2010	2011	2012	2013	2014	2015
Low Income	40	35	33	31	27	27	26	18	20
Lower-middle income	17	15	15	13	13	13	15	20	21
Upper-middle income	4	4	5	7	6	6	5	5	5
High income	3	4	4	3	3	3	3	3	3
Global average	4	4	5	5	5	5	4	5	5

Table 6 Estimated global amounts of hazardous waste generated (in millions of MT), based on extrapolation of data using number of inhabitants or volume of GDP.

Indicator	2007	2008	2009	2010	2011	2012	2013	2014	2015
Population	259	274	285	320	332	345	356	388	394
GDP	256	275	286	326	340	355	360	388	390
Difference	1%	0%	0%	-2%	-2%	-3%	-1%	0%	1%

If one looks at the data per inhabitant the data suggest that the amount of hazardous waste increases with increasing income level. The amounts also increase over the years, mainly due to the increase in lower-middle and upper-middle income countries. In low income countries, the trend seems to be that the generation per inhabitant is going down and in high income countries generation per inhabitant seems to be more or less stable.

The indicator on generation per unit of GDP shows an inverse pattern when linking generation to income level. The lower the income, the higher the generation of hazardous waste per unit of GDP. This suggests that the countries with lower income levels depend more on economic activities that are more polluting or that use processes that are more polluting than the processes for the same type of activity in countries with higher income levels. The trend over the years seems to be rather stable except for the low income countries where the amounts per unit of GDP are lower at the end of the period covered.

Global amounts and trends

The UN has 193 Member States and 2 non-Member States. Moreover, the Cook Islands are a Party to the Basel Convention, but not a UN Member State. In an attempt to produce an estimate for the total amount of hazardous waste generated in these 196 countries an estimation was made that would use the indicators per category of income level for the countries that were not represented in the dataset. The results of the estimated amounts based on both indicators are given in table 6. Also the difference between the two methods is given in that table. The data per country used for this estimation are given in Annex 4.

The data from the 104 countries that at least once reported usable data on generation represent overall around 75% of the amounts. The estimate of the

total is therefore relatively robust. However, for the low income countries the reported data only represent around 10% of the estimated amount which makes the estimate for this group of countries rather unreliable.

The data show a considerable growth of the total amount of hazardous waste that is generated globally with approximately 50%, independent of the indicator used. The two calculation methods come to very similar results. A split between the different categories of income level of countries was made for the two indicators, with the results in tables 7 and 8 below.

The combined share of the global hazardous waste generation in lower-middle income and upper-middle income countries increased from around 40% in 2007 to around 60% in 2015 while the share of the high income countries decreased from around 60% in 2007 to around 40% in 2015. The low income countries produce relatively low amounts of hazardous waste overall, but the figure of the estimate for these countries is not very reliable as explained above.

No comparison was made with the results of the previous analysis for the period 2004 – 2006, which used a different methodology and did not attempt to complement the dataset of the Basel Convention with additional information or to fill data gaps. The data in both documents are therefore not comparable.

Table 7 Estimated global amounts of hazardous waste generated (in millions of MT) in countries in the different categories of income level. Extrapolation based on size of population.

Population	2007	2008	2009	2010	2011	2012	2013	2014	2015
Low Income	10	10	11	11	11	11	11	8	8
Lower-middle income	55	52	55	58	67	69	82	119	123
Upper-middle income	42	50	64	98	105	106	105	107	107
High income	152	162	155	153	150	160	158	154	155
Total	259	274	285	320	332	345	356	388	394

Table 8 Estimated global amounts of hazardous waste generated (in millions of MT) in countries in the different categories of income level. Extrapolation based on size of the economy.

GDP	2007	2008	2009	2010	2011	2012	2013	2014	2015
Low Income	9	9	9	9	9	10	10	8	8
Lower-middle income	54	53	56	60	69	71	84	120	125
Upper-middle income	46	54	68	104	112	113	110	112	108
High income	147	159	153	154	151	161	156	149	149
Total	256	275	286	326	340	355	360	388	390

Conclusions

The conclusions of this analysis must be read with great caution. The dataset of the Basel Convention, which is the basis of the analysis, shows large gaps. The data between Parties are very difficult to compare, due to differences in national definitions of hazardous waste and differences in measuring and reporting systems. Even the time series of the same Party can show extremely large disparities over the years. In most cases the Parties do not provide information about the background of such large changes and these are therefore difficult to understand. The exclusion of data from countries where these differences are extreme and the gap filling exercise that was presented above provide for a possibility to estimate the global generation and a trend over time, but this is not very accurate. Nevertheless it allows for some interesting conclusions.

The overall 50% increase in the **generation** of hazardous waste between 2007 and 2015 is mainly due to growth in the countries with lower-middle and higher-middle income. This trend is more accurate than the total amount that is estimated to be between 256 and 259 million MT in 2007 and between 390 and 394 million MT in 2015. Generation of hazardous waste per inhabitant is the highest in high income countries but the generation per unit of GDP is the highest in the low income countries.

4.3 GENERATION OF OTHER WASTES

The Convention also addresses two waste types included in Annex II as 'other wastes' requiring special consideration, namely: wastes collected from households; and residues arising from the incineration of household wastes.

Generation of wastes collected from households (hereafter 'household wastes')

This waste stream is included in Annex II with the code Y46. The data as reported by Parties under the national reporting system of the Basel Convention are given in table 9.

The overview shows that the level of reporting for household waste is even lower than for hazardous waste. There is no visible trend in the data.

Generation of residues arising from the incineration of household waste

This waste stream is included in Annex II with the code Y47. The data as reported by Parties under the national reporting system of the Basel Convention are given in table 10.

The number of Parties reporting is very low which is partly explained by the fact that only Parties with incineration capacity will generate this type of waste and

Table 9 Total amount of household waste (Y46) in millions of MT as reported to the Secretariat and the coverage of these data.

	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total amount of household waste	122	280	192	100	88	159	187	438	367
Number of Parties reporting	42	43	46	38	38	42	45	47	44

Table 10 Total amount of waste resulting from the incineration of household waste (Y47) in millions of MT as reported to the Secretariat and the coverage of these data.

	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total amount of incineration residues	1,7	5,3	1,4	1,2	2,1	11,7	1,3	0,8	1,0
Number of Parties reporting	14	11	12	11	12	13	10	8	17

most Parties do not have this capacity. The low amounts reported also appear to be due to underreporting. The differences from one year to the other are rather large.

For this waste stream, data coverage is limited and the differences in reporting from one year to another are too significant to enable any meaningful analysis. As no additional information sources were identified, no attempt was made to complement the reporting data in order to extrapolate any implausible data or identify any trends, nor were both Annex II waste streams analysed as a whole. The pattern of generation and their disposal is completely different and a combined analysis would not provide for meaningful additional insights. For this reason, this waste stream will not be addressed any further in this report.

The data as reported for household waste cannot be used for analysis as such, without complementary information and more processing. How this was done is described in the next section.

4.4 ANALYSIS OF DATA ON GENERATION OF HOUSEHOLD WASTE

Over the different years the dataset of the Basel Convention contains data from 84 different Parties, of which only 6 have provided information for this waste stream over the full period. The procedure for filling gaps in the data was the same as that described for hazardous waste in section 4.2. The only difference is that information from the OECD could be used to complement the dataset, in addition to information from Eurostat and the UN Statistics Division. After this exercise to complete the dataset, information was available regarding 112 countries. For this section of the analysis, an indicator was also calculated for the different groups of countries based on level of income. For household waste the only indicator calculated is the amount of waste generated per inhabitant. The results of this calculation are set out in table 11.

Table 11 Average generation of household waste in countries from different categories of income level (in kg per year per inhabitant)

Categories of income level	2007	2008	2009	2010	2011	2012	2013	2014	2015
Low Income	51	51	50	49	48	47	48	49	49
Lower-middle income	121	139	128	127	128	124	121	121	121
Upper-middle income	190	191	194	199	200	204	219	241	230
High income	575	562	553	555	551	532	540	518	532
Total	274	274	271	274	273	269	279	285	282

Table 12 Estimated global amounts of household waste generated (in millions of MT) in countries in the different categories of income level. Extrapolation based on size of population.

Categories of income level	2007	2008	2009	2010	2011	2012	2013	2014	2015	Increase 07 - 15
Low Income	25	26	26	26	27	27	29	31	30	18%
Lower-middle income	319	374	349	353	359	355	353	357	364	14%
Upper-middle income	464	468	480	496	502	516	558	618	595	28%
High income	626	617	611	617	617	599	611	590	608	-3%
Total	1,424	1,468	1,463	1,489	1,500	1,492	1,547	1,590	1,591	12%



The indicator shows a clear link between the level of income and the amount of waste generated per inhabitant per year. The amounts per inhabitant for low income and for lower-middle income countries remained more or less stable during the reporting period. The amounts per inhabitant in upper-middle income countries increased while the amounts per inhabitant in high income countries seem to diminish.

The average indicators were applied to the countries that did not report in any of the data sources in order to provide an estimate of the global generation of household waste as set out in Table 12 below for the countries in the different categories of income level. An overview of the data per country is given in Annex 5.

For the Upper middle and High income countries the share of the data from Parties that reported is around 95%. These data could therefore be considered robust due to the coverage. However, for the Lower Middle income countries this is only 25% and for the Low income countries around 10%. As such, the data for the two groups are less reliable due to the low proportion of Parties reporting.

The estimated amount of household waste generated worldwide was 1,4 billion MT in 2007, which increased to 1,6 billion MT in 2015. The amounts are increasing in all groups of countries with the exception of the high income countries. The amounts are increasing most rapidly in the upper-middle income countries, which in 2015 generated overall nearly the same amount of household waste as the high income countries.

Conclusions

The amount of household waste that is generated globally was estimated to be around 1,6 billion MT in 2015. The amount has increased around 12% in the period 2007 – 2015. In particular the increase was large in upper-middle income countries, which in 2015 generated nearly the same amount of household waste as the high income countries.

The data reported to the Basel Convention form a rather poor basis for this analysis due to the low reporting rate. Moreover, there are large differences in the reported data that may result from differences in definitions and concepts that are used as basis for these data. For example, it seems that certain Parties report on municipal waste and not on household waste. Municipal waste may include waste from shops, small enterprises and offices that is similar to household waste.

Other Parties report on the amount of residual household waste and not on total household waste. This means that they do not report amounts of household waste that are being collected separately e.g. those for recycling. Finally, some Parties report extremely low amounts of household waste. This may be because they report on hazardous household waste only and not on the total amount of household waste.

The overall guidance document on the environmentally sound management of household waste to be developed by the Basel Convention Household waste partnership may help in addressing such issues.

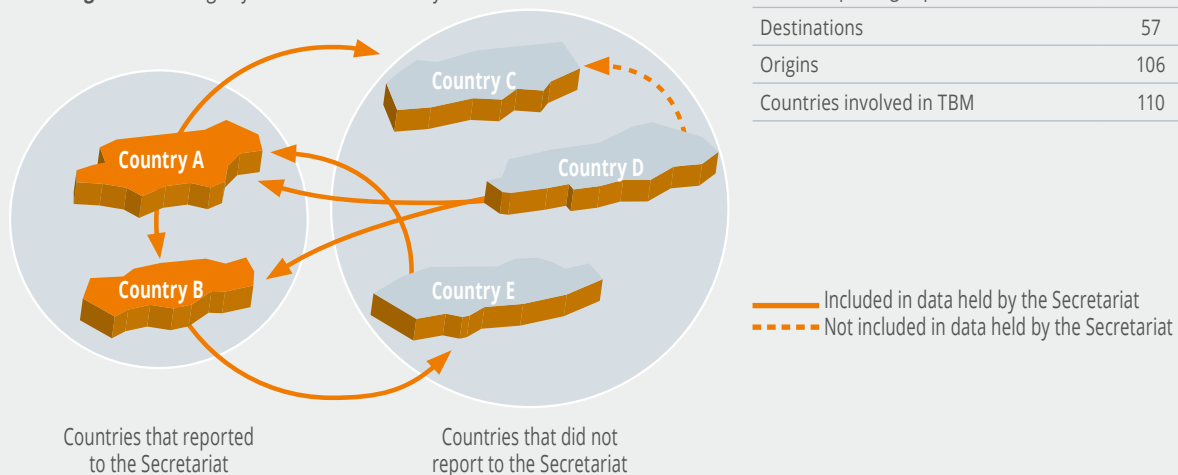
The main focus of the Convention is on the control of transboundary movements of hazardous and other wastes. The Convention has established a comprehensive system of notifications and controls. As such, the majority of the reported data is on transboundary movements, which is the focus of the analysis of this section. Before presenting the results of this analysis, some explanations are given on the methodology used.

5.1 METHODOLOGY USED TO ANALYSE DATA ON TRANSBOUNDARY MOVEMENTS

Transboundary movements by definition involve more than one country. In all cases, there is a country of origin or state of export and a country of destination or state of import. In some cases, one or more states of transit are also involved. When analysing the data on transboundary movements in this document, there is a problem as not all Parties fulfilled their obligations to report these data. Also, in certain circumstances, countries that are not a Party to the Convention may be involved in a transboundary movement, but are not obliged to transmit national reports. Since reported transboundary movements always involve at least two countries, it is possible in certain cases to get information about movements involving countries that did not report themselves, by analysing the data reported by the other Parties involved in these particular movements. This is illustrated in the figure.

In this illustration, only Country A and B reported on transboundary movements to the Secretariat. Country A exports wastes to countries B and C and imports wastes from countries D and E. Country B exports to Country E and imports from countries A and D. Country C imports wastes from countries A and D. The data

Figure 1 Coverage of data in the dataset of the Secretariat



compiled by the Secretariat thus includes transboundary movements between countries A and B twice. Country A reports its exports to B and Country B reports the same movement as imported waste from A. Even though countries C to E did not report themselves, the data from the Secretariat nevertheless contains information about movements to or from these countries where either Country A or B were involved. Only the movement from Country D to C is not covered by the data compiled, as neither of the two countries reported their data.

By combining data from reported imports with data from reported exports to countries that did not themselves report to the Secretariat, a best estimate can be made of the real amount of wastes subject to transboundary movements. Only movements that involve countries where none of the countries have reported would be missing. Since the number of countries that reported on transboundary movements of hazardous and other wastes is rather high, it may be assumed that the global coverage of dataset held by the Secretariat in this respect is rather good.

Analysing reports from both exporting and importing countries also allows the possibility to compare the same data if reported by more than one Party. This gives an indication of the quality of the data and allows to highlight cases where the amounts reported as exports may differ significantly from the amounts reported as imports. Such differences in data on transboundary movements

were analysed and used to verify the quality of the reported data. Some of the data differed due to Parties reporting on wastes that fall outside the scope of the Convention or on wastes that is considered or defined as hazardous their national legislation, in addition to hazardous wastes under the Convention¹⁴.

5.2 REPORTS BY PARTIES

Parties report on transboundary movements in which they have been involved. Table 13 gives an overview of the number of Parties that reported on imports and exports. Since transboundary movements (TBM) always involve at least two countries, the number of countries mentioned in this data can be larger, since Parties that did not report could be mentioned in imports or exports as reported by other Parties. The dataset for the years 2007 – 2015 contains information about transboundary movements involving 163 countries. The total number of countries involved in reported transboundary movements is quite high which suggests that the dataset compiled by the Secretariat covers a high percentage of the total amount of transboundary movements subject to control of authorities. In the period from 2010 to 2012 the number of reporting countries went down. In 2012 it was so low that also the coverage went down. From 2013 onwards the number of Parties reporting is increasing again, which may be helped by the efforts of the Implementation and Compliance Committee as well as the Secretariat.

Table 13 Number of Parties reporting and number of countries involved in reported movements

	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total ¹⁵
Parties reporting imports	40	37	47	42	34	30	38	43	41	64
Parties reporting exports	71	63	68	65	56	50	68	63	68	108
Destinations	57	64	65	64	63	55	60	66	64	93
Origins	106	112	108	132	118	104	122	131	135	160
Countries involved in TBM	110	118	110	139	130	108	126	135	139	163

14. E.g. within the EU certain non-hazardous wastes are subject to control when they are moved across borders. Transboundary movements of non-hazardous waste (with the exception of wastes non-hazardous wastes on Annex II) are not in the scope of the Convention and therefore should not be reported. Some Member States of the EU do not include the data from these movements in their national reports to the Secretariat while other do. Where such cases were found the data on transboundary movements of non-hazardous wastes were removed from the dataset before the analysis of the data.

15. Number of Parties that have reported imports or exports in at least one year between 2007 and 2015.

Table 14 Total reported transboundary movements for the major types of wastes as defined by the Convention between 2007 and 2015 (amounts in million Metric tonnes)

	2007	2008	2009	2010	2011	2012	2013	2014	2015
Article 1.1.a	6,7	6,6	6,1	7,5	8,2	6,1	8,1	8,0	7,3
Article 1.1.b	1,8	3,0	3,2	3,3	1,2	1,1	1,8	1,6	1,7
Total Hazardous waste	8,5	9,6	9,3	10,8	9,4	7,2	9,8	9,6	9,0
Household waste	0,3	0,6	1,0	0,9	1,0	1,9	4,0	3,5	4,1
Incineration residues	0,5	0,6	0,6	0,7	0,5	0,5	0,8	1,1	1,2
Total Annex II to the convention	0,8	1,3	1,6	1,6	1,5	2,4	4,8	4,6	5,3
Total TBM	9,3	10,8	10,9	12,4	10,9	9,6	14,7	14,2	14,4

5.3 TOTAL AMOUNT OF WASTE SUBJECT TO TRANSBOUNDARY MOVEMENTS

The total amount of hazardous and other wastes that were subject to transboundary movements increased from a little over 9 million MT in 2007 to over 14 million MT in 2015 (see table 14). This increase is nearly exclusively caused by the increase of transboundary movements of household waste in that period. The amount of hazardous waste subject to transboundary movement did not increase significantly over that period. The amounts reported for 2012 appear to be far too low to reflect the reality of transboundary movements that took place. A number of Parties that normally report significant amounts of transboundary movements did not report in that year. Based on an assessment of the average flows between those Parties, it can be assumed that for hazardous waste in that year at least an amount of 1,3 million MT (20% of the reported amount) is missing. In other years a similar analysis showed that the missing amounts due to underreporting were generally estimated around 0,1 to 0,2 million ton (around 2% of the total reported amount of hazardous waste).

The amounts in the previous analysis for the period 2004 to 2006 are comparable to those reported between 2007 and 2015, in spite of differences in how the dataset was prepared and in particular that the analysis of double reported amounts was not done in exactly the same manner.

In the following sections, a number of aspects are highlighted for hazardous waste only. This includes the following issues:

- Countries that import and export large amounts of hazardous wastes;
- Waste disposal operations;
- Patterns according to country groupings;
- Self-sufficiency and waste balances.

An analysis of a number of specific waste streams is then presented.

5.4 COUNTRIES IMPORTING AND EXPORTING LARGE AMOUNTS OF HAZARDOUS WASTES

In total, 41 Parties reported that they had imported hazardous wastes (both Article 1.1.a and Article 1.1.b) from 2007 to 2015. By combining information from these Parties with information on reported exports to countries that did not report such information themselves, evidence of imports of wastes by 92 different countries can be obtained. An overview of the top 10 countries of import is provided in table 15. Imports for 2007 to 2015 were averaged to establish the top 10 countries of import as these can vary considerably from one year to another. These 10 countries consented to import over 80% of the total amount of imported hazardous wastes. From these countries, 8 were also in the top 10 for the period between 2004 – 2006.

Table 15 Average amounts (in tonnes) of hazardous wastes imported between 2007 – 2015 by the top 10 countries of import

Country	Average import (MT)	% of overall imports
Germany	3.347.907	36%
Netherlands	704.263	8%
Mexico	656.497	7%
Belgium	630.387	7%
United States of America (USA)	499.883	5%
France	440.671	5%
Sweden	421.500	5%
Canada	417.515	5%
Italy	287.181	3%
Spain	219.736	2%
Other	1.626.119	18%
Total	9.251.658	100%

In total, 71 Parties reported that they had exported wastes in the same period. The combination of data from reported exports and reported imports to countries that did not report themselves, provided evidence that 160 countries exported wastes in that period. Table 16 presents the top 10 exporting countries representing nearly 75% of the total amount of exported wastes in this period. The countries in this table are almost the same as those for the previous period analysed.

Table 16 Average amounts (in MT) of hazardous wastes exported 2007 – 2015 by the top 10 countries of export

Country	Average export between 2007 and 2015 (in MT)	% of overall exports
Italy	1.150.781	12%
Netherlands	1.138.020	12%
USA	1.123.203	12%
France	710.085	8%
Belgium	661.393	7%
Canada	479.920	5%
Switzerland	444.944	5%
Germany	416.289	4%
Norway	393.601	4%
Austria	313.389	3%
Other	2.420.032	26%
Total	9.251.658	100%

5.5 WASTE DISPOSAL OPERATIONS OF HAZARDOUS WASTES

The Basel Convention control procedure aims to ensure that the relevant competent authorities are notified and can make an informed decision as to whether to consent or not to a transboundary movement, and ensure that the wastes will be disposed of in an environmentally sound manner. The Convention distinguishes a number of different operations, listed in Annex IV to the Convention. These operations are grouped into two sub-annexes:

- Operations which may lead to resource recovery, recycling, reclamation, direct re-use or alternative uses or 'recovery operations', indicated with a code numbered R1 to R13 (annex IV B); and
- Operations which do not lead to resource recovery, recycling, reclamation, direct re-use or alternative uses are further referred to in this report as 'final disposal operations' indicated with a code numbered D1 to D15 (Annex IV A).

For the purpose of the analysis, disposal operations of waste were further grouped into 4 main categories:

- Recycling (and reuse) (Operations R2 – R11)
- Incineration¹⁶ (Operations D10 and R1)
- Landfilling (Operations D1 – D7 and D12)
- Interim final disposal (Operations D8, D9, D13 – D15)
- Interim recovery (Operations R12 and R13)

The data on transboundary movement were analysed to identify trends in disposal. In cases where the information suggested that the movement was destined for interim treatment as well as subsequent recovery or final disposal (e.g. physic-chemical treatment (D9) and landfilling (D5)) only the final treatment was considered.

Table 17 gives an overview of the disposal operations hazardous wastes undergo in the state of import with the distinction between the different types of operations. A similar analysis for other wastes is given in section 5.8. Table 17 shows that around 75% of the reported movements are destined for R1 to R13 operations. This remains more or less stable over the years and mainly consists of recycling. Around 20% of the waste is destined for incineration, roughly equally divided between energy recovery and incineration on land. Landfilling represents around 10%. There are no clear trends over time based on this data.

5.6 ANALYSIS OF PATTERNS ACCORDING TO COUNTRY GROUPINGS

The analysis of patterns of transboundary movements could be focusing on the activities of individual countries only. However, it is also interesting to see what the patterns exist between different groupings of countries. In this section, the patterns of transboundary movements are analysed according to three different types of groupings, as defined in chapter two of this document:

- Annex VII or non-Annex VII countries²⁰;
- Regional groups of countries;
- Countries grouped according to their level of income.

The distinction between Annex VII and non-Annex VII countries is relevant, in particular because of the Ban Amendment and may give some indication of the impact so far by the Parties that are already implementing the Amendment through existing measures adopted by Parties that have consented to be bound.

From an environmental point of view and for the purpose of implementing the obligations under the Convention, distances of transboundary movements are also an important consideration. Parties have an obligation, among others, under Article 4 of the Convention to ensure that the transboundary

Table 17 Share of waste disposal operations for hazardous waste between 2007 and 2015

	2007	2008	2009	2010	2011	2012	2013	2014	2015	Average
Recovery total¹⁷	75%	71%	71%	77%	73%	70%	75%	76%	75%	74%
recycling	59%	51%	52%	54%	56%	53%	56%	59%	59%	55%
interim recovery	3%	5%	6%	4%	5%	5%	6%	6%	6%	5%
Incineration total¹⁸	20%	24%	24%	25%	22%	21%	20%	21%	21%	22%
energy recovery	13%	15%	14%	18%	13%	12%	12%	12%	11%	13%
incineration	7%	9%	10%	8%	9%	9%	8%	9%	11%	9%
landfilling	10%	13%	13%	9%	12%	14%	9%	10%	8%	11%
interim final disposal	8%	6%	5%	4%	4%	6%	6%	4%	4%	5%
Final disposal total¹⁹	24%	28%	28%	22%	25%	28%	23%	23%	23%	25%
other/unclear	1%	0%	0%	2%	2%	2%	2%	1%	2%	1%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Table 18 Pattern of transboundary movements between Annex VII countries and non-Annex VII countries for the period 2007 – 2015 (amounts in million MT)

Status in Annex VII	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total	% of the total
Annex VII to Annex VII	7,8	9,3	8,9	10,0	8,8	6,4	8,9	8,8	8,0	77,0	92%
Annex VII to non-Annex VII	0,13	0,09	0,15	0,19	0,03	0,04	0,01	0,03	0,02	0,69	1%
Non Annex VII to Annex VII	0,13	0,11	0,10	0,18	0,35	0,20	0,43	0,43	0,40	2,34	3%
Non Annex VII to non-Annex VII	0,38	0,05	0,12	0,44	0,26	0,58	0,47	0,33	0,61	3,24	4%
Total	8,5	9,6	9,3	10,8	9,4	7,2	9,8	9,6	9,0	83,3	100%

movement of hazardous wastes and other wastes is reduced to the minimum. Furthermore, disposal of wastes close to the place of generation is the best way to minimize the environmental impact of transboundary movements. Supervision of the relevant conditions is also easier when wastes are disposed of close to the place of generation. To analyse these aspects, patterns of transboundary movements within and between the different continents were analysed.

Annex VII or non-Annex VII countries

The total amounts of transboundary movements of hazardous wastes related to the status of the importing and exporting country with regard to Annex VII are presented in table 18.

The table shows that the vast majority of transboundary movements (92% of the total amount over the period covered by the analysis) is between Annex VII

16. The term 'Incineration' as used in this analysis refers to all thermal treatment operations with waste, including operations where waste is incinerated with energy recovery or where it is co-incinerated in industrial installations such as power plants or cement kilns.

Incineration at sea (D11) is also listed in Annex IV as an incineration operation, but this type of operation is prohibited in international environmental law (in particular by the London Convention on the Prevention of Marine Pollution by Dumping of Waste and Other Matter 1972). Moreover, none of the Parties reported any movements for this type of treatment and therefore this disposal operation is not taken into account.

17. Sum of Recycling / Reuse, Interim recovery and Energy recovery (R1 – R13)

18. Sum of energy recovery and incineration (D10 + R1)

19. Sum of Incineration, Landfilling and Interim disposal (D1 – D15)

20. See section 2.1 above – Annex VII includes Parties and other States which are members of OECD, EU and Liechtenstein. Annex VII has yet to enter into force as at the time of this publication.

countries. Movements between non-Annex VII countries represent a greater flow (4% of the total amount) than those between non-Annex VII and Annex VII countries (3% of the total amount). The flows between non-Annex VII countries seem to gain importance.

There is a very small amount of reported exports from Annex VII countries to non-Annex VII countries (1%) and the amounts have been decreasing. In most cases it is unclear if this is actually a transboundary movement of hazardous waste or if exports have been made using the Basel Convention procedures for wastes outside the scope of the Convention or additional wastes considered or defined as hazardous by the national legislation of one of the countries involved.

Regional groups of countries

An overview of the amount of hazardous wastes moved between countries within each region and between the different regions is given in Figure 2²¹.

The overview shows that 95% of transboundary movements remain within the same region and only a limited amount is exported between the regions. However, there are notable differences between movements within these regions. This dominance within the region is mainly dominated by the data from the EU and America OECD, where most of the waste remains within the same region. For the other parts of the world around 50% remains within the same region and the other 50% leaves the region.

Countries according to their level of income

The patterns of transboundary movements based on the level of income of the countries involved were studied. Table 19 provides an overview of such patterns for the period 2007 - 2015.

The table shows that most wastes stay within the countries of the same category of income level. There are 5 exports from high income countries to low income countries. The amounts are very small and the wastes in question are most likely all wastes that fall outside the scope of the Convention yet were moved using the Basel Convention control procedure.

Table 20 gives an overview per year of the amounts and the percentage of exports going to countries with higher income level, countries in the same category of income level and to countries with lower income level. This is based on information on the countries of export and destination and their respective category of levels of income of the World Bank.

This overview shows that the amount of wastes that are moved between countries within the same category of income level is over 85% but the percentages may vary slightly over time. The amounts exported to countries in a lower category of income level fluctuate significantly but are higher than the exports to countries in a higher category of income level, with the latter

Table 19 Patterns of transboundary movements according to the categories of income level of the countries. Total amounts for 2007 – 2015 in MT.

Origin \ Destination	High income	Upper middle income	Lower middle income	Low income	Total
High income	70.469.119	6.836.618	814.070	3.034	78.122.840
Upper middle income	1.636.642	950.059	411.090	11.354	3.009.145
Lower middle income	581.370	561.651	583.963	43.790	1.770.775
Low income	31.998	244.958	83.585	1.621	362.162
Total	72.719.129	8.593.285	1.892.708	59.799	83.264.922

Table 20 Trends of transfer of wastes between countries of different categories of income level

Export to	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Countries with lower income level	11%	5%	7%	12%	15%	2%	14%	11%	8%	10%
Same level	85%	94%	93%	86%	81%	95%	80%	84%	85%	86%
Countries with higher income level	4%	1%	1%	1%	4%	3%	6%	5%	7%	4%

Figure 2 Flows of hazardous wastes between regions.



increasing over time. We can also observe a trend of increasing exports of used lead-acid batteries to one Party, in particular from upper middle income countries from 2011 onwards.

Import/export balance per category of income level

Instead of looking at imports and exports of hazardous wastes in isolation, one can also look into the balance between the two flows to identify if there are groups of countries that are net importers or net exporters. Table 21 provides the results of this analysis.

Table 21 Import/export balance per category of income level of countries. Total amounts for 2007 – 2015 in MT.

Category of income level	Export	Import	Balance
High income	78.122.840	72.719.129	-5.403.711
Upper middle income	3.009.145	8.593.285	5.584.141
Lower middle income	1.770.775	1.892.708	121.934
Low income	362.162	59.799	-302.363
Total	83.264.922	83.264.922	0

If one looks at the import/export balance of the countries in the different categories of income level, the most remarkable issue is in particular the upper-middle income countries are net importers. This is predominantly due to the high imports by one Party that imported 5,8 million tons of hazardous waste in the period 2007 – 2015. Low income countries appear to rely to a large extent on treatment facilities in countries with a higher income level.

Disposal of wastes according to categories income level of the countries

The way wastes are treated also differs according to the different categories of income level. This is illustrated in Table 22.

Table 22 Percentage of imported and exported wastes as treated in the state of import. Data for the total period 2007 – 2015.

Category of income level	Export		Import	
	Final disposal	Recovery	Final disposal	Recovery
High income	25%	75%	28%	72%
Upper middle income	15%	85%	4%	96%
Lower middle income	10%	90%	1%	99%
Low income	42%	58%	2%	98%
Total	25%	75%	25%	75%

Table 23 Trend 2007-2015 for the global TBM rate, amounts in millions of MT

	2007	2008	2009	2010	2011	2012	2013	2014	2015	Average
Total generation	256	275	286	326	340	355	360	388	390	331
Total transboundary movement	8,5	9,6	9,3	10,8	9,4	7,2	9,8	9,6	9,0	9,3
TBM rate	3,3%	3,5%	3,3%	3,3%	2,8%	2,0%	2,7%	2,5%	2,3%	2,8%

In high income countries, approximately 75% of imported and exported wastes are subject to recovery operations. This suggests that the main driver for transboundary movement in those countries is that Parties want to make sure that some of the value that is incorporated in hazardous waste gets recovered. For the middle income countries the import is nearly exclusively destined for recovery but the export has a significant share of final disposal as destination, although lower than for the high income countries. For the low income countries nearly half of the exports are destined for final disposal. This suggests that the low income countries more often depend on other countries to ensure environmentally sound final disposal than is the case in the high-income or upper middle income countries. The data on import for low income countries are not representative, as this represents only 10 transboundary movements totalling only 1.800 MT of waste.



5.7 MINIMIZATION OF TRANSBOUNDARY MOVEMENTS

Parties to the Basel Convention have an obligation to take appropriate measures to ensure that the transboundary movement is reduced to the minimum consistent with the environmentally sound and efficient management of wastes. To analyse the trends in this context one could compare the trend of the total amount of hazardous waste that is generated with the total amount that is moved across borders to see if the overall amount of wastes subject to transboundary movement (further referred to as TBM rate) is increasing or decreasing. Table 23 gives an overview of the total generation of hazardous waste, as estimated in section 4.1 and compares it with the total transboundary movement as estimated in section 5.3. This shows that the TBM rate globally is very low and is even decreasing from 3,3% in 2007 to 2,3% in 2015. This implies that the growth of amount of hazardous waste generated is higher than the growth of transboundary movements over the same period and therefore hazardous wastes are increasingly staying within the country where the waste is generated, both in absolute quantities and proportionally.

The data presented from sections 4.1 and 5.3 were used to analyse differences in the TBM rate of countries per category of income level. Table 24 shows that this rate is less than 0,5% in the low and middle income countries and the high income countries have highest TBM rate of nearly 6%.

Table 24 TBM rate per category income level of countries. Total amounts (in MT) for the period 2007 - 2015

Category of income level	Generation	Export	Import	TBM rate
High income	153.145.850	8.680.316	8.079.903	5,67%
Upper middle income	91.792.140	334.349	954.809	0,36%
Lower middle income	76.703.996	196.753	210.301	0,26%
Low income	8.964.929	40.240	7.475	0,45%
Total	330.606.915	9.251.658	9.251.658	2,80%

5.8 WASTE CATEGORIES

This document presents for the first time an analysis of a number of specific waste streams. This is not very easy, because the Parties do not use the descriptions of waste uniformly. For this analysis the following waste streams were selected:

- The two waste streams in Annex II: waste collected from household (Y46) and residues arising from incineration of household wastes (Y47);
- Used lead-acid batteries (ULAB) (selected streams identified with Y-code Y31 in combination with the waste descriptions);
- Waste oils (selected streams identified with Y-code Y8 in combination with the waste descriptions);
- Waste containing mercury or mercury compounds (any waste identified with Y29, in combination with the waste description).

The waste streams were selected for a variety of reasons that mean they are the subject of much scrutiny and interest at present. The Annex II waste streams make up significant volumes of transboundary movement. Household waste is the subject of a newly established partnership established under the Convention. ULAB and waste oils are amongst the waste streams that are generated in all countries and that are frequently moved across borders. Mercury containing wastes were selected because of their political relevance in view of the entry into force of the Minamata Convention in 2017.

○ Annex II Wastes (Collected from households / Residues arising from incineration of household wastes)

The geographical pattern of transboundary movements of and the type of management used for the two waste entries in Annex II differ considerably, therefore these are analysed separately.

○ Household waste (Y46)

From the overview of Table 25 it is clear that transboundary movements of wastes on Annex II and in particular household waste is increasing considerably.

Table 26 Amounts (in MT) of household waste imported 2007 – 2015 by the top 5 countries of import

Country	Household waste imported	% of overall exports
Netherlands	5.964.871	34%
Sweden	3.908.200	22%
Germany	3.665.760	21%
Switzerland	1.354.060	8%
Denmark	614.041	4%
Others	1.880.982	11%
Total	17.387.913	100%

Table 25 Amounts (in MT) of household waste imported 2007 – 2015 (in million MT)

Household waste (Y46)	2007	2008	2009	2010	2011	2012	2013	2014	2015	Average
Amount imported	0,3	0,6	1,0	0,9	1,0	1,9	4,0	3,5	4,1	1,9

In total 32 countries were involved in the import of household waste during the reporting period. The top 5 countries represent nearly 90% of these imports (see table 26).

Most of the reported transboundary movements of household waste are destined for incineration. The top 5 countries of import seem to have a well-developed infrastructure for incineration and allow imports of waste from other countries to be incinerated in their installations.

Table 27 Amounts (in MT) of household waste exported 2007 – 2015 by the top 5 countries of export

Country	Export of household waste (in MT)	Share
United Kingdom of Great Britain and Northern Ireland	7.042.164	41%
Sweden	2.506.117	14%
Germany	2.503.111	14%
Switzerland	2.093.543	12%
Denmark	1.170.992	7%
Others	2.071.987	12%
Total	17.387.913	100%

In total 38 countries reported that they were involved in exports of household waste. The top 5 exporting countries represent nearly 90% of these exports.

Table 28 gives an overview of the types of disposal in the state of import²².

Recovery is the dominant type of operation for which household waste is subject to transboundary movement. Only 8% of the household waste is exported with the intention of recycling. It should be understood that the household waste that is exported under the Basel Convention control procedure would normally be mixed household waste and not fractions that have been collected separately. Those fractions (e.g. separately collected metals, paper, glass or plastics) would normally be listed on Annex IX and the transboundary movement would not require a notification because these are out of the scope of the Convention²⁶.

22. In section 5.5 it was explained which D and R codes correspond to each type of disposal operation.

23. Sum of recycling / reuse, interim recovery and energy recovery (R1 – R13)

24. Sum of energy recovery and incineration (D10 + R1)

25. Sum of incineration, landfill and interim final disposal (D1 – D15)

26. Wastes contained in Annex IX are not hazardous wastes covered by Article 1 (1) (a) unless they contain Annex I material to an extent causing them to exhibit a hazardous characteristic listed in Annex III. As such, the fractions would be classified by Parties as neither hazardous wastes nor other wastes.

Table 28 Share of waste disposal operations for hazardous waste between 2007 and 2015

Disposal operation	2007	2008	2009	2010	2011	2012	2013	2014	2015	Average
Recovery total²³	74%	42%	66%	44%	54%	75%	84%	92%	98%	81%
recycling	11%	11%	12%	11%	11%	11%	7%	7%	5%	8%
interim recovery	21%	4%	2%	6%	6%	3%	1%	1%	0%	2%
Incineration total²⁴	66%	81%	83%	77%	81%	86%	89%	92%	95%	88%
energy recovery	43%	27%	52%	28%	37%	61%	76%	83%	93%	71%
incineration	23%	54%	31%	49%	44%	25%	13%	8%	2%	17%
landfill	1%	4%	3%	2%	2%	0%	0%	0%	0%	1%
interim final disposal	2%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Final disposal total²⁵	26%	58%	34%	52%	46%	25%	13%	8%	2%	18%
other/unclear	0%	1%	0%	4%	0%	0%	3%	0%	0%	2%
Total amount (million MT)	0,3	0,6	1,0	0,9	1,0	1,9	4,0	3,5	4,1	1,9

Wastes often are disposed of through incineration. There are two main forms of incineration in practice: energy recovery (R1) and incineration on land (D10)²⁷. The difference is that installations for energy recovery use the generated heat of the combustion process for heating or for the production of electricity. This is a recovery process. Incinerators in which household waste is treated thermally, to reduce volume and to destroy organic matter but that do not use the heat for any useful purpose are a procedure for final disposal. Incineration is increasing and represents 95% of the treatment of the household waste that is moved across borders in 2015.

○ Residues arising from Incineration of household wastes (Y47)

Residues from incineration mainly consist of bottom ashes, which would typically represent around one third of the total input of the amount of wastes that is disposed of. Normally these ashes do contain hazardous components but not in concentrations that would render the waste hazardous. The residues are either landfilled or processed for recycling.

There are also residues from flue-gas cleaning, which is typically a low percentage of the input material (1-3% of the total input). These residues are often considered hazardous wastes and landfilled in specifically engineered landfills.

There is no clear trend in the amounts of these types of wastes subject to transboundary movements, which are imported only by 11 countries, all located in Europe. The amounts imported during the period covered by the present analysis are set out in Table 29. Over 90% of the residues are imported by three countries.

Table 29 Imports of incineration residues in the period 2007 – 2015 (amounts in MT)

State of import	Total amount (in MT)	%
Netherlands	2.489.287	38%
Germany	2.135.694	33%
Norway	1.306.992	20%
Others	553.455	9%
Total	6.485.428	100%

There are 24 countries that export incineration residues, which are also based in Europe with small amounts are also exported to one non-Party and one country in Asia. Around 75% of the residues are exported by 5 countries (See table 30).

Table 30 Exports of incineration residues in the period 2007 – 2015 by the 5 largest states of export (amounts in MT)

State of export	Total amount (in MT)	%
Germany	1.603.580	25%
Belgium	1.470.757	23%
Sweden	703.466	11%
Denmark	620.532	10%
Switzerland	562.207	9%
Others	1.524.885	24%
Total	6.485.428	100%

The distribution of the disposal operations is given in table 31.

Most of the residues are being recycled and the recycling rates are increasing from 75% in 2007 to 85% in 2015. This consists both of recycling of metals that are separated from the ash and the ash itself, which after pre-treatment is used for construction purposes. Final disposal, which is commonly direct landfilling or landfilling after interim treatment, decreased from 25% to 15% in the same period.



Table 31 Share of the different types of disposal operations of incineration residues in the state of import between 2007 – 2015 (the total represents the amount in MT)

Disposal operation	2007	2008	2009	2010	2011	2012	2013	2014	2015	Average
Recovery total²⁸	75%	81%	78%	95%	78%	85%	84%	87%	91%	85%
recycling	74%	67%	53%	74%	66%	63%	63%	73%	77%	69%
interim recovery	2%	14%	25%	21%	12%	22%	21%	14%	14%	16%
Incineration total²⁹	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
energy recovery	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
incineration	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
landfill	10%	8%	5%	5%	8%	7%	6%	12%	4%	7%
interim final disposal	14%	11%	17%	0%	14%	9%	8%	1%	5%	8%
Final disposal total³⁰	25%	19%	22%	5%	22%	15%	14%	13%	9%	15%
other/unclear	0%	0%	0%	0%	0%	0%	2%	0%	0%	2%
Total amount (million MT)	0,5	0,6	0,6	0,7	0,5	0,5	0,8	1,1	1,2	0,7

27. Annex IV also includes incineration at sea but this is prohibited in international environmental law and none of the Parties reported any movements for this type of operation (see note 16 above).

28. Sum of recycling / reuse, interim recovery and energy recovery (R1 – R13)

29. Sum of energy recovery and incineration (D10 + R1)

30. Sum of incineration, landfill and interim final disposal (D1 – D15)

Table 32 Share of the ULAB from different regions going to specific destinations and total amounts of TBM of ULABs in the period 2007 – 2015 (amounts in thousands of MT).

Destination \ origin	Africa	Asia OECD	Asia other	America OECD	America other	Europe EU/OECD	Europe other	Pacific OECD	Pacific other	Total amount imported (2007 – 2015) in 1000 MT
Australia	0%	1%	0%	0%	0%	0%	0%	9%	44%	25
Belgium	4%	1%	0%	0%	0%	18%	0%	0%	0%	559
Bulgaria	0%	0%	0%	0%	0%	2%	21%	0%	0%	92
Canada	0%	0%	0%	16%	0%	0%	0%	0%	0%	828
Germany	0%	0%	0%	0%	0%	16%	1%	0%	0%	463
Spain	26%	0%	0%	1%	2%	13%	1%	0%	0%	529
France	0%	0%	0%	0%	0%	11%	0%	0%	0%	334
Republic of Korea	22%	98%	77%	3%	70%	0%	0%	71%	50%	1.655
Mexico	0%	0%	0%	72%	10%	0%	0%	0%	0%	3.745
Philippines	0%	0%	11%	0%	0%	0%	0%	4%	0%	61
Sweden	0%	0%	0%	0%	0%	10%	0%	0%	0%	289
Slovenia	0%	0%	0%	0%	0%	8%	35%	0%	0%	277
USA	0%	0%	0%	5%	0%	0%	0%	0%	0%	265
South Africa	44%	0%	0%	0%	0%	0%	0%	0%	0%	153
Other	5%	0%	11%	1%	19%	21%	42%	15%	6%	953
Total amount exported (2007 – 2015 (in 1000 MT))	346	474	478	5.088	605	2.866	155	214	3	10.229

ULAB

Used lead-acid batteries (ULAB) are generated mostly generated as waste from maintenance and demolition of vehicles. The amounts that are being transported across borders in the period between 2007 and 2015 is more than 10 million MT which corresponds to a little over 1 million MT per year.

Transboundary movements are usually for the purpose of recycling of lead (99% of all exports), with only a limited number of countries having the necessary

facilities for recycling. Table 32 gives an overview where the transboundary movement of ULABs originating from the different regions mostly get recycled.

Waste oils

Waste oil is generated mainly from maintenance operations from vehicles. When exported it mostly will be regenerated to produce new lubricant oil or used as fuel. The total volume of transboundary movements worldwide is around 400.000 ton per year (see Table 33). Most exports take place within

Europe, where there are two main states of import, although a number of countries import lesser amounts. In the other regions, the destinations are more concentrated. In Africa, only two countries reported imports. Most of the waste oils from the Pacific region are imported to two countries. In America (OECD and non OECD) the volume of import is dominated by one Party only, followed by one non-Party. In Asia in particular two Parties import a high volume of waste oils.

Table 33 Main states of import for waste oils from the different regions in the period 2007 – 2015 (amounts in MT)

Africa	Amount (MT)	America	Amount (MT)	Asia	Amount (MT)	Europe	Amount (MT)	Pacific	Amount (MT)
Ghana	40.810	Mexico	84.356	Philippines	93.500	Germany	1.476.608	Australia	1.704
South Africa	131.323	USA	19.666	Uzbekistan	19.835	Netherlands	496.099	New Zealand	2.911
Other	0	Other	6.318	Other	2.082	Other	1.308.640	Other	0
Total	172.133	Total	110.340	Total	115.416	Total	3.281.347	Total	4.616

Mercury waste

Mercury waste that is subject to transboundary movements consists of a variety of waste streams, amongst which dental amalgam, fluorescent tubes, other electronic and electrical waste (e-waste), batteries and residues from industrial processes. The descriptions of waste streams used by the Parties do not allow for a detailed breakdown of the different mercury waste streams.

In total 73 Parties reported exports, mostly in small amounts. The 5 largest states of export are indicated in table 34, including information on the main destination and main type of waste disposal is mentioned. On average the movements amount to around 55.000 MT per year. Most of the waste is destined either for recycling/reclamation of metals and metal compounds (R4) or for physico-chemical treatment (D9).

Table 34 Average amounts of mercury waste exported by the 5 largest states of export, main states of import and disposal operation in the period 2007-2015. Amounts in MT

Country	Average export per year (MT)	Share	Main state of import	Main disposal operation
USA	12.495	23%	Canada	D9
United Kingdom of Great Britain and Northern Ireland	11.759	21%	Turkey, Netherlands	R4
France	7.950	15%	Germany, United Kingdom of Great Britain and Northern Ireland	R4
Sweden	6.871	13%	Norway	D9
Netherlands	3.259	6%	Germany	R4
Others	12.442	23%		
Total	54.775	100%		



The dataset as put together by the Secretariat of the Basel Convention based on national reports covering the years 2007 to 2015 contains important information on global trends in generation and transboundary movements of hazardous wastes and other wastes. However, the conclusions of this analysis should be considered with caution. The dataset of the Basel Convention, which is the basis of the analysis, shows large gaps in the data on generation of waste. Comparisons among Parties are difficult to make, due to differences in national definitions of hazardous waste as well as in measuring and reporting systems. Even the time series of the same Party can show extremely large differences over the years. In most cases, the Parties do not provide information about the background of such changes, which are unexplained. In comparison, the dataset on transboundary movement appears to include information about the majority of movements that take place. However, data between Parties are sometimes not comparable for instance because some include information on movements falling outside of the scope of the Convention. An attempt has been made to exclude such data from the analysis, but this is not always possible because Parties do not indicate the status of the information very clearly. Keeping in mind these considerations, there are some interesting conclusions that can be drawn from the analysis.

Level of reporting

Only 50% of the Parties fulfill their obligation to transmit their national reports in a given year. Quantitative information on the generation of hazardous wastes and other wastes is provided in only 25-30% of these reports. These percentages have not increased significantly despite the calls of the subsequent meetings of the COP, the efforts of the Implementation and Compliance Committee and the Secretariat. The revised reporting format to be used as from the year 2016 provides that the submission of such information has become optional.

Due to the gaps, the data on generation of wastes as reported to the Secretariat cannot be used as such for a meaningful analysis of the volume of and trends in global waste generation. Consequently, for this analysis the data have been complemented with data from other sources. The dataset on transboundary movement however provides a fairly complete picture of the global situation therefore these data do enable an analysis to be carried out.

Generation of hazardous waste

The global generation of hazardous waste is estimated to have increased from 256 – 259 MT in 2007 to 390 – 394 MT in 2015. The biggest increases were seen

in Lower middle income and Higher middle income countries. The volume of hazardous waste generated per inhabitant is highest in high income countries but the volume of generation per unit of GDP is the highest in the low income countries.

Generation of household waste

The amount of household waste that is generated worldwide was estimated to be around 1,6 billion MT in 2015, with an increase of around 12% between 2007 – 2015. The increase was particularly notable in upper-middle income countries, which in 2015 generated nearly the same amount of household waste as high income countries.

Coverage of data on transboundary movement

The dataset of the Basel Convention includes evidence of transboundary movement involving in total more than 160 countries. If certain Parties do not report in a given year, information on movements involving those Parties can often be found in the reports of other Parties that were received. Consequently, it can be concluded that the dataset covers the global situation quite well.

Significant underreporting appears to have been an issue for only one year during the period covered, when a number of Parties did not report for the year 2012. If one looks to the amounts these countries are reporting to be moved amongst these missing countries in other years it is estimated at around 20% of the reported amount for 2012. For the other years in the period covered by this analysis, underreporting is estimated to be around 2%.

Overall volume of transboundary movements of wastes

Between 2007 and 2015 the volume of reported transboundary movements increased from 9,3 to 14,4 million MT. This increase is mainly driven by the increased transboundary movements of household waste. The flow of hazardous wastes is more or less stable over the period. The amount is also more or less the same as in 2004 – 2006, even though the data are not totally comparable with the current data.

Transboundary movements of hazardous wastes

Most transboundary movements take place to and from a limited number of countries. The 10 largest states of import receive 80% of all imports and the 10 largest states of export represent 75% of all exports. The countries within the top 10 were nearly the same as in the period 2004 – 2006.

Recovery operations³¹ represent 75% of the disposal operations that hazardous waste will undergo in the state of import. Recycling and reuse operations represent around 60% of the disposal operations and incineration (both recovery



31. Operations included in Annex IV B of the Convention and indicated with an R-code. This includes recycling.

and final disposal operations) around 20%. The percentages remained more or less stable for the whole period covered by the analysis. Half of the exports of hazardous wastes for recovery purposes take place from low income countries.

Over 90% of the transboundary movement takes place between Annex VII countries and this share is more or less stable. The flow between non-Annex VII countries represents 4% of the total of transboundary movements and seems to be gaining importance.

The reports indicate that only a very small amount of exports occur from Annex VII countries to non-Annex VII countries (1%) and the amounts have been decreasing. In most cases it is unclear if this is in fact hazardous waste or if these exports are wastes outside of the scope of the Convention that have been moved using the Basel Convention control procedure.

Nearly all waste (95%) that is subject to transboundary movements stays within the region where it is generated. This figure may however be mainly due to the fact that most reports received in the period covered by the analysis were transmitted by Parties in the European region and North America. For the other regions, the reports indicated that half of the reported volumes were being exported to a different region to that in which it was generated.

The patterns of transboundary movements of hazardous wastes based on the income level of the countries involved were studied. Exports to countries with a lower level of income consistently represents 10% of the reported transboundary movement and are dominated by exports between OECD member states. The export of hazardous wastes from countries of lower income level to countries with a higher income level consistently represents 4% of the reported transboundary movements.

Minimization of transboundary movements is also an objective of the Convention. To see if there is evidence on achieving this objective the data on generation and transboundary movements of hazardous waste were compared, for individual countries and for the world as a whole. Globally 97% of all hazardous waste that is generated stays within the country where it is generated and this percentage remains stable over the years. The high income countries export a higher percentage of the waste generated as they export nearly 6% of the waste they generate. In the other categories of income level export only represents less than 0,5% of the hazardous waste generated. This does not imply that all such waste is managed in an environmentally sound manner within these countries and it is without prejudice to efforts needed to ensure that domestically generated hazardous wastes are managed in an environmentally sound manner in these countries. The situation can differ considerably from one country to the next. Some countries export the majority of their hazardous waste. It would appear that these are often small countries that may have more difficulties setting up necessary infrastructure to manage their own hazardous waste.

Specific waste streams

The patterns of transboundary movements of 5 waste streams were analysed:

- Household waste (Y46);
- Incineration residues (Y47);
- Used lead-acid batteries (ULAB);
- Waste oils;
- Mercury waste.

Transboundary movement of **household waste** significantly increased in the period 2007 – 2015 from 0,3 MT to 4,1 million MT. This is dominated by exports to certain countries in the Europe region, where the waste is incinerated.

Transboundary movement of **incineration residues** doubled in the same period from 0,5 to 1,1 million MT. The main movements here too were within the Europe region and mainly to prepare the residues for recycling. One Party also allowed landfilling in specially engineered landfill.

ULABs are subjected to disposal operations, principally to allow for the recycling of lead. Each year around 1 million ton of ULABs is moved across borders. Imports of ULABs are concentrated in a limited number of countries that are willing and have the capacity to manage this waste stream.

Around 400.000 MT of **waste oils** are moved across borders each year, 75% of which is within the Europe. The waste oil is commonly managed in such a manner as to either be reused again as lubricant oil or used as fuel. In Europe these operations are concentrated in Germany and the Netherlands. For Asia they are concentrated in the Philippines and Uzbekistan, for America Mexico and the USA, for Africa Ghana and South Africa and for Oceania in Australia and New Zealand.

Mercury waste is interesting because of the Minamata Convention, which entered into force on 16 September 2017. Parties to this latest Convention have obligations in that respect that are beyond the scope of this analysis. Transboundary movement of mercury wastes in accordance with the Basel Convention control procedure represents around 55.000 MT per year, 75% of which is exported from 5 countries. The main types of disposal operations the waste will undergo are physico-chemical treatment prior to final disposal and recycling. There are large regional differences regarding the main type of disposal operation to which the waste will be subjected.

Elements for further attention

This analysis has tried to estimate amounts of hazardous waste and other waste generated globally, as well as analyse the trends in transboundary movement of these wastes. There were various challenges in analysing this information, as explained in the beginning of the analysis.

Providing information to the Secretariat of the Convention is an important tool for Parties. The information from national reports should provide valuable feedback to Parties on their progress in implementing the Basel Convention and in achieving environmentally sound management of wastes within the scope of the Convention. To better support Parties efforts to implement the Convention and provide Parties with more information, various challenges and areas could be addressed.

1. Increase the number of Parties transmitting annual national reports

The analysis of the data transmitted by the Parties was hampered for two reasons. Firstly a low rate of Parties that are transmitting their national reports to the Secretariat, in particular on generation of hazardous wastes and other wastes, did not permit analysis of the evolution of trends of generation of wastes. A higher rate of reporting would provide valuable information about the evolution of generation of wastes at the global level, as well as providing Parties with information about national efforts to implement and enforce the Convention.

2. Improve the quality of the national reporting data

The second problem is that the information as reported often is difficult to interpret. For the generation of waste the main problem is very large differences in amounts stated in the national reports about how much have been generated. Disparities in data reported can only be understood if additional information is obtained. It is important that Parties understand the importance of providing clear and complete information indicating which data relates to hazardous waste defined or considered as such by national definitions and which data relates to hazardous waste as defined by the Convention. Additional information explaining large differences between data of different years would also be useful and support any future efforts to understand national reporting data.



Word	Definition
The Convention	Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal
Wastes	Article 2.1 of the Convention: Substances or objects which are disposed of or are intended to be disposed of or are required to be disposed of by the provisions of national law
Hazardous wastes	Article 1.1 of the Convention (a) Wastes that belong to any category contained in Annex I, unless they do not possess any of the characteristics contained in Annex III; and (b) Wastes that are not covered under paragraph (a) but are defined as, or are considered to be, hazardous wastes by the domestic legislation of the Party of export, import or transit.
Other wastes	Article 1.2 of the Convention Wastes that belong to any category contained in Annex II
Disposal	Operations listed in Annex IV of the Convention
Final disposal	Disposal operations listed in Annex IV part A of the Convention, identified with codes D1 - D15
Recovery	Disposal operations listed in Annex IV part B of the Convention, identified with codes R1 - R13
Secretariat	The Secretariat of the Basel Convention
Implementation and Compliance Committee	The Committee administering the mechanism for promoting the implementation and compliance of the Basel Convention
Party	Party to the Basel Convention
Country	State, regardless if it is a Party to the Convention or not (excluding political and/or economic integration organisations that may be Parties)
Annex VII countries	Members of the Organisation for Economic Cooperation and Development (OECD), European Union (EU), Liechtenstein
Non-Annex VII countries	All countries that are not included in Annex VII

Units used in the report		Data	
Units	Definition	Separator	Indication
Kg	Kilogram	.	1000 separator
Mt	Metric ton (1000 kg)	,	Indication of decimal

In the report countries are classified according to region (see section 2.1), category of income (according to World Bank classification as at 2018) and status in the Convention. The following table provides an overview of the classifications applied.

<i>Countries</i>	<i>Wealth level</i>	<i>Region</i>	<i>Status in the Convention</i>
Afghanistan	Low income	Asia non OECD	Non Annex VII
Albania	Upper middle income	Europe non EU/OECD	Non Annex VII
Algeria	Upper middle income	Africa	Non Annex VII
Andorra	High income	Europe non EU/OECD	Non Annex VII
Angola	Upper middle income	Africa	Non Annex VII
Antigua and Barbuda	High income	America non OECD	Non Annex VII
Argentina	Upper middle income	America non OECD	Non Annex VII
Armenia	Lower middle income	Europe non EU/OECD	Non Annex VII
Australia	High income	Pacific OECD	Non Annex VII
Austria	High income	Europe EU/OECD	Annex VII
Azerbaijan	Upper middle income	Europe non EU/OECD	Non Annex VII
Bahamas	High income	America non OECD	Non Annex VII
Bahrain	High income	Asia non OECD	Non Annex VII
Bangladesh	Lower middle income	Asia non OECD	Non Annex VII
Barbados	High income	America non OECD	Non Annex VII
Belarus	Upper middle income	Europe non EU/OECD	Non Annex VII
Belgium	High income	Europe EU/OECD	Annex VII
Belize	Upper middle income	America non OECD	Non Annex VII
Benin	Low income	Africa	Non Annex VII
Bhutan	Lower middle income	Asia non OECD	Non Annex VII
Bolivia	Lower middle income	America non OECD	Non Annex VII
Bosnia and Herzegovina	Upper middle income	Europe non EU/OECD	Non Annex VII
Botswana	Upper middle income	Africa	Non Annex VII
Brazil	Upper middle income	America non OECD	Non Annex VII
Brunei Darussalam	High income	Asia non OECD	Non Annex VII
Bulgaria	Upper middle income	Europe EU/OECD	Annex VII
Burkina Faso	Low income	Africa	Non Annex VII
Burundi	Low income	Africa	Non Annex VII

32. For the purpose of the analysis, the list of countries includes non-Party States that were referred to in the national reporting data as States concerned by transboundary movements.

<i>Countries</i>	<i>Wealth level</i>	<i>Region</i>	<i>Status in the Convention</i>
Cabo Verde	Lower middle income	Africa	Non Annex VII
Cambodia	Lower middle income	Asia non OECD	Non Annex VII
Cameroon	Lower middle income	Africa	Non Annex VII
Canada	High income	America OECD	Non Annex VII
Central African Republic	Low income	Africa	Non Annex VII
Chad	Low income	Africa	Non Annex VII
Chile	High income	America OECD	Non Annex VII
China	Upper middle income	Asia non OECD	Non Annex VII
Colombia	Upper middle income	America non OECD	Non Annex VII
Comoros	Low income	Africa	Non Annex VII
Congo	Lower middle income	Africa	Non Annex VII
Cook Islands	High income	Pacific non OECD	Non Annex VII
Costa Rica	Upper middle income	America non OECD	Non Annex VII
Côte d'Ivoire	Lower middle income	Africa	Non Annex VII
Croatia	High income	Europe EU/OECD	Annex VII
Cuba	Upper middle income	America non OECD	Non Annex VII
Cyprus	High income	Europe EU/OECD	Annex VII
Czech Republic	High income	Europe EU/OECD	Annex VII
Denmark	High income	Europe EU/OECD	Annex VII
Democratic People's Republic of Korea	Low income	Asia non OECD	Non Annex VII
Democratic Republic of Congo	Low income	Africa	Non Annex VII
Djibouti	Lower middle income	Africa	Non Annex VII
Dominica	Upper middle income	America non OECD	Non Annex VII
Dominican Republic	Upper middle income	America non OECD	Non Annex VII
Ecuador	Upper middle income	America non OECD	Non Annex VII
Egypt	Lower middle income	Africa	Non Annex VII
El Salvador	Lower middle income	America non OECD	Non Annex VII
Equatorial Guinea	Upper middle income	Africa	Non Annex VII
Eritrea	Low income	Africa	Non Annex VII
Estonia	High income	Europe EU/OECD	Annex VII
Eswatini	Lower middle income	Africa	Non Annex VII
Ethiopia	Low income	Africa	Non Annex VII
Fiji	Upper middle income	Pacific non OECD	Non Party
Finland	High income	Europe EU/OECD	Annex VII

<i>Countries</i>	<i>Wealth level</i>	<i>Region</i>	<i>Status in the Convention</i>
France	High income	Europe EU/OECD	Annex VII
Gabon	Upper middle income	Africa	Non Annex VII
Gambia	Low income	Africa	Non Annex VII
Georgia	Upper middle income	Europe non EU/OECD	Non Annex VII
Germany	High income	Europe EU/OECD	Annex VII
Ghana	Lower middle income	Africa	Non Annex VII
Greece	High income	Europe EU/OECD	Annex VII
Guatemala	Lower middle income	America non OECD	Non Annex VII
Guinea	Low income	Africa	Non Annex VII
Guinea-Bissau	Low income	Africa	Non Annex VII
Guyana	Upper middle income	America non OECD	Non Annex VII
Haiti	Low income	America non OECD	Non Party
Holy See	High income	Europe non EU/OECD	Non Party
Honduras	Lower middle income	America non OECD	Non Annex VII
Hungary	High income	Europe EU/OECD	Annex VII
Iceland	High income	Europe EU/OECD	Annex VII
India	Lower middle income	Asia non OECD	Non Annex VII
Indonesia	Lower middle income	Asia non OECD	Non Annex VII
Iran (Islamic Republic of)	Upper middle income	Asia non OECD	Non Annex VII
Iraq	Upper middle income	Asia non OECD	Non Annex VII
Ireland	High income	Europe EU/OECD	Annex VII
Israel	High income	Asia OECD	Non Annex VII
Italy	High income	Europe EU/OECD	Annex VII
Jamaica	Upper middle income	America non OECD	Non Annex VII
Japan	High income	Asia OECD	Non Annex VII
Jordan	Upper middle income	Asia non OECD	Non Annex VII
Kazakhstan	Upper middle income	Europe non EU/OECD	Non Annex VII
Kenya	Lower middle income	Africa	Non Annex VII
Kiribati	Lower middle income	Pacific non OECD	Non Annex VII
Kuwait	High income	Asia non OECD	Non Annex VII
Kyrgyzstan	Lower middle income	Europe non EU/OECD	Non Annex VII
Lao People's Democratic Republic	Lower middle income	Asia non OECD	Non Annex VII
Latvia	High income	Europe EU/OECD	Annex VII
Lebanon	Upper middle income	Asia non OECD	Non Annex VII

<i>Countries</i>	<i>Wealth level</i>	<i>Region</i>	<i>Status in the Convention</i>
Lesotho	Lower middle income	Africa	Non Annex VII
Liberia	Low income	Africa	Non Annex VII
Libya	Upper middle income	Africa	Non Annex VII
Liechtenstein	High income	Europe non EU/OECD	Annex VII
Lithuania	High income	Europe EU/OECD	Annex VII
Luxembourg	High income	Europe EU/OECD	Annex VII
Madagascar	Low income	Africa	Non Annex VII
Malawi	Low income	Africa	Non Annex VII
Malaysia	Upper middle income	Asia non OECD	Non Annex VII
Maldives	Upper middle income	Asia non OECD	Non Annex VII
Mali	Low income	Africa	Non Annex VII
Malta	High income	Europe EU/OECD	Annex VII
Marshall Islands	Upper middle income	Pacific non OECD	Non Annex VII
Mauritania	Lower middle income	Africa	Non Annex VII
Mauritius	Upper middle income	Africa	Non Annex VII
Mexico	Upper middle income	America OECD	Non Annex VII
Micronesia (Federated States of)	Lower middle income	Pacific non OECD	Non Annex VII
Monaco	High income	Europe non EU/OECD	Non Annex VII
Mongolia	Lower middle income	Asia non OECD	Non Annex VII
Montenegro	Upper middle income	Europe non EU/OECD	Non Annex VII
Morocco	Lower middle income	Africa	Non Annex VII
Mozambique	Low income	Africa	Non Annex VII
Myanmar	Lower middle income	Asia non OECD	Non Annex VII
Namibia	Upper middle income	Africa	Non Annex VII
Nauru	High income	Pacific non OECD	Non Annex VII
Nepal	Low income	Asia non OECD	Non Annex VII
Netherlands	High income	Europe EU/OECD	Annex VII
New Zealand	High income	Pacific OECD	Non Annex VII
Nicaragua	Lower middle income	America non OECD	Non Annex VII
Niger	Low income	Africa	Non Annex VII
Nigeria	Lower middle income	Africa	Non Annex VII
Norway	High income	Europe EU/OECD	Annex VII
Oman	High income	Asia non OECD	Non Annex VII
Pakistan	Lower middle income	Asia non OECD	Non Annex VII

<i>Countries</i>	<i>Wealth level</i>	<i>Region</i>	<i>Status in the Convention</i>
Palau	Upper middle income	Pacific non OECD	Non Annex VII
Panama	Upper middle income	America non OECD	Non Annex VII
Papua New Guinea	Lower middle income	Pacific non OECD	Non Annex VII
Paraguay	Upper middle income	America non OECD	Non Annex VII
Peru	Upper middle income	America non OECD	Non Annex VII
Philippines	Lower middle income	Asia non OECD	Non Annex VII
Poland	High income	Europe EU/OECD	Annex VII
Portugal	High income	Europe EU/OECD	Annex VII
Qatar	High income	Asia non OECD	Non Annex VII
Republic of Korea	High income	Asia OECD	Non Annex VII
Republic of Moldova	Lower middle income	Europe non EU/OECD	Non Annex VII
Romania	Upper middle income	Europe EU/OECD	Annex VII
Russian Federation	Upper middle income	Europe non EU/OECD	Non Annex VII
Rwanda	Low income	Africa	Non Annex VII
Saint Kitts and Nevis	High income	America non OECD	Non Annex VII
Saint Lucia	Upper middle income	America non OECD	Non Annex VII
Saint Vincent and the Grenadines	Upper middle income	America non OECD	Non Annex VII
Samoa	Lower middle income	Pacific non OECD	Non Annex VII
San Marino	High income	Europe non EU/OECD	Non Party
Sao Tome and Principe	Lower middle income	Africa	Non Annex VII
Saudi Arabia	High income	Asia non OECD	Non Annex VII
Senegal	Low income	Africa	Non Annex VII
Serbia	Upper middle income	Europe non EU/OECD	Non Annex VII
Seychelles	High income	Africa	Non Annex VII
Sierra Leone	Low income	Africa	Non Annex VII
Singapore	High income	Asia non OECD	Non Annex VII
Slovakia	High income	Europe EU/OECD	Annex VII
Slovenia	High income	Europe EU/OECD	Annex VII
Solomon Islands	Lower middle income	Pacific non OECD	Non Party
Somalia	Low income	Africa	Non Annex VII
South Africa	Upper middle income	Africa	Non Annex VII
South Sudan	Low income	Africa	Non Party
Spain	High income	Europe EU/OECD	Annex VII
Sri Lanka	Lower middle income	Asia non OECD	Non Annex VII

<i>Countries</i>	<i>Wealth level</i>	<i>Region</i>	<i>Status in the Convention</i>
State of Palestine	Lower middle income	Asia non OECD	Non Annex VII
Sudan	Lower middle income	Africa	Non Annex VII
Suriname	Upper middle income	America non OECD	Non Annex VII
Sweden	High income	Europe EU/OECD	Annex VII
Switzerland	High income	Europe EU/OECD	Annex VII
Syrian Arab Republic	Lower middle income	Asia non OECD	Non Annex VII
Tajikistan	Lower middle income	Europe non EU/OECD	Non Annex VII
United Republic of Tanzania	Low income	Africa	Non Annex VII
Thailand	Upper middle income	Asia non OECD	Non Annex VII
The Former Yugoslav Republic of Macedonia	Upper middle income	Europe non EU/OECD	Non Annex VII
Timor-Leste	Lower middle income	Asia non OECD	Non Party
Togo	Low income	Africa	Non Annex VII
Tonga	Lower middle income	Pacific non OECD	Non Annex VII
Trinidad and Tobago	High income	America non OECD	Non Annex VII
Tunisia	Lower middle income	Africa	Non Annex VII
Turkey	Upper middle income	Europe EU/OECD	Annex VII
Turkmenistan	Upper middle income	Europe non EU/OECD	Non Annex VII
Tuvalu	Upper middle income	Pacific non OECD	Non Party
Uganda	Low income	Africa	Non Annex VII
Ukraine	Lower middle income	Europe non EU/OECD	Non Annex VII
United Arab Emirates	High income	Asia non OECD	Non Annex VII
United Kingdom of Great Britain and Northern Ireland	High income	Europe EU/OECD	Annex VII
United States of America	High income	America OECD	Non Party
Uruguay	High income	America non OECD	Non Annex VII
Uzbekistan	Lower middle income	Europe non EU/OECD	Non Annex VII
Vanuatu	Lower middle income	Pacific non OECD	Non Party
Venezuela	Upper middle income	America non OECD	Non Annex VII
Viet Nam	Lower middle income	Asia non OECD	Non Annex VII
Yemen	Lower middle income	Asia non OECD	Non Annex VII
Zambia	Lower middle income	Africa	Non Annex VII
Zimbabwe	Low income	Africa	Non Annex VII

Data from the Secretariat are the best available data to analyse patterns of transboundary movements of hazardous wastes and other wastes. However, a number of aspects of these data have to be taken into account when analysing them. The main issues are:

- not all countries transmit national annual reports;
- differences in national definitions of hazardous wastes;
- differences in national reporting systems.

Not all countries transmit national annual reports

There are two reasons why the data held by the Secretariat are incomplete. Firstly, not all Parties to the Convention fulfil their reporting obligations or transmit data every year. Secondly, countries not Party to the Convention are not obliged to and do not report their transboundary movements to the Secretariat.

One way to address the problem of under-reporting is to compare and combine data reported on imports and exports from the Parties that did report information. If all Parties would report on transboundary movements, all movements would be reported twice: once by the state of export and once by the state of import. This potential double reporting could be used to fill the gaps that are present because certain Parties and non-Parties did not report data. The reports submitted by Parties will contain information about transboundary movements with Parties that did not report themselves and also, in some cases, with non-Parties³³.

When comparing data from reported imports with those from reported exports it is clear that these data do not match. Differences of more than 20% in the reported datasets are common. This is partly due to the fact that not all countries reported their data (see above). For example, if country A did report and country B did not there may be differences if the transboundary movements between the two countries do not match one another. If country A imports 1 million tonnes of wastes from country B and exports 0.5 million tonnes of wastes to that country, the difference between import and export data in the dataset of the Secretariat will be 0.5 million tonnes. As mentioned above, the best way to remediate this is to compare and combine data reported on imports and exports. This will however, not totally remove discrepancies. The other reasons for discrepancies are the differences in national definitions of hazardous wastes and differences in reporting systems.

Differences in national definitions of hazardous wastes

The Convention contains a definition of hazardous wastes that allows for some differences in what is considered or defined as hazardous. Article 1.1.a is the harmonized part of the definition and is based on categories of wastes contained in Annex I exhibiting characteristics of Annex III of the Convention. This Article and related Annexes are further elaborated by Annexes VIII and IX with the lists of wastes for the Convention.



Article 1.1.b indicates that any other wastes defined as or considered to be hazardous in national legislation are also hazardous wastes for the Convention, which are to be notified through the Secretariat under Article 3. This is the non-harmonized part of the definition of hazardous wastes in the Convention. When Parties report on transboundary movements of hazardous wastes they should also report on transboundary movements of wastes that are hazardous according to Article 1.1.b. The other countries involved in transboundary movements of these wastes may not always report on these movements as the wastes may not be hazardous under their national legislation, although here matching the reports could help address challenges in this respect.

Reporting systems as applied by Parties

Two aspects are highlighted: control of transboundary movements of 'non-hazardous' wastes and the point of measurement of the amounts of wastes subject to transboundary movements.

1. Wastes outside the scope of the Convention voluntarily subjected to the control system

In certain countries, the prior informed consent procedure for transboundary movements of wastes is not only applied to hazardous wastes, but also to certain wastes that are not 'Other wastes' under Annex II to the Convention. The notion of 'controlled wastes' in these countries is wider than the notion of 'hazardous wastes' under the Convention. Not all Parties that reported their data to the Secretariat have dealt with this issue in the same manner. The Secretariat puts data relating to such wastes in a separate table with the end-notes for the data, but does not include them in the dataset of transboundary movements of hazardous wastes. However, it is not always possible to identify such cases in the data as transmitted.

2. Amounts reported

Within the control system of hazardous wastes there are several possibilities to report on the amount of wastes that were subject to transboundary movements, e.g.:

- amounts notified;
- amounts exported or imported;
- amounts treated.








The differences between the amounts one would find may be quite different depending on the nature of the amounts that are reported. In particular, the amounts of wastes notified may be much larger than the amounts that are imported or exported in reality. Exporters may wish to include a certain degree of flexibility when notifying their shipments in order to avoid having to do another notification when the amounts would exceed their expectations at the time of preparing the notification. In addition, it cannot be excluded that different authorities report different types of quantitative data within the reporting system under the Basel Convention.

33. Information on transboundary movement should be included if these are covered by bilateral or multilateral agreements as foreseen in Article 11 of the Convention.

Annex > 4 Generation of hazardous wastes

The data on generation of hazardous waste used in this analysis came from 3 different sources: the Secretariat of the Basel Convention, UN Statistics Division and Eurostat. The data for this analysis were extracted from these databases in the summer of 2017. The time series for countries included in these datasets were completed by inter- and extrapolation. For countries where none of the sources contained information the amounts were estimated based on the average amount generated per inhabitant (annex 4.1) and per unit of GDP (Annex 4.2) for the different income level categories of countries as defined by the World Bank. They present the results of this estimation for all Parties to the Basel Convention complemented with the UN member countries that are not Parties.

To indicate the source or nature of the data the following color indications were used:

Color indication	Source or nature of the data	Website
 waste amount	data from the UN Statistics Division	https://unstats.un.org/unsd/envstats/qindicators.cshtml
 waste amount	data from Eurostat	http://ec.europa.eu/eurostat/data/database
 waste amount	Data from USA EPA ³⁴	https://rcrainfo.epa.gov/rcrainfoweb/action/modules/br/main/broverview
 waste amount	missing data for years filled by interpolation or extrapolation	-
 waste amount	missing data for years filled by assuming the amount is the same as for the closest year reported	-
 Country	quantities estimated on the basis of the average generation of waste per inhabitant or unit of GDP of the countries in the same income level category	-
 waste amount	data as reported under the Basel Convention are completely out of range, replaced by data from another source or filled via interpolation or extrapolation	-

Annex 4.1 Estimation of global generation of hazardous waste (population)

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015
Afghanistan	533.270	531.748	541.706	545.823	550.085	550.290	554.662	402.394	422.520
Albania	12.002.625	12.002.625	12.002.625	12.002.625	12.002.625	12.002.625	12.002.625	12.002.625	12.002.625
Algeria	325.100	325.100	325.100	325.100	325.100	325.100	18.912	43	27
Andorra	866	875	1.031	1.994	2.425	2.674	2.962	5.186	4.663
Angola	435.866	423.220	453.157	495.580	577.551	605.859	741.618	1.093.996	1.154.064
Antigua and Barbuda	12.726	13.670	13.126	13.039	12.818	13.716	13.679	13.383	13.562
Argentina	194.753	211.596	229.896	253.661	274.800	292.499	294.772	370.800	378.161
Armenia	13.346.024	11.455.378	14.766.142	17.307.829	18.225.893	20.206.172	22.411.698	46.511.900	46.511.900
Australia	1.117.184	1.473.828	1.447.065	1.949.418	2.215.510	6.607.641	7.191.312	10.031.053	12.946.368
Austria	990.276	1.093.112	858.000	951.135	903.651	951.722	1.125.571	1.252.125	1.265.844
Azerbaijan	10.400	24.200	15.100	25.800	185.000	297.000	202.700	456.600	262.600
Bahamas	47.674	51.540	49.772	49.703	49.089	52.729	52.752	51.729	52.502
Bahrain	35.008	45.784	39.721	145.578	139.830	6.862.900	339.147	227.821	135.058
Bangladesh	3.054.285	2.894.271	3.023.549	3.226.568	3.670.408	3.759.489	4.494.813	6.477.924	6.677.703
Barbados	25	25	25	25	25	25	25	25	25

34. Source of reference as this non-Party was a State concerned by several transboundary movements according to reporting information transmitted by Parties

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015
Belarus	2.999.841	3.602.793	18.004.820	33.348.169	34.728.899	34.728.899	34.728.899	34.728.899	34.728.899
Belgium	4.978.943	5.918.821	5.343.060	4.767.299	4.677.349	4.587.398	3.766.797	2.946.195	2.946.195
Belize	5.203	6.234	8.196	12.674	13.758	14.141	14.148	14.678	14.916
Benin	169.392	169.435	173.023	174.327	175.176	174.410	174.875	126.360	132.455
Bhutan	14.260	13.633	14.358	15.431	17.659	18.178	21.821	31.553	32.617
Bolivia (Plurinational State of)	143	143	143	143	143	143	143	143	143
Bosnia and Herzegovina	4.981	3.145	4.870	647.243	796.583	945.923	4	8.408	8.408
Botswana	33.383	39.632	51.692	79.402	85.733	87.751	87.495	90.504	91.714
Brazil	1.420	11.330	11.330	11.330	11.330	11.330	11.330	11.330	11.330
Brunei Darussalam	50	50	50	50	50	50	50	50	50
Bulgaria	816.767	814.909	792.636	647.243	203.990	160.162	124.634	177.923	181.866
Burkina Faso	285.540	286.188	292.884	295.720	297.773	297.064	298.427	216.023	226.820
Burundi	159.070	159.993	164.209	166.134	167.450	167.070	167.809	121.509	127.737
Cabo Verde	10.097	9.564	9.987	10.654	12.116	12.408	14.836	21.393	22.076
Cambodia	283.898	269.976	283.158	303.440	346.692	356.736	428.531	620.576	642.814
Cameroon	8.376	9.283	8.717	9.142	9.326	9.510	9.694	9.879	10.063
Canada	4.598.467	4.937.741	4.739.337	4.706.556	4.625.289	4.946.456	4.930.019	4.819.294	4.879.137
Central African Republic	2.990	2.990	2.990	2.990	2.990	2.990	2.990	2.990	2.990
Chad	215.892	216.912	222.506	225.264	227.537	227.759	229.572	166.685	175.456
Chile	124.753	188.307	339.253	404.695	388.773	431.474	461.892	494.454	529.313
China	10.790.000	13.570.000	14.298.000	15.868.000	34.312.000	34.652.427	35.493.832	36.335.236	39.761.000
Colombia	98.353	107.782	190.000	228.661	279.052	241.388	241.620	234.324	406.078
Comoros	12.855	12.804	13.023	13.070	13.083	12.976	12.961	9.328	9.737
Congo	197	197	197	197	197	197	197	197	197
Cook Islands	2.981	3.160	2.868	2.766	2.635	2.833	2.772	2.635	2.633
Costa Rica	76.193	90.195	117.183	179.122	192.270	195.472	193.462	198.554	199.596
Côte d'Ivoire	396.182	379.236	400.643	432.643	498.300	517.078	626.602	915.631	957.262
Croatia	52.492	58.432	42.444	58.322	63.615	66.344	123.576	132.440	133.156
Cuba	1.417.308	1.165.124	912.940	660.756	500.651	450.953	401.256	351.558	301.860
Cyprus	38.097	76.618	75.444	37.311	82.743	79.548	65.817	65.590	50.625
Czech Republic	1.733.164	2.038.359	2.161.389	1.784.126	1.840.809	1.636.790	1.443.358	1.565.888	1.503.979

Annex > 4

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015
Democratic People's Republic of Korea	484.915	474.103	473.204	466.013	457.758	445.546	436.748	308.525	316.158
Democratic Republic of the Congo	1.170.401	1.176.212	1.207.226	1.222.722	1.235.270	1.236.548	1.246.586	905.598	954.296
Denmark	528.548	648.481	517.584	825.593	925.038	843.064	1.280.729	1.718.394	1.718.394
Djibouti	16.801	16.006	16.817	18.050	20.650	21.273	25.579	37.069	38.418
Dominica	1.237	1.447	1.860	2.815	2.997	3.026	2.976	3.037	3.037
Dominican Republic	16.398	22.058	27.719	33.379	39.040	44.700	88.821	120.000	120.000
Ecuador	197.738	193.812	196.762	196.762	196.762	196.762	196.762	196.762	196.762
Egypt	450.000	452.000	452.000	245.000	245.000	245.000	245.000	245.000	245.000
El Salvador	16.465	16.465	16.465	16.465	16.465	16.465	16.465	16.465	16.465
Equatorial Guinea	14.461	17.683	23.736	37.481	41.555	43.621	44.549	47.136	48.796
Eritrea	2.112	2.112	2.112	2.112	2.112	2.112	1.328	544	544
Estonia	9.007.643	7.736.679	6.783.924	9.097.834	9.311.675	9.233.466	10.657.492	10.484.292	9.233.049
Eswatini	20.933	20.933	20.933	20.933	20.933	20.933	20.933	20.933	20.933
Ethiopia	1.622.850	1.620.626	1.652.261	1.661.974	1.667.307	1.657.202	1.658.613	1.196.036	1.250.822
Fiji	14.557	17.172	22.244	33.889	36.239	36.691	36.162	36.968	37.037
Finland	2.246.100	2.371.000	1.426.000	1.507.000	1.279.500	1.052.000	1.893.728	1.915.719	1.915.719
France	9.890.824	10.892.890	11.215.512	11.538.134	11.420.636	11.303.137	11.043.271	10.783.405	10.523.539
Gabon	25.968	31.285	41.428	64.638	70.928	73.786	74.701	78.281	80.131
Gambia	30.836	30.949	31.715	32.066	32.336	32.306	32.501	23.559	24.768
Georgia	928.410	928.410	985.000	951.990	951.990	951.990	951.990	951.990	951.990
Germany	18.775.000	18.594.000	17.316.000	19.931.452	16.924.000	16.924.000	16.950.000	17.000.000	17.000.000
Ghana	471.206	453.158	480.373	519.819	599.091	621.235	751.542	1.095.707	1.142.611
Greece	333.155	333.155	237.000	227.000	277.000	233.479	230.000	225.010	203.778
Grenada	1.806	2.116	2.723	4.125	4.391	4.430	4.354	4.439	4.435
Guatemala	847	1.079	36	301.350	31	6.321	7.564	8.808	10.051
Guinea	202.289	201.118	204.202	204.551	204.327	202.237	201.657	145.017	151.436
Guinea-Bissau	1.508	1.508	1.508	1.508	1.508	1.508	1.508	1.508	1.782
Guyana	742	742	742	742	742	742	6.010	1.316	1.316
Haiti	191.473	189.075	190.590	189.494	187.846	184.450	182.345	129.870	134.147
Holy See	111	117	112	109	107	114	112	108	109
Honduras	1.700	1.700	1.820	1.700	9.600	4.500	7.825	11.150	253

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015
Hungary	1.570.728	933.146	821.454	735.318	1.087.738	1.132.088	1.048.390	862.939	617.990
Iceland	90.484	90.484	8.304	8.304	16.263	16.263	16.263	16.263	16.263
India	7.900.000	7.900.000	7.900.000	7.900.000	7.900.000	7.900.000	7.900.000	7.900.000	7.900.000
Indonesia	4.836.340	4.593.294	4.809.804	5.143.116	5.859.500	6.008.422	7.189.367	10.368.038	10.694.295
Iran (Islamic Republic of)	4.677.965	4.677.965	4.677.965	4.677.965	4.677.965	4.677.965	4.667.377	1.099.215	1.099.215
Iraq	2.338	2.338	15.546	15.546	119.425	119.425	16.371	892.807	20.622
Ireland	493.068	768.672	327.960	321.733	309.286	296.838	316.473	317.425	328.000
Israel	294.306	336.458	309.400	317.421	325.442	333.462	341.483	334.444	334.444
Italy	6.878.155	6.878.155	8.543.415	8.543.415	8.987.032	8.987.032	9.372.184	8.923.548	8.923.548
Jamaica	48.397	56.813	73.211	111.021	118.254	119.321	117.227	119.447	119.227
Japan	17.896.075	19.001.875	18.032.666	17.707.350	17.208.985	18.201.795	17.942.879	17.347.544	17.368.914
Jordan	1.293.804	1.293.804	108.403	61.962	1.230.441	1.230.441	1.230.441	1.230.441	1.230.441
Kazakhstan	276.234	325.820	422.550	646.255	695.752	710.686	707.323	729.838	736.871
Kenya	790.579	761.436	808.610	876.897	1.013.203	1.053.696	1.278.712	1.870.337	1.956.749
Kiribati	1.999	1.915	2.021	2.177	2.496	2.574	3.096	4.489	4.656
Kuwait	348.633	392.059	395.382	412.970	427.334	481.250	503.187	511.975	534.171
Kyrgyzstan	5.546.316	5.581.166	5.683.650	5.745.858	5.876.177	9.540.652	15.693.079	15.693.079	15.693.079
Lao People's Democratic Republic	123.504	117.715	123.632	132.462	151.038	154.872	185.261	267.252	276.053
Latvia	31.562	31.408	29.437	31.635	58.476	85.121	109.232	80.979	86.603
Lebanon	71.258	83.710	109.217	170.919	191.764	206.488	216.880	233.848	242.922
Lesotho	41.148	38.899	40.578	43.273	49.225	50.454	60.399	87.201	90.084
Liberia	70.382	71.363	73.729	74.817	75.363	74.961	74.923	53.935	56.354
Libya	104.108	123.254	159.814	243.115	258.848	260.326	254.692	258.923	258.842
Liechtenstein	46.453	7.204	8.160	8.354	17.466	3.642	2.423	1.204	1.204
Lithuania	118.912	115.719	104.886	93.172	140.964	107.343	145.033	155.927	154.645
Luxembourg	124.131	85.487	97.058	99.196	93.497	315.082	316.812	98.686	317.788
Madagascar	45.957	45.957	45.957	45.957	45.957	45.957	45.957	45.957	45.957
Malawi	277.305	278.035	284.634	287.418	289.361	288.569	289.764	209.670	220.094
Malaysia	1.138.839	1.304.899	1.705.308	929.584	1.010.594	1.707.040	1.343.405	1.665.347	2.314.714
Maldives	5.860	7.026	9.256	14.365	15.678	16.220	16.335	17.038	17.370
Mali	273.992	275.444	282.545	285.674	287.757	286.944	288.028	208.369	218.770

Annex > 4

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015
Malta	55.281	55.620	47.205	41.991	41.636	27.347	19.865	33.056	41.318
Marshall Islands	909	1.063	1.366	2.066	2.196	2.212	2.170	2.208	2.200
Mauritania	68.764	66.277	70.463	76.546	88.657	92.468	112.567	165.150	173.252
Mauritius	7.116	7.330	7.550	7.776	8.825	8.249	9.362	9.832	10.325
Mexico	205.696	236.778	395.064	165.343	134.313	110.835	87.357	200.936	98.823
Micronesia (Federated States of)	2.181	2.032	2.089	2.197	2.467	2.499	2.958	4.227	4.326
Monaco	584	682	401	401	401	401	401	401	401
Mongolia	53.797	51.117	53.622	57.526	65.855	67.940	81.843	118.822	123.316
Montenegro	2.840	2.840	2.840	2.840	2.840	2.840	2.840	284.124	284.124
Morocco	150.000	176.500	203.000	229.500	256.000	262.000	275.653	289.305	289.305
Mozambique	444.546	445.106	455.041	458.998	461.771	460.292	462.066	334.272	350.809
Myanmar	1.020.694	962.380	1.000.798	1.063.637	1.205.561	1.230.892	1.467.590	2.110.099	2.170.808
Namibia	36.269	42.891	55.796	85.641	92.598	95.085	95.223	98.951	100.696
Nauru	174	203	260	395	427	440	444	462	467
Nepal	525.217	515.808	517.270	512.091	505.990	495.667	489.176	347.918	358.895
Netherlands	6.006.518	6.006.518	6.006.518	4.485.047	4.485.047	5.915.938	5.915.938	4.830.495	4.830.495
New Zealand	589.523	632.407	606.408	601.953	591.692	633.211	631.717	618.128	626.290
Nicaragua	565	565	565	565	565	565	565	1.407	2.872
Niger	293.881	296.685	305.899	311.266	315.969	317.866	322.088	235.213	249.192
Nigeria	81.400	81.400	81.400	81.400	81.400	81.400	81.400	98	30.800
Norway	1.017.000	1.447.674	1.000.000	1.763.033	1.667.275	1.357.124	1.300.000	1.380.000	1.410.000
Oman	370.825	407.828	404.359	418.945	433.523	491.042	519.002	536.133	570.003
Pakistan	3.328.159	3.182.885	3.357.041	3.617.004	4.153.852	4.295.057	5.183.457	7.540.243	7.845.036
Palau	2.801	2.990	2.853	2.820	2.759	2.942	2.925	2.855	2.889
Panama	2.400	1.683	1.275	14.200	12.870	15.460	15.460	15.460	15.460
Papua New Guinea	137.581	132.011	139.616	150.742	173.355	179.392	216.591	315.180	328.077
Paraguay	104.035	123.133	159.991	244.720	263.039	267.926	265.781	273.467	275.621
Peru	107.630	107.630	107.630	107.630	107.630	107.630	107.630	107.630	107.630
Philippines	1.130.247	1.515.449	1.900.651	1.346.506	4.979.340	678.811	1.712.394	1.712.394	4.332.026
Poland	1.204.183	6.820.058	7.740.564	1.607.748	1.834.072	1.799.678	1.795.608	1.974.866	1.597.619
Portugal	2.811.613	3.539.985	1.472.079	1.619.614	862.489	1.076.994	984.056	543.758	857.028

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015
Qatar	9.471	18.940	20.265	21.589	18.581	15.572	21.633	28.321	28.321
Republic of Korea	3.501.980	3.501.980	3.501.980	3.501.980	3.501.980	3.501.980	3.501.980	3.501.980	3.501.980
Republic of Moldova	6.501	6.530	6.664	404	528	418	418	418	3.357
Romania	1.100.000	441.500	438.581	695.689	695.689	689.251	689.251	590.300	590.300
Russian Federation	2.496.181	2.913.495	3.735.991	5.641.444	5.987.498	6.023.638	5.902.723	5.999.764	5.973.462
Rwanda	189.279	189.137	193.000	194.179	194.716	193.407	193.416	139.364	145.650
Saint Kitts and Nevis	6.933	7.440	7.137	7.086	6.964	7.454	7.435	7.274	7.368
Saint Lucia	82	182	227	536	844	1.153	1.469	2.461	2.797
Saint Vincent and the Grenadines	1.902	2.223	2.852	4.308	4.570	4.592	4.494	4.564	4.544
Samoa	3.179	3.737	4.826	7.338	7.843	7.946	7.841	8.025	8.044
San Marino	4.175	4.486	4.309	4.285	4.219	4.523	4.517	4.420	4.473
Sao Tome and Principe	3.386	3.246	3.433	3.706	4.264	4.415	5.336	7.773	8.101
Saudi Arabia	3.516.758	3.834.472	3.739.521	3.777.744	3.781.535	4.122.392	4.187.342	4.165.797	4.282.973
Senegal	268	268	268	268	268	268	268	268	268
Serbia	1.710	2.164.626	652.792	11.161.172	183.353	247.048	577.490	210.000	53.474
Seychelles	12.573	13.405	12.768	12.591	12.298	13.079	12.972	12.622	12.723
Sierra Leone	120.519	120.115	122.063	122.393	122.422	121.293	120.996	86.959	90.637
Singapore	491.000	472.000	356.000	434.000	432.600	290.500	332.800	411.180	446.870
Slovakia	663.300	602.480	562.348	466.422	379.628	369.475	362.655	376.733	400.209
Slovenia	69.885	136.872	84.287	96.937	106.344	115.751	127.922	140.093	137.679
Solomon Islands	10.232	9.812	10.371	11.193	12.868	13.315	16.075	23.387	24.336
Somalia	221.159	221.499	226.475	228.410	229.686	228.810	229.550	165.993	174.187
South Africa	869.908	1.026.504	1.330.791	2.032.861	2.184.273	2.225.915	2.210.168	2.276.165	2.295.397
South Sudan	177.447	180.466	187.066	190.774	193.471	193.934	195.380	141.644	148.813
Spain	3.143.407	2.783.688	2.880.335	2.991.152	3.054.849	3.071.427	3.071.427	2.984.518	2.984.518
Sri Lanka	411.228	387.946	403.430	428.339	484.462	493.080	585.551	838.102	858.073
State of Palestine	8.466	11.886	14.423	4.080	4.296	4.512	4.512	4.512	4.512
Sudan	670.114	640.984	676.245	729.210	838.651	868.858	1.051.165	1.533.596	1.600.975
Suriname	4	4	4	4	4	3	4	7	7
Sweden	2.064.000	2.064.000	2.064.000	2.527.760	2.527.760	2.527.760	2.527.760	2.568.154	2.568.154
Switzerland	2.634.667	2.634.667	2.634.667	2.634.667	2.634.667	2.634.667	2.634.667	2.634.667	2.601.036

Annex > 4

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015
Syrian Arab Republic	407.534	395.330	418.499	445.738	497.553	492.987	565.067	780.377	776.092
Tajikistan	148.468	142.174	150.174	162.053	186.391	193.013	233.277	339.846	354.126
Thailand	1.849.000	2.693.000	2.693.000	2.693.000	2.693.000	2.693.000	2.693.000	2.693.000	3.445.000
The Former Yugoslav Republic of Macedonia	6.441	6.441	149.534	149.534	678.568	678.568	40.797	40.797	40.797
Timor-Leste	22.106	20.969	21.945	23.531	26.984	27.926	33.785	49.286	51.407
Togo	1.134.379	1.134.379	1.134.379	1.134.379	1.134.379	1.134.379	1.134.379	792.919	832.500
Tonga	1.785	2.097	2.705	4.104	4.371	4.408	4.330	4.415	4.416
Trinidad and Tobago	124.471	124.471	124.471	124.471	124.471	124.471	124.471	177.441	203.610
Tunisia	213.766	202.423	211.448	225.637	256.634	262.821	314.197	452.867	467.008
Turkey	938	1.018.283	938	3.225.786	938	938	938	3.432.426	938
Turkmenistan	84.923	100.503	130.752	200.478	216.242	221.248	220.587	228.129	231.041
Tuvalu	179	211	273	415	444	450	445	455	457
Uganda	612.883	616.883	633.928	642.695	649.794	650.854	656.430	477.022	502.779
Ukraine	2.585.200	2.301.200	1.230.338	1.659.800	1.513.947	1.368.094	919.068	919.068	919.068
United Arab Emirates	7.285	7.285	274.387	135.718	188.596	341.423	227.870	481.248	297.142
United Kingdom of Great Britain and Northern Ireland	7.081.726	7.098.635	4.373.744	4.202.325	4.193.218	629.704	4.159.591	149.417	38.726
United Republic of Tanzania	839.945	842.998	863.969	873.573	880.823	879.887	885.115	641.644	674.799
United States of America	33.312.951	34.320.613	35.328.275	35.081.863	34.835.450	34.301.405	33.767.360	33.707.074	33.646.787
Uruguay	465.104	495.307	471.658	464.808	453.391	481.423	476.565	462.854	465.734
Uzbekistan	720.952	720.952	783.372	844.082	844.082	844.082	844.082	844.082	844.082
Vanuatu	4.566	4.383	4.638	5.011	5.768	5.975	7.221	10.519	10.961
Venezuela (Bolivarian Republic of)	123.157	123.157	123.157	123.157	123.157	123.157	123.157	123.157	123.157
Viet Nam	1.782.878	1.686.465	1.759.721	1.876.203	2.132.837	2.183.647	2.610.026	3.760.847	3.876.177
Yemen	1.639.758	1.639.758	1.639.758	1.639.758	1.639.758	1.639.758	1.639.758	1.639.758	1.639.758
Zambia	9.572	9.572	9.572	9.572	9.572	9.572	9.572	9.572	9.572
Zimbabwe	25.099	20.286	40.975	45.536	47.023	37.346	37.346	37.346	37.346
Total	258.900.443	274.331.462	284.563.868	320.436.597	332.215.826	345.031.048	355.999.285	387.848.350	393.691.227

Annex 4.2 Estimation of global generation of hazardous waste (GDP)

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015
Afghanistan	395.754	355.123	408.386	493.104	480.936	556.045	519.065	359.894	393.378
Albania	12.002.625	12.002.625	12.002.625	12.002.625	12.002.625	12.002.625	12.002.625	12.002.625	12.002.625
Algeria	325.100	325.100	325.100	325.100	325.100	325.100	18.912	43	27
Andorra	866	875	1.031	1.994	2.425	2.674	2.962	5.186	4.663
Angola	252.456	338.257	393.128	541.183	614.904	645.672	642.205	651.610	547.939
Antigua and Barbuda	4.498	4.772	4.403	3.976	3.604	4.104	3.853	3.867	4.355
Argentina	194.753	211.596	229.896	253.661	274.800	292.499	294.772	370.800	378.161
Armenia	13.346.024	11.455.378	14.766.142	17.307.829	18.225.893	20.206.172	22.411.698	46.511.900	46.511.900
Australia	1.117.184	1.473.828	1.447.065	1.949.418	2.215.510	6.607.641	7.191.312	10.031.053	12.946.368
Austria	990.276	1.093.112	858.000	951.135	903.651	951.722	1.125.571	1.252.125	1.265.844
Azerbaijan	10.400	24.200	15.100	25.800	185.000	297.000	202.700	456.600	262.600
Bahamas	28.729	28.941	28.276	27.398	24.901	28.345	27.456	26.153	28.444
Bahrain	35.008	45.784	39.721	145.578	139.830	6.862.900	339.147	227.821	135.058
Bangladesh	1.361.059	1.370.706	1.574.580	1.485.725	1.704.506	1.733.869	2.234.464	3.492.586	4.118.202
Barbados	25	25	25	25	25	25	25	25	25
Belarus	2.999.841	3.602.793	18.004.820	33.348.169	34.728.899	34.728.899	34.728.899	34.728.899	34.728.899
Belgium	4.978.943	5.918.821	5.343.060	4.767.299	4.677.349	4.587.398	3.766.797	2.946.195	2.946.195
Belize	5.390	5.500	6.962	9.168	8.780	8.805	8.296	8.771	9.273
Benin	239.994	248.566	232.114	215.668	209.594	220.738	237.098	174.245	165.533
Bhutan	20.449	18.823	19.433	20.434	24.119	23.711	26.790	39.572	43.444
Bolivia (Plurinational State of)	143	143	143	143	143	143	143	143	143
Bosnia and Herzegovina	4.981	3.145	4.870	647.243	796.583	945.923	4	8.408	8.408
Botswana	45.685	43.981	53.466	83.907	92.623	82.172	76.686	83.571	76.796
Brazil	1.420	11.330	11.330	11.330	11.330	11.330	11.330	11.330	11.330
Brunei Darussalam	50	50	50	50	50	50	50	50	50
Bulgaria	816.767	814.909	792.636	647.243	203.990	160.162	124.634	177.923	181.866
Burkina Faso	272.227	291.668	273.714	277.851	287.647	302.331	309.026	222.588	222.589
Burundi	54.519	56.163	56.900	62.714	63.185	66.942	70.287	55.530	61.839
Cabo Verde	25.882	26.767	26.302	21.450	24.710	22.778	27.574	37.537	33.234
Cambodia	147.698	154.854	159.825	144.891	169.997	182.525	230.159	338.941	381.043

Annex > 4

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015
Cameroon	8.376	9.283	8.717	9.142	9.326	9.510	9.694	9.879	10.063
Canada	5.059.269	5.436.260	4.957.832	5.588.520	5.645.050	6.156.671	5.936.498	5.440.912	4.988.427
Central African Republic	2.990	2.990	2.990	2.990	2.990	2.990	2.990	2.990	2.990
Chad	347.304	360.747	302.636	329.763	326.066	334.876	335.314	249.899	217.399
Chile	124.753	188.307	339.253	404.695	388.773	431.474	461.892	494.454	529.313
China	10.790.000	13.570.000	14.298.000	15.868.000	34.312.000	34.652.427	35.493.832	36.335.236	39.761.000
Colombia	98.353	107.782	190.000	228.661	279.052	241.388	241.620	234.324	406.078
Comoros	18.592	18.230	17.143	16.414	15.726	15.457	16.019	11.626	11.294
Congo	197	197	197	197	197	197	197	197	197
Cook Islands	2.981	3.160	2.868	2.766	2.635	2.833	2.772	2.635	2.633
Costa Rica	111.692	123.014	159.154	244.561	249.602	260.024	255.752	260.363	291.845
Côte d'Ivoire	347.798	362.379	373.026	320.713	336.317	351.577	465.886	714.588	693.026
Croatia	52.492	58.432	42.444	58.322	63.615	66.344	123.576	132.440	133.156
Cuba	1.417.308	1.165.124	912.940	660.756	500.651	450.953	401.256	351.558	301.860
Cyprus	38.097	76.618	75.444	37.311	82.743	79.548	65.817	65.590	50.625
Czech Republic	1.733.164	2.038.359	2.161.389	1.784.126	1.840.809	1.636.790	1.443.358	1.565.888	1.503.979
Democratic People's Republic of Korea	276.234	325.820	422.550	646.255	695.752	710.686	707.323	729.838	736.871
Democratic Republic of the Congo	657.886	669.299	597.285	635.016	639.693	743.591	777.181	610.793	722.518
Denmark	528.548	648.481	517.584	825.593	925.038	843.064	1.280.729	1.718.394	1.718.394
Djibouti	14.496	14.946	16.120	14.546	16.419	17.600	21.676	32.080	36.458
Dominica	1.760	1.841	2.547	3.241	2.959	2.719	2.614	2.715	2.753
Dominican Republic	16.398	22.058	27.719	33.379	39.040	44.700	88.821	120.000	120.000
Ecuador	197.738	193.812	196.762	196.762	196.762	196.762	196.762	196.762	196.762
Egypt	450.000	452.000	452.000	245.000	245.000	245.000	245.000	245.000	245.000
El Salvador	16.465	16.465	16.465	16.465	16.465	16.465	16.465	16.465	16.465
Equatorial Guinea	54.592	79.362	78.258	106.953	125.970	125.273	112.812	110.311	64.724
Eritrea	2.112	2.112	2.112	2.112	2.112	2.112	1.328	544	544
Estonia	9.007.643	7.736.679	6.783.924	9.097.834	9.311.675	9.233.466	10.657.492	10.484.292	9.233.049
Eswatini	20.933	20.933	20.933	20.933	20.933	20.933	20.933	20.933	20.933
Ethiopia	792.309	943.236	1.060.867	926.189	857.057	1.172.676	1.233.767	998.221	1.287.057
Fiji	14.221	14.157	14.949	20.608	22.292	22.224	21.543	22.974	23.368

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015
Finland	2.246.100	2.371.000	1.426.000	1.507.000	1.279.500	1.052.000	1.893.728	1.915.719	1.915.719
France	9.890.824	10.892.890	11.215.512	11.538.134	11.420.636	11.303.137	11.043.271	10.783.405	10.523.539
Gabon	51.950	62.319	62.829	94.222	107.409	96.077	90.438	93.440	75.899
Gambia	32.117	33.655	29.455	29.469	24.255	24.709	23.402	15.241	18.743
Georgia	928.410	928.410	985.000	951.990	951.990	951.990	951.990	951.990	951.990
Germany	18.775.000	18.594.000	17.316.000	19.931.452	16.924.000	16.924.000	16.950.000	17.000.000	17.000.000
Ghana	423.281	426.732	399.152	414.671	524.270	545.293	712.170	780.121	792.558
Greece	333.155	333.155	237.000	227.000	277.000	233.479	230.000	225.010	203.778
Grenada	3.168	3.319	4.016	5.059	4.599	4.475	4.332	4.685	5.237
Guatemala	847	1.079	36	301.350	31	6.321	7.564	8.808	10.051
Guinea	166.207	157.369	150.768	146.536	135.920	153.445	161.360	118.900	133.752
Guinea-Bissau	1.508	1.508	1.508	1.508	1.508	1.508	1.508	1.508	1.782
Guyana	742	742	742	742	742	742	6.010	1.316	1.316
Haiti	236.609	228.205	215.351	204.910	201.621	213.635	218.863	157.533	174.191
Holy See	111	117	112	109	107	114	112	108	109
Honduras	1.700	1.700	1.820	1.700	9.600	4.500	7.825	11.150	253
Hungary	1.570.728	933.146	821.454	735.318	1.087.738	1.132.088	1.048.390	862.939	617.990
Iceland	90.484	90.484	8.304	8.304	16.263	16.263	16.263	16.263	16.263
India	7.900.000	7.900.000	7.900.000	7.900.000	7.900.000	7.900.000	7.900.000	7.900.000	7.900.000
Indonesia	7.389.252	7.632.477	8.290.693	9.731.708	11.832.210	11.933.990	13.594.211	17.996.001	18.181.535
Iran (Islamic Republic of)	4.677.965	4.677.965	4.677.965	4.677.965	4.677.965	4.677.965	4.667.377	1.099.215	1.099.215
Iraq	2.338	2.338	15.546	15.546	119.425	119.425	16.371	892.807	20.622
Ireland	493.068	768.672	327.960	321.733	309.286	296.838	316.473	317.425	328.000
Israel	294.306	336.458	309.400	317.421	325.442	333.462	341.483	334.444	334.444
Italy	6.878.155	6.878.155	8.543.415	8.543.415	8.987.032	8.987.032	9.372.184	8.923.548	8.923.548
Jamaica	53.558	54.965	62.693	86.569	85.285	82.822	73.399	71.431	75.899
Japan	15.593.375	17.679.186	18.915.698	19.743.301	19.433.208	20.934.811	16.610.463	14.714.586	14.080.723
Jordan	1.293.804	1.293.804	108.403	61.962	1.230.441	1.230.441	1.230.441	1.230.441	1.230.441
Kazakhstan	437.891	536.216	600.473	971.502	1.137.644	1.163.784	1.216.598	1.138.036	981.269
Kenya	546.363	536.953	568.839	515.518	555.900	655.458	820.806	1.241.302	1.346.163
Kiribati	2.235	2.081	2.005	1.975	2.347	2.445	2.788	3.759	3.380

Annex > 4

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015
Kuwait	395.911	517.246	382.914	399.774	486.118	587.457	561.106	493.543	366.360
Kyrgyzstan	5.546.316	5.581.166	5.683.650	5.745.858	5.876.177	9.540.652	15.693.079	15.693.079	15.693.079
Lao People's Democratic Republic	72.197	81.435	89.623	91.864	109.466	132.506	177.907	268.043	303.787
Latvia	31.562	31.408	29.437	31.635	58.476	85.121	109.232	80.979	86.603
Lebanon	102.643	115.849	182.990	249.425	236.704	241.739	228.027	235.049	250.573
Lesotho	31.125	27.955	28.641	30.855	36.989	34.822	37.726	50.928	49.297
Liberia	29.711	29.622	37.779	39.998	41.452	46.990	50.401	36.133	40.610
Libya	281.972	350.161	328.221	490.671	204.933	194.148	178.398	178.349	184.661
Liechtenstein	46.453	7.204	8.160	8.354	17.466	3.642	2.423	1.204	1.204
Lithuania	118.912	115.719	104.886	93.172	140.964	107.343	145.033	155.927	154.645
Luxembourg	124.131	85.487	97.058	99.196	93.497	315.082	316.812	98.686	317.788
Madagascar	45.957	45.957	45.957	45.957	45.957	45.957	45.957	45.957	45.957
Malawi	178.188	185.425	202.477	215.342	214.670	163.226	142.902	108.681	127.243
Malaysia	1.138.839	1.304.899	1.705.308	929.584	1.010.594	1.707.040	1.343.405	1.665.347	2.314.714
Maldives	7.292	8.479	11.192	15.246	14.467	14.090	14.371	15.904	18.282
Mali	327.483	339.800	332.971	330.414	348.107	336.898	331.777	251.368	254.493
Malta	55.281	55.620	47.205	41.991	41.636	27.347	19.865	33.056	41.318
Marshall Islands	630	614	795	1.081	1.020	1.035	982	941	955
Mauritania	57.388	59.513	56.398	55.981	68.633	67.941	85.276	108.917	102.264
Mauritius	7.116	7.330	7.550	7.776	8.825	8.249	9.362	9.832	10.325
Mexico	205.696	236.778	395.064	165.343	134.313	110.835	87.357	200.936	98.823
Micronesia (Federated States of)	4.375	3.909	4.264	3.791	4.111	4.236	4.703	6.426	6.649
Monaco	584	682	401	401	401	401	401	401	401
Mongolia	72.402	84.117	70.431	92.659	137.934	159.829	187.441	246.997	247.865
Montenegro	2.840	2.840	2.840	2.840	2.840	2.840	2.840	284.124	284.124
Morocco	150.000	176.500	203.000	229.500	256.000	262.000	275.653	289.305	289.305
Mozambique	376.573	400.576	356.868	314.185	352.212	393.528	414.780	304.447	295.456
Myanmar	345.043	476.630	567.067	638.486	794.724	776.614	895.821	1.324.723	1.321.535
Namibia	36.505	34.103	46.223	74.035	73.291	72.828	65.363	66.067	61.155
Nauru	71	138	160	171	230	350	350	355	323
Nepal	415.123	437.187	420.423	495.142	507.312	510.421	498.993	359.047	425.533

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015
Netherlands	6.006.518	6.006.518	6.006.518	4.485.047	4.485.047	5.915.938	5.915.938	4.830.495	4.830.495
New Zealand	474.213	467.709	438.733	507.709	531.673	594.622	613.813	609.059	564.004
Nicaragua	565	565	565	565	565	565	565	1.407	2.872
Niger	172.526	188.298	176.513	176.940	171.911	187.966	198.548	148.001	142.612
Nigeria	81.400	81.400	81.400	81.400	81.400	81.400	81.400	98	30.800
Norway	1.017.000	1.447.674	1.000.000	1.763.033	1.667.275	1.357.124	1.300.000	1.380.000	1.410.000
Oman	145.341	213.731	174.963	203.116	214.413	258.815	254.321	245.917	224.336
Pakistan	2.605.213	2.544.183	2.583.681	2.286.432	2.830.122	2.917.398	3.444.549	4.936.513	5.721.993
Palau	819	796	971	1.206	1.181	1.198	1.176	1.290	1.529
Panama	2.400	1.683	1.275	14.200	12.870	15.460	15.460	15.460	15.460
Papua New Guinea	108.401	119.673	124.539	125.222	170.573	200.119	229.616	341.989	357.373
Paraguay	57.612	74.356	82.955	131.442	148.238	137.615	148.921	158.724	145.191
Peru	107.630	107.630	107.630	107.630	107.630	107.630	107.630	107.630	107.630
Philippines	1.130.247	1.515.449	1.900.651	1.346.506	4.979.340	678.811	1.712.394	1.712.394	4.332.026
Poland	1.204.183	6.820.058	7.740.564	1.607.748	1.834.072	1.799.678	1.795.608	1.974.866	1.597.619
Portugal	2.811.613	3.539.985	1.472.079	1.619.614	862.489	1.076.994	984.056	543.758	857.028
Qatar	9.471	18.940	20.265	21.589	18.581	15.572	21.633	28.321	28.321
Republic of Korea	3.501.980	3.501.980	3.501.980	3.501.980	3.501.980	3.501.980	3.501.980	3.501.980	3.501.980
Republic of Moldova	6.501	6.530	6.664	404	528	418	418	418	3.357
Romania	1.100.000	441.500	438.581	695.689	695.689	689.251	689.251	590.300	590.300
Russian Federation	5.428.035	6.673.867	6.366.946	10.006.656	11.999.535	12.142.287	11.468.209	10.606.847	7.268.793
Rwanda	153.770	169.383	175.933	178.655	174.124	198.079	197.372	143.890	164.935
Saint Kitts and Nevis	2.328	2.593	2.615	2.442	2.377	2.479	2.539	2.573	2.816
Saint Lucia	82	182	227	536	844	1.153	1.469	2.461	2.797
Saint Vincent and the Grenadines	2.722	2.794	3.515	4.470	3.993	3.877	3.708	3.741	3.926
Samoa	9.419	9.636	8.619	8.288	9.802	10.416	11.990	16.234	16.972
San Marino	5.828	6.667	4.309	4.285	4.219	4.523	4.517	4.420	4.473
Sao Tome and Principe	2.493	2.813	2.886	2.545	3.090	3.284	4.513	7.040	6.707
Saudi Arabia	1.436.525	1.824.087	1.551.537	1.829.539	2.118.459	2.483.792	2.405.515	2.295.317	2.101.856
Senegal	268	268	268	268	268	268	268	268	268
Serbia	1.710	2.164.626	652.792	11.161.172	183.353	247.048	577.490	210.000	53.474

Annex > 4








Country	2007	2008	2009	2010	2011	2012	2013	2014	2015
Seychelles	3.569	3.394	3.064	3.360	3.364	3.828	4.546	4.317	4.619
Sierra Leone	86.778	87.311	81.435	80.961	78.927	102.939	127.404	90.020	84.888
Singapore	491.000	472.000	356.000	434.000	432.600	290.500	332.800	411.180	446.870
Slovakia	663.300	602.480	562.348	466.422	379.628	369.475	362.655	376.733	400.209
Slovenia	69.885	136.872	84.287	96.937	106.344	115.751	127.922	140.093	137.679
Solomon Islands	8.823	9.099	9.185	8.655	11.746	13.329	15.787	23.365	23.837
Somalia	215.167	186.508	175.038	165.598	143.555	144.910	138.581	101.362	118.295
South Africa	1.250.466	1.152.344	1.541.096	2.463.081	2.459.351	2.217.515	1.884.906	1.803.308	1.689.158
South Sudan	532.999	462.006	433.592	410.208	355.605	358.962	343.283	238.409	179.992
Spain	3.143.407	2.783.688	2.880.335	2.991.152	3.054.849	3.071.427	3.071.427	2.984.518	2.984.518
Sri Lanka	553.065	609.035	646.351	731.085	865.156	889.773	1.107.140	1.603.138	1.701.758
State of Palestine	8.466	11.886	14.423	4.080	4.296	4.512	4.512	4.512	4.512
Sudan	784.696	815.660	816.657	845.897	892.114	885.758	1.073.593	1.659.604	2.051.012
Suriname	4	4	4	4	4	3	4	7	7
Sweden	2.064.000	2.064.000	2.064.000	2.527.760	2.527.760	2.527.760	2.527.760	2.568.154	2.568.154
Switzerland	2.634.667	2.634.667	2.634.667	2.634.667	2.634.667	2.634.667	2.634.667	2.634.667	2.601.036
Syrian Arab Republic	690.771	604.416	620.826	520.743	535.383	525.339	601.928	816.251	852.969
Tajikistan	63.589	77.208	76.510	72.717	86.429	99.244	126.727	186.589	165.790
Thailand	1.849.000	2.693.000	2.693.000	2.693.000	2.693.000	2.693.000	2.693.000	2.693.000	3.445.000
The Former Yugoslav Republic of Macedonia	6.441	6.441	149.534	149.534	678.568	678.568	40.797	40.797	40.797
Timor-Leste	9.557	8.362	8.589	7.204	7.407	7.268	8.328	11.293	11.801
Togo	1.134.379	1.134.379	1.134.379	1.134.379	1.134.379	1.134.379	1.134.379	792.919	832.500
Tonga	5.131	5.228	4.888	4.761	5.605	6.143	6.695	8.959	9.192
Trinidad and Tobago	124.471	124.471	124.471	124.471	124.471	124.471	124.471	177.441	203.610
Tunisia	665.179	671.007	667.689	567.732	607.010	585.657	689.083	961.668	911.057
Turkey	938	1.018.283	938	3.225.786	938	938	938	3.432.426	938
Turkmenistan	52.890	77.440	105.267	148.193	172.651	196.749	201.525	223.706	190.517
Tuvalu	113	122	141	209	232	223	197	192	174
Uganda	494.210	496.206	693.471	624.376	550.094	636.719	644.199	501.296	556.163
Ukraine	2.585.200	2.301.200	1.230.338	1.659.800	1.513.947	1.368.094	919.068	919.068	919.068
United Arab Emirates	7.285	7.285	274.387	135.718	188.596	341.423	227.870	481.248	297.142

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015
United Kingdom of Great Britain and Northern Ireland	7.081.726	7.098.635	4.373.744	4.202.325	4.193.218	629.704	4.159.591	149.417	38.726
United Republic of Tanzania	864.438	953.742	934.507	971.800	908.714	1.058.335	1.147.937	865.124	910.986
United States of America	33.312.951	34.320.613	35.328.275	35.081.863	34.835.450	34.301.405	33.767.360	33.707.074	33.646.787
Uruguay	80.848	106.562	114.480	139.532	151.372	173.009	185.352	173.696	171.145
Uzbekistan	720.952	720.952	783.372	844.082	844.082	844.082	844.082	844.082	844.082
Vanuatu	9.000	7.875	8.089	6.785	6.975	6.845	7.842	10.635	11.113
Venezuela (Bolivarian Republic of)	123.157	123.157	123.157	123.157	123.157	123.157	123.157	123.157	123.157
Viet Nam	1.782.878	1.686.465	1.759.721	1.876.203	2.132.837	2.183.647	2.610.026	3.760.847	3.876.177
Yemen	1.639.758	1.639.758	1.639.758	1.639.758	1.639.758	1.639.758	1.639.758	1.639.758	1.639.758
Zambia	9.572	9.572	9.572	9.572	9.572	9.572	9.572	9.572	9.572
Zimbabwe	25.099	20.286	40.975	45.536	47.023	37.346	37.346	37.346	37.346
Total	255.843.652	274.652.559	285.614.046	325.798.178	340.414.785	354.559.991	360.136.097	388.466.122	389.976.803

Annex > 5 Generation of household waste

The data on generation of household waste used in this analysis came from 4 different sources: the Secretariat of the Basel Convention, UN Statistics Division, Eurostat and OECD. The time series for countries included in these datasets were completed by inter- and extrapolation. For countries where none of the sources contained information the amounts were estimated based on the average amount generated per inhabitant for the different income level categories of countries as defined by the World Bank. The next table presents the results of this estimation for all Parties to the Basel Convention, complemented with the UN member states that are not Parties.

To indicate the source or nature of the data the following color indications were used:

Color indication	Source or nature of the data	Website
 waste amount	data from the UN Statistics Division	https://unstats.un.org/unsd/envstats/qindicators.cshtml
 waste amount	data from Eurostat	http://ec.europa.eu/eurostat/data/database
 waste amount	Data from OECD	https://stats.oecd.org/Index.aspx?DataSetCode=WSECTOR#
 waste amount	missing data for years filled by interpolation or extrapolation	-
 waste amount	missing data for years filled by assuming the amount is the same as for the closest year reported	-
 Country	quantities estimated on the basis of the average generation of waste per inhabitant or unit of GDP of the countries in the same income level category	-
 waste amount	data as reported under the Basel Convention are completely out of range, replaced by data from another source or filled via interpolation or extrapolation	-

Parties	2007	2008	2009	2010	2011	2012	2013	2014	2015
Afghanistan	1.361.347	1.386.001	1.410.612	1.411.275	1.438.520	1.451.017	1.521.528	1.604.366	1.638.855
Albania	1.395.162	1.218.000	1.313.000	1.396.000	1.791.000	1.469.000	1.455.440	1.476.106	1.465.737
Algeria	8.700.000	8.700.000	8.700.000	8.700.000	8.700.000	8.700.000	8.700.000	8.700.000	8.700.000
Andorra	33.826	34.944	34.858	34.328	32.178	31.182	32.881	33.749	34.497
Angola	3.999.692	4.156.356	4.382.014	4.658.543	4.842.729	5.123.682	5.688.050	6.477.118	6.402.385
Antigua and Barbuda	112.000	122.000	136.000	137.000	121.000	123.000	127.439	128.185	128.936
Argentina	5.585.000	5.585.000	5.662.000	14.600.000	14.600.000	14.600.000	14.000.000	14.000.000	14.000.000
Armenia	392.000	1.543.500	411.000	1.528.300	1.615.800	408.000	2.070.700	1.917.300	1.971.300
Australia	12.727.000	13.381.000	14.035.000	14.036.000	14.037.000	13.166.725	13.401.060	13.602.709	12.005.000
Austria	1.639.000	1.627.749	1.809.000	1.822.000	1.738.800	1.655.600	1.777.900	1.687.200	1.675.800
Azerbaijan	1.631.000	1.478.000	6.677.000	6.705.000	6.893.800	1.647.000	6.962.000	6.962.000	6.962.000
Bahamas	196.620	195.732	195.841	199.811	201.614	197.750	203.791	197.967	205.224
Bahrain	281.736	341.989	402.241	407.504	407.504	428.730	463.860	451.902	459.527
Bangladesh	17.764.879	20.732.628	19.278.630	19.390.477	19.649.956	19.341.020	19.139.330	19.252.214	19.573.920
Barbados	158.675	155.798	153.796	154.853	154.572	149.376	152.341	146.662	150.994
Belarus	3.141.000	3.087.000	3.347.000	3.765.000	3.878.000	3.640.000	3.555.238	3.581.979	3.608.920

Parties	2007	2008	2009	2010	2011	2012	2013	2014	2015
Belgium	5.243.000	5.134.000	5.037.000	4.973.000	5.035.000	4.969.000	4.891.000	4.788.000	4.708.000
Belize	56.766	58.450	60.826	64.112	65.788	68.598	75.262	84.451	82.502
Benin	432.403	441.586	450.525	450.741	458.072	459.903	479.700	503.805	513.721
Bhutan	512.943	512.943	512.943	512.943	512.943	512.943	512.943	521.736	521.736
Bolivia (Plurinational State of)	841.983	866.474	947.334	1.040.000	1.059.000	1.100.000	994.507	1.001.353	1.008.246
Bosnia and Herzegovina	1.367.000	1.367.000	1.362.000	1.276.000	1.307.000	1.303.000	1.192.000	1.335.000	1.249.000
Botswana	364.674	371.713	384.585	401.658	410.126	426.495	465.575	521.625	507.653
Brazil	51.432.000	52.216.000	53.000.000	53.000.000	55.300.000	57.900.000	55.458.913	55.952.351	56.450.178
Brunei Darussalam	215.017	213.168	211.885	215.352	217.039	212.103	218.787	212.996	221.706
Bulgaria	3.592.549	3.615.000	3.561.350	3.091.146	3.732.000	3.363.874	3.135.000	3.192.528	3.011.000
Burkina Faso	586.000	624.000	666.000	645.592	637.068	641.316	632.848	649.897	654.230
Burundi	11.000	16.000	14.000	7.000	39.000	14.854	14.925	14.997	15.069
Cabo Verde	58.677	68.410	63.556	63.977	64.856	63.714	63.162	63.528	64.598
Cambodia	391.035	393.552	355.000	383.000	408.000	461.000	406.382	408.997	411.630
Cameroon	3.708.000	6.489.000	7.249.000	5.808.268	5.719.082	5.763.502	5.675.003	5.853.382	5.898.846
Canada	13.651.000	13.651.000	13.810.500	13.970.000	14.110.500	14.251.000	14.251.000	14.251.000	14.251.000
Central African Republic	1.067.177	1.067.177	1.067.177	1.067.177	1.067.177	1.067.177	1.067.177	1.092.300	1.092.300
Chad	551.116	565.338	579.416	582.433	595.041	600.579	629.767	664.581	680.561
Chile	5.493.000	5.608.000	5.780.000	5.936.000	6.142.000	6.566.679	6.991.358	7.416.037	7.416.037
China	152.150.000	154.380.000	157.340.000	158.048.000	163.953.000	170.809.000	208.404.500	246.000.000	229.185.190
Colombia	9.192.000	10.661.000	8.980.000	9.686.000	8.996.000	9.712.805	9.790.785	9.869.391	9.948.628
Comoros	32.817	33.363	33.900	33.759	34.186	34.177	35.556	37.173	37.746
Congo	480.044	573.333	544.964	558.969	576.048	575.410	577.127	588.297	606.521
Cook Islands	10.923	10.806	9.958	9.991	9.915	9.037	9.184	8.810	9.038
Costa Rica	1.506.000	1.506.000	1.506.000	1.506.000	1.659.000	1.698.000	1.752.000	1.788.000	1.877.000
Côte d'Ivoire	1.942.560	1.942.560	1.942.560	1.942.560	1.942.560	1.942.560	1.942.560	1.942.560	1.942.560
Croatia	1.719.000	1.788.000	1.743.000	1.630.000	1.645.000	1.670.000	1.721.000	1.637.000	1.654.000
Cuba	5.877.966	4.927.817	4.169.183	4.628.000	4.228.000	4.636.200	4.494.710	4.529.044	4.668.000
Cyprus	581.350	608.130	620.000	571.000	451.787	400.666	371.365	368.377	373.421
Czech Republic	3.846.000	3.812.305	5.324.244	5.361.882	5.388.058	5.188.279	5.167.805	5.323.947	5.274.126
Democratic People's Republic of Korea	1.237.928	1.235.741	1.232.245	1.204.898	1.197.088	1.174.864	1.198.052	1.230.088	1.226.275

Parties	2007	2008	2009	2010	2011	2012	2013	2014	2015
Democratic Republic of the Congo	2.987.895	3.065.797	3.143.653	3.161.466	3.230.374	3.260.628	3.419.662	3.610.672	3.701.512
Denmark	3.528.000	3.654.000	4.206.000	3.732.000	4.349.000	4.421.000	4.437.000	4.450.000	4.485.000
Djibouti	97.675	114.527	107.230	108.455	110.435	109.419	108.832	110.147	112.562
Dominica	13.515	13.562	13.798	14.241	14.197	14.700	15.753	17.323	16.776
Dominican Republic	1.810.405	1.840.711	1.898.050	1.972.939	2.005.039	2.073.062	2.249.395	2.503.464	2.419.544
Ecuador	3.684.595	3.684.595	3.657.371	3.845.186	4.033.000	2.756.000	2.756.000	2.756.000	2.756.000
Egypt	17.000.000	21.000.000	20.800.000	21.100.000	21.050.000	21.000.000	22.300.000	23.600.000	25.000.000
El Salvador	1.111.188	1.111.188	1.111.188	1.111.188	1.111.188	1.111.188	1.111.188	1.111.188	1.111.188
Equatorial Guinea	157.977	165.800	176.649	189.579	198.822	211.920	236.944	271.742	270.028
Eritrea	212.416	214.903	217.102	215.140	216.640	215.554	222.971	232.441	235.413
Estonia	389.792	354.904	301.739	280.929	399.000	267.178	288.592	350.740	364.439
Eswatini	229.807	229.807	229.807	229.807	229.807	229.807	229.807	229.807	229.807
Ethiopia	4.142.985	4.224.118	4.302.557	4.297.212	4.360.204	4.369.879	4.549.911	4.768.625	4.851.713
Fiji	158.868	161.090	165.377	171.429	173.369	178.355	192.312	212.933	205.026
Finland	2.675.000	2.768.203	2.562.420	2.520.004	2.718.768	2.738.095	2.681.547	2.629.879	2.738.280
France	34.630.000	34.514.000	34.504.000	34.535.000	35.019.000	34.198.000	33.996.000	33.703.000	33.399.000
Gabon	283.675	293.398	308.212	326.971	339.339	358.675	397.592	451.300	443.576
Gambia	78.722	80.639	82.588	82.904	84.545	85.187	89.141	93.888	96.069
Georgia	855.000	3.419.600	950.000	950.000	950.000	950.000	888.140	888.140	888.140
Germany	47.887.000	57.451.000	57.788.000	49.237.000	50.237.000	44.188.000	49.570.000	44.000.000	45.000.000
Ghana	2.740.718	3.246.052	3.062.844	3.123.907	3.207.202	3.195.993	3.200.142	3.256.348	3.349.262
Greece	5.002.000	5.077.244	5.154.004	5.231.924	5.607.326	5.375.729	5.375.700	5.067.657	5.249.000
Guatemala	3.864	3.864	3.864	3.864	3.864	3.864	3.864	6.958	10.051
Guinea	516.387	524.213	531.725	528.887	534.345	533.259	553.190	578.190	587.367
Guinea-Bissau	52.540	52.540	52.540	52.540	52.540	52.540	173.028	276.387	308.571
Guyana	142.295	142.497	144.778	148.713	149.793	153.734	165.839	183.579	176.495
Haiti	488.767	492.824	496.263	489.926	491.243	486.367	500.212	517.800	520.331
Holy See	458	447	440	441	438	427	433	415	427
Honduras	930.507	1.096.786	1.029.576	1.044.276	1.066.250	1.056.306	1.051.521	1.063.911	1.087.974
Hungary	3.018.403	3.444.290	3.239.000	3.051.354	2.909.619	2.895.345	2.716.889	3.136.200	3.099.000
Iceland	174.000	208.000	132.000	154.000	158.000	164.000	167.000	175.000	193.000

Parties	2007	2008	2009	2010	2011	2012	2013	2014	2015
India	142.429.201	166.795.482	155.592.173	156.881.013	159.234.797	156.870.565	155.300.282	156.266.467	158.952.713
Indonesia	7.577.000	7.577.000	6.866.000	7.245.000	7.742.000	7.650.000	6.003.000	5.842.000	6.027.000
Iran (Islamic Republic of)	2.427.477	2.427.477	2.427.477	2.427.477	2.427.477	840.965	840.965	840.965	840.965
Iraq	17.551.000	17.551.000	17.551.000	17.551.000	13.236.000	13.113.000	13.113.000	14.349.000	14.349.000
Ireland	1.625.490	1.556.879	1.498.469	1.420.706	1.391.803	1.362.900	1.398.000	1.413.067	1.320.417
Israel	4.304.000	4.434.000	4.551.000	4.623.000	4.746.000	4.837.000	4.907.000	5.034.000	5.126.200
Italy	32.536.000	32.461.000	32.107.000	32.440.000	31.386.000	29.994.000	29.962.096	29.655.000	29.524.000
Jamaica	528.606	532.929	544.910	561.603	565.698	579.820	623.756	688.624	659.788
Japan	50.816.000	48.110.000	46.252.000	45.359.000	45.430.000	45.234.000	44.874.000	31.242.000	37.450.570
Jordan	3.864.000	3.864.000	2.069.000	2.069.000	2.025.000	2.243.000	2.287.742	2.381.998	2.480.138
Kazakhstan	2.397.746	2.310.977	2.224.207	2.107.148	2.029.463	1.944.852	1.863.769	1.786.067	1.711.603
Kenya	4.598.316	5.454.393	5.155.823	5.269.809	5.424.301	5.420.757	5.444.781	5.558.601	5.735.661
Kiribati	11.591	13.715	12.886	13.082	13.278	13.241	13.183	13.341	13.649
Kuwait	8.947.000	9.070.000	8.382.000	9.185.000	11.248.000	10.422.000	9.764.076	9.842.454	9.921.461
Kyrgyzstan	1.659.000	2.521.000	1.818.000	1.115.000	1.174.000	980.000	1.497.956	1.508.575	1.519.269
Lao People's Democratic Republic	718.255	843.236	788.295	796.015	808.535	796.732	788.792	794.220	809.059
Latvia	861.000	1.368.790	1.033.908	1.131.403	1.535.058	1.799.445	1.902.007	2.013.696	2.087.507
Lebanon	1.720.000	1.720.000	1.720.000	1.720.000	1.940.000	1.940.000	1.940.000	1.940.000	1.940.000
Lesotho	239.332	278.645	258.707	259.986	263.511	259.450	257.141	259.063	264.058
Liberia	179.631	185.958	191.967	193.448	197.077	197.638	205.517	215.006	218.556
Libya	1.137.218	1.156.208	1.189.512	1.229.800	1.238.377	1.265.397	1.355.586	1.492.695	1.432.644
Liechtenstein	40.000	38.000	35.000	33.000	29.000	28.000	34.158	34.336	34.514
Lithuania	1.045.500	1.369.000	788.889	1.049.709	973.541	836.213	875.419	920.292	943.184
Luxembourg	333.000	341.000	338.000	344.000	345.000	346.000	335.000	348.000	356.000
Madagascar	419.000	419.000	419.000	419.000	419.000	419.000	419.000	419.000	419.000
Malawi	707.884	724.699	741.171	743.145	756.720	760.928	794.881	835.968	853.705
Malaysia	7.094.870	7.094.870	7.094.870	7.094.870	7.094.870	7.094.870	7.094.870	7.094.870	9.187.820
Maldives	228.000	232.000	232.000	222.000	210.000	211.000	227.121	228.517	229.921
Mali	699.476	717.944	735.760	738.637	752.525	756.644	790.086	830.736	848.526
Malta	255.188	385.439	267.773	246.022	242.885	248.361	247.607	256.000	266.179
Marshall Islands	26.000	26.000	26.000	26.000	26.000	26.000	26.000	26.000	26.000

Annex > 5

Parties	2007	2008	2009	2010	2011	2012	2013	2014	2015
Mauritania	399.956	474.689	449.283	459.945	474.636	475.709	479.321	490.822	507.802
Mauritius	365.824	373.860	389.999	402.816	389.743	388.000	393.573	396.100	398.643
Mexico	36.865.000	37.595.000	38.325.000	40.059.000	41.063.000	42.103.000	40.506.148	40.860.167	43.151.080
Micronesia (Federated States of)	12.687	14.490	13.321	13.205	13.210	12.855	12.596	12.562	12.628
Monaco	45.191	41.000	41.298	35.000	44.000	46.000	42.696	42.923	43.151
Mongolia	312.906	366.153	341.868	345.711	352.497	349.494	348.496	353.027	361.469
Montenegro	493.000	382.000	349.000	330.000	337.000	279.667	315.000	343.000	332.000
Morocco	6.800.000	6.800.000	6.800.000	6.800.000	6.800.000	6.852.000	5.300.000	5.380.000	5.380.000
Mozambique	1.134.865	1.160.129	1.184.946	1.186.769	1.207.595	1.213.747	1.267.533	1.332.743	1.360.693
Myanmar	5.936.678	6.893.890	6.381.280	6.391.954	6.454.109	6.332.372	6.249.121	6.271.146	6.363.068
Namibia	396.200	402.347	415.297	433.215	442.920	462.019	506.820	570.227	557.293
Nauru	5.749	5.062	4.979	5.564	5.623	5.570	5.829	5.737	5.987
Nepal	1.340.786	1.344.455	1.346.992	1.324.060	1.323.227	1.306.983	1.341.919	1.387.155	1.392.075
Netherlands	9.922.000	4.325.000	4.185.000	9.484.000	9.479.000	5.118.704	8.840.000	4.862.331	8.855.000
New Zealand	2.531.000	2.531.000	2.531.000	2.531.000	2.461.000	2.595.000	2.798.000	2.931.000	2.931.000
Nicaragua	666.701	779.398	726.021	731.238	741.485	729.913	722.108	726.223	738.511
Niger	750.252	773.311	796.575	804.784	826.272	838.154	883.542	937.798	966.571
Nigeria	17.677.711	20.947.471	19.784.513	20.209.848	20.794.539	20.777.994	20.871.176	21.312.040	22.000.018
Norway	2.020.000	2.324.000	2.000.000	2.295.000	2.403.000	2.392.000	2.518.000	2.175.000	2.187.000
Oman	1.530.413	1.551.795	1.594.913	1.688.101	1.783.279	1.841.415	2.004.738	2.052.225	2.232.474
Pakistan	19.357.741	22.800.193	21.405.053	21.736.871	22.238.096	22.096.301	22.071.685	22.409.406	22.995.587
Palau	3.832	3.820	3.887	4.081	4.119	4.083	4.577	5.053	4.892
Panama	515.000	497.000	554.000	634.000	674.000	670.000	600.023	604.002	608.007
Papua New Guinea	800.113	945.616	890.163	905.872	928.079	922.793	922.161	936.614	961.570
Paraguay	1.136.456	1.155.062	1.190.678	1.237.746	1.258.374	1.302.350	1.414.608	1.576.424	1.525.718
Peru	366.537	366.537	366.537	366.537	366.537	366.537	366.537	366.537	366.537
Philippines	7.472.000	8.869.000	9.104.000	9.104.000	9.104.000	9.104.000	9.104.000	9.104.000	9.104.000
Poland	12.264.000	5.721.851	6.679.692	7.464.356	8.502.848	7.424.594	7.424.401	7.188.183	10.863.500
Portugal	4.648.222	5.154.434	5.185.035	5.319.477	5.012.380	4.639.459	4.607.260	4.719.601	4.764.568
Qatar	696.621	610.996	2.717.000	2.596.000	2.566.000	1.040.250	1.040.250	1.040.250	1.040.250
Republic of Korea	18.376.000	19.006.280	18.581.000	17.943.000	17.861.000	17.881.000	17.786.000	15.460.000	18.755.081

Parties	2007	2008	2009	2010	2011	2012	2013	2014	2015
Republic of Moldova	1.820.000	2.173.000	2.268.000	2.360.000	2.402.000	2.469.000	1.079.925	1.079.925	1.270.690
Romania	5.243.190	5.669.125	5.283.355	6.343.000	4.608.634	5.044.000	5.071.000	4.956.000	4.895.000
Russian Federation	62.868.180	64.605.130	66.871.680	69.256.630	69.198.280	80.564.330	80.564.330	80.564.330	80.564.330
Rwanda	148.012	148.012	148.012	148.012	148.012	148.012	148.012	148.012	148.012
Saint Kitts and Nevis	28.171	28.122	27.661	28.554	28.648	27.642	28.631	27.467	28.710
Saint Lucia	47.000	47.000	45.000	46.000	52.000	32.307	33.321	33.170	32.669
Saint Vincent and the Grenadines	20.772	20.821	21.231	21.792	21.796	22.321	23.918	26.312	25.154
Samoa	22.008	25.497	23.577	23.705	23.874	23.473	23.078	23.224	23.435
San Marino	17.234	16.873	16.597	17.267	17.077	16.479	17.287	16.584	17.524
Sao Tome and Principe	19.692	23.128	21.783	22.175	22.827	22.604	22.714	23.068	23.745
Saudi Arabia	14.517.979	14.590.345	14.749.504	15.221.695	15.555.173	15.461.908	16.176.202	15.949.309	16.777.926
Senegal	607.277	619.722	632.166	632.852	644.056	647.748	677.081	712.409	727.517
Serbia	2.067.000	2.550.000	2.636.000	2.650.000	2.710.000	2.620.000	2.410.000	2.130.000	1.840.000
Seychelles	51.742	50.620	50.343	50.508	50.128	48.906	49.700	48.196	49.445
Sierra Leone	307.653	313.061	317.859	316.461	320.151	319.833	331.916	346.703	351.565
Singapore	5.602.000	2.627.585	2.630.000	6.517.000	2.860.000	2.933.900	3.030.000	3.040.000	3.070.000
Slovakia	1.668.648	1.790.691	1.745.494	1.796.160	1.766.990	1.749.473	1.744.429	1.838.924	1.888.456
Slovenia	653.125	643.403	653.911	610.132	610.132	578.243	552.422	557.872	550.627
Solomon Islands	59.515	70.221	66.118	67.264	68.814	68.433	68.385	69.446	71.277
Somalia	564.599	577.337	589.752	590.578	600.661	603.351	629.707	661.823	675.634
South Africa	2.653.190	2.653.190	2.653.190	2.653.190	2.653.190	2.653.190	4.961.797	23.499.101	12.846.444
South Sudan	452.964	470.379	487.095	493.258	505.954	511.385	535.970	564.744	577.220
Spain	23.434.694	24.049.862	23.575.435	23.774.000	22.672.000	21.683.266	21.184.000	20.836.000	20.151.000
Sri Lanka	2.391.767	2.778.887	2.572.338	2.574.114	2.593.621	2.536.694	2.493.336	2.490.753	2.515.215
State of Palestine	1.309.000	1.346.000	1.385.000	1.426.000	1.468.000	1.513.000	1.441.258	1.451.447	1.461.709
Sudan	866.000	967.000	1.355.000	1.355.000	1.355.000	1.355.000	1.355.000	1.355.000	1.355.000
Suriname	183.000	76.000	77.000	82.000	84.000	77.000	79.000	197.000	205.000
Sweden	4.442.000	4.044.000	4.366.000	4.115.000	4.246.000	4.398.680	4.450.000	4.547.160	4.703.790
Switzerland	5.465.000	5.653.000	5.461.000	5.565.000	5.478.000	5.576.000	5.708.000	6.006.000	6.030.000
Syrian Arab Republic	2.370.374	2.831.831	2.668.426	2.678.618	2.663.582	2.536.128	2.406.113	2.319.262	2.274.788
Tajikistan	863.499	1.018.345	957.435	973.880	997.742	992.965	993.218	1.009.924	1.037.946

Parties	2007	2008	2009	2010	2011	2012	2013	2014	2015
Thailand	25.887.175	26.024.051	26.155.452	26.283.333	26.409.310	26.531.665	26.648.988	26.755.751	26.850.000
The Former Yugoslav Republic of Macedonia	714.000	714.000	726.000	721.000	735.000	786.000	793.000	765.000	765.000
Timor-Leste	128.580	150.195	139.928	141.335	144.395	143.668	143.859	146.380	150.568
Togo	0	0	0	0	0	0	1.089.543	1.115.692	0
Tonga	12.358	14.351	13.275	13.272	13.351	12.917	12.794	12.776	12.915
Trinidad and Tobago	502.402	505.698	509.017	512.357	515.719	519.103	505.900	558.600	514.800
Tunisia	2.000.000	2.000.000	2.000.000	2.200.000	2.200.000	2.200.000	2.250.000	2.250.000	2.250.000
Turkey	30.366.000	28.454.000	30.196.000	29.733.000	30.862.000	30.786.000	30.920.000	31.230.000	31.283.000
Turkmenistan	927.680	942.655	973.210	1.014.121	1.034.614	1.075.322	1.174.062	1.315.189	1.278.900
Tuvalu	1.951	1.975	1.943	1.993	2.125	2.190	2.188	2.406	2.528
Uganda	1.564.608	1.607.860	1.650.734	1.661.750	1.699.272	1.716.205	1.800.698	1.901.896	1.950.148
Ukraine	11.600.000	11.388.012	10.276.042	10.915.653	12.037.364	13.159.075	12.660.601	12.166.519	12.068.412
United Arab Emirates	5.436.083	5.478.252	6.654.000	5.932.500	5.211.000	5.173.000	5.284.500	5.396.000	6.061.000
United Kingdom of Great Britain and Northern Ireland	34.780.000	33.424.000	32.507.000	31.955.000	31.066.000	30.413.000	30.890.000	31.131.000	31.567.000
United Republic of Tanzania	2.144.265	2.197.276	2.249.817	2.258.716	2.303.433	2.320.133	2.428.039	2.558.227	2.617.379
United States of America	232.693.000	229.200.000	222.188.000	227.749.000	227.876.000	228.465.000	231.350.000	234.471.000	234.471.000
Uruguay	1.920.054	1.884.202	1.859.939	1.872.901	1.864.658	1.805.680	1.841.053	1.771.858	1.824.153
Uzbekistan	4.365.428	4.410.200	4.524.500	4.605.200	4.265.120	4.534.913	4.569.592	4.604.535	4.639.746
Vanuatu	26.556	31.396	29.572	30.077	30.769	30.677	30.748	31.160	32.056
Venezuela (Bolivarian Republic of)	5.275.008	5.375.328	5.555.459	5.786.649	5.891.540	6.103.033	6.632.909	7.395.624	7.159.773
Viet Nam	10.369.910	12.080.669	11.220.262	11.275.225	11.418.389	11.233.856	11.113.665	11.177.045	11.361.918
Yemen	1.447.000	2.667.238	2.625.069	2.720.280	2.985.042	1.535.000	2.817.826	2.838.692	2.859.713
Zambia	5.850.000	5.850.000	5.850.000	5.850.000	5.850.000	5.850.000	5.850.000	5.850.000	5.850.000
Zimbabwe	681.794	688.481	695.665	690.179	696.598	695.350	721.852	754.774	766.428
Total	1.433.554.679	1.484.518.672	1.467.087.891	1.493.218.239	1.504.428.680	1.496.773.827	1.551.276.592	1.595.036.579	1.596.290.711

The data on transboundary movement of hazardous wastes and other wastes are based on the data as reported to the Secretariat. The information on reported imports was used as a basis for this analysis because it contains data from a smaller number of countries and therefore reduces the difficulties due to differences of definitions and reporting systems between countries. To complement the dataset for imports to countries that did not report themselves the data on exports to these countries were used from the reported export data.

The data for movements where both the state of import and export reported were analysed to identify large differences between the amounts reported. If there were indications that the dataset on imports contained information of transboundary movement of waste that was out of the scope of the Convention these data were removed and the data from the exporting country were used instead. When looking at these data the Focal Points and Competent Authorities should be aware that they may find data regarding their country that differ from

those they reported to the Secretariat because of this combination of data from different tables.

The next 4 tables present the results of the data processing with the time series per state of import and export and for hazardous wastes and other wastes separately.

Annex 6.1 Import of hazardous wastes per country

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Afghanistan			92	834			22			948
Albania		23							30.063	30.086
Algeria	125									125
Australia	26.940	1.775	2.615	4.509	4.431	17.420	2.827	2.723	13.860	77.100
Austria	25.537	98.776	69.285	114.039	102.002	114.933	114.000	119.332	119.146	877.050
Azerbaijan	14	477		17.176			3.627	116	6.585	27.996
Bahrain					4.947	10.436	1.436	5.494	18.298	40.611
Belarus	111.930		2		374					112.306
Belgium	916.043	761.712	678.737	674.947	571.495	373.922	649.800	458.292	588.531	5.673.479
Bosnia and Herzegovina			2.200			3.000			2	5.202
Brazil	415	1.030								1.445
Bulgaria	44.720	20.400	28.500	23.800	10.128	30.039	42.552	46.836	34.404	281.380
Cameroon							233			233
Canada	470.120	509.501	485.336	362.788	393.959	345.230	437.105	380.640	372.955	3.757.635
China	77.171	18.468	4.609	4.901			1.475	212	51.557	158.394
Colombia		9.600								9.600
Costa Rica							264	10.380	4.672	15.316
Croatia			500					334	168	1.002
Cyprus		9.762				9.314		568		19.645
Czech Republic	28.752	9.949	10.778	21.313	22.613	24.673	28.287	46.345	40.025	232.735
Denmark	138.305	144.362	92.175	146.710	182.136	269.085	372.465	314.071	282.057	1.941.367
El Salvador	2.400									2.400
Estonia	15.133	15.599	14.063	16.247	19.556	17.957	25.510	22.273	24.372	170.709
Finland	11.293	17.542	25.866	18.354	13.419	21.069	14.136	22.551	14.133	158.363

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
France	524.536	380.758	414.043	575.974	423.043	258.886	396.452	553.342	439.003	3.966.036
Gambia								270		270
Georgia	22		53				105	4.554		4.734
Germany	2.616.779	4.553.997	4.275.384	4.251.513	3.243.726	3.077.096	2.743.973	2.682.708	2.685.987	30.131.163
Ghana		1.000		2.341			46.515	2.057	2.469	54.382
Greece	1.160	206	2.969	998	9.716	6.139	3.846	6.919	329	32.281
Guatemala			3.600	3.500	10.100	401.371	31.550	12.650	65.475	528.246
Hungary	1.480	980	3.330	570	405	8.240	791	5.780	11.242	32.819
India	8.950	12.463	1.042	441		10.002	51.260	4.306	7.000	95.464
Iran (Islamic Republic of)		10	1.450	306	2.000	1.054	39.214	74.088	2.000	120.122
Iran (Islamic Republic of)		10	1.450	306	2.000	1.054	39.214	74.088	2.000	120.122
Ireland	3.685	1.516	2.892	3.269	6.730	6.333	14.660	7.270	8.878	55.232
Israel	17.523	4.906	772	1.672	12.000	10.482	9.315	16.631	7.372	80.672
Italy	367.038	199.422	685.741	560.438	366.675	39.883	123.846	123.163	118.423	2.584.629
Japan	5.516	3.514	2.770	143	32.631	3.060	12.179	11.592	27.496	98.901
Kazakhstan			1	261	3.672	862	2.040			6.835
Kyrgyzstan			2	356	48					405
Latvia	233	621	888	3.430	103.480	6.238	2.360	2.093	1.773	121.116
Liechtenstein		171								171
Lithuania	6.000	2.041	17.258	7.753	12.395	8.515	6.266	8.433	5.240	73.901
Luxembourg	6.561	6.267	1.321	2.129	1.589	1.306	5.813	3.043	4.147	32.175
Malaysia	133.074	52.927	12.927	7.200	6.558	23.500	6.679	34.382	6.679	283.925
Mexico	659.470	370.880	370.880	817.617	1.081.301	1.000	1.222.111	757.935	627.278	5.908.472
Morocco		4.416	1.406	36.678		13.141	417	22.207	11.235	89.501
Netherlands	624.060	667.247	465.239	532.271	569.323	298.797	1.134.628	1.113.739	933.065	6.338.369
New Zealand	12.000	14.751	7.921	5.441	2.222	700	2.070	2.725	3.332	51.161
Niger		62								62
Nigeria						7		10	800	817
Norway	56.096	133.967	150.106	218.277	190.679	107.989	118.792	101.290	110.417	1.187.614
Pakistan	1.000	140	60	132	445			205		1.982
Panama									169	169

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Peru		2.250	25.990	30.071	3.250	10.000	601		500	72.662
Philippines	8.048	13.809	178.646	224.687	43.200	52.524	42.042	9.369	26.240	598.563
Poland	8.192	18.635	36.909	45.312	76.793	87.647	76.375	117.430	128.921	596.214
Portugal			1.182	464	57	943	4.085	27.262	56.422	90.415
Republic of Korea	72.145	139.372	142.658	141.250	206.063	189.091	298.057	489.244	282.189	1.960.069
Republic of Moldova			32							32
Romania		4.725		57	3.415	11.151	6.540	13.156	15.796	54.839
Russian Federation	115		971	13.210	68.767		129.384		308.000	520.447
Saudi Arabia								30		30
Senegal								169	180	349
Serbia			704	219	706	1.953	304	24		3.911
Sierra Leone	216									216
Singapore	699	3.446	3.446	2.953	3.295	4.887	4.841	1.999	2.425	27.990
Slovakia	2.638	1.123	989	1.285	355	10.765	49.981	58.085	41.234	166.455
Slovenia	27.391	22.135	27.534	34.314	41.282	37.290	34.311	33.812	38.882	296.951
South Africa	87.762	160		67.183	120	88.699	103.674	171.528	72.582	591.707
Spain	222.126	259.721	153.074	197.278	164.308	61.825	229.289	362.683	327.323	1.977.627
Sri Lanka									9.060	9.060
Suriname								88		88
Swaziland								19		19
Sweden	355.081	345.758	210.796	677.958	524.724	494.597	432.377	436.507	315.701	3.793.499
Switzerland	34.968	66.854	34.285	76.697	69.190	13.551	14.627	52.104	57.165	419.441
Tajikistan				20	147					166
Thailand	4.142	3.179	3.005	4.247	2.538	2.697	2.606	332	2.342	25.087
The former Yugoslav Republic of Macedonia		3.000	583		2.137	176		73	94	6.062
Trinidad and Tobago	8									8
Tunisia	538	75								613
Turkey	35	15.541	4.430	315	41.400	18.148	83.358	192.576	49.121	404.924
Turkmenistan							68			68
Ukraine	1.508	4.000	3.004	3.004	14.713		10.853	3.000	1.080	41.162
United Arab Emirates	8						600			608

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
United Kingdom	121.533	127.846	185.380	203.507	181.634	83.893	126.327	115.778	117.224	1.263.121
United States of America	595.303	483.899	426.597	430.562	466.152	499.498	528.917	551.960	516.056	4.498.945
Uruguay			247							247
Uzbekistan			19.293	200.746	127.597					347.636
Venezuela (Bolivarian Republic of)	8.239	6.765	982							15.986
Vietnam		1.285	1.665							2.950
Total	8.464.775	9.554.816	9.299.214	10.793.665	9.445.638	7.191.012	9.847.839	9.618.788	9.049.175	83.264.922



Annex 6.2 Export of hazardous wastes per country

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Afghanistan	1.871	839	316	255	355			1.760	1.070	6.465
Albania		1		181	16	155		3	37	394
Algeria			78	6.657	3.463		9.551	8.987	4.167	32.903
Andorra	911	903	1.374	381	718	866	4.345	2.081	5.341	16.920
Argentina	256	246	180	92		526	327	315	558	2.501
Armenia			92	292	2.000		11.700	3.100	2.000	19.184
Australia	28.274	21.013	15.999	1.170	23.801	5.379	24.234	44.634	37.361	201.865
Austria	498.576	290.021	189.982	315.123	314.827	273.367	294.729	344.960	298.916	2.820.502
Azerbaijan	51	1.627		261			72	1.000		3.011
Bahamas							79	92		171
Bahrain	70			6	493	662	500			1.731
Barbados					18	102				120
Belarus	1.544	5.274	1.467	4.436	66.404	5.636	2.357	96	96	87.311
Belgium	819.343	821.221	681.641	653.991	682.849	434.121	630.469	624.679	604.225	5.952.539
Benin								199		199
Bolivia (Plurinational State of)							60	144	28	231
Bosnia and Herzegovina	4.064	1.402	2.459	2.200	3.683	6.543	6.680	3.424	9.159	39.615
Botswana	9.117			33.646		29.246	90.890	20.988	35.180	219.067
Brazil	489	5.524	713	628	938	3.489	1.305	761	4.414	18.261
Brunei Darussalam	40	27				7		4	1.828	1.906
Bulgaria	325	1.109	1.787	6.208	5.561	6.455	3.035	4.906	11.208	40.594
Burundi									2	2
Cabo Verde								203	1.603	1.806
Cameroon			59	6					399	464
Canada	452.040	464.299	430.291	432.985	465.898	503.101	538.369	524.108	508.188	4.319.279
Chile	3.102		26.015	60.313	431	108	200		500	90.669
China	1.269	1.928	2.944	1.788	642	34.104	3.151	55.815	17.168	118.809
Colombia	128	191	313	169	101	92	238	147	45	1.425
Costa Rica	1.278	4.800	4.915	9.292	13.685		335	748	964	36.016
Côte d'Ivoire		1.542	0						19	1.561

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Croatia	15.554	18.024	15.891	19.087	20.875	20.078	15.536	20.622	18.808	164.476
Cuba	78	266	266	231			1.812		1.109	3.763
Cyprus	7.284	1.801	2.172	3.430	6.882	4.565	2.807	3.147	1.073	33.161
Czech Republic	3.855	6.275	14.082	17.898	19.594	18.185	30.881	37.674	37.132	185.576
Democratic People's Republic of Korea				190						190
Democratic Republic of the Congo		763				130		900		1.793
Denmark	135.155	255.119	210.223	306.053	132.370	174.307	197.693	162.885	265.711	1.839.516
Djibouti					395		344	202	193	1.134
Dominica							3.243		118	3.361
Dominican Republic	2.801	27.349	9.938		56.250	44.700	88.821	120.017		349.876
Ecuador			43	3			3	2.075	2.898	5.022
Egypt	1	30						50		81
El Salvador		2.400	6.000	7.900	7.100	401.371	38.727	21.028	67.024	551.550
Equatorial Guinea				8	30	23		26	35	122
Eritrea									106	106
Estonia	3.737	906	5.711	1.346	17.836	3.429	3.278	4.490	3.098	43.831
Ethiopia	179	69	800		446	0	747			2.242
Fiji		744	744				1			1.489
Finland	67.668	98.484	78.985	112.490	95.392	97.691	113.629	117.685	120.769	902.793
France	580.104	579.959	740.432	771.452	865.473	431.676	803.422	991.432	626.814	6.390.765
Gabon			5					1		5
Gambia							2	12	9	23
Georgia	776	56	5	17.002		6.264	559	2.315	828	27.805
Germany	310.808	352.341	269.428	486.438	399.040	299.996	500.759	611.062	516.730	3.746.600
Ghana		2.829	2.829					36	202	5.896
Greece	5.250	18.957	12.901	19.263	44.267	31.162	24.070	174.081	25.088	355.040
Guatemala			607	1.171		130	13.864	19.500	10.000	45.271
Guinea	381	372								753
Guinea-Bissau							6.530	939	180	7.649
Guyana	8					224	3.732	1.076	327	5.368
Honduras				2.700	10.450	1.000	101	6.150	37	20.437

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Hungary	30.824	32.434	34.501	38.955	33.774	38.187	32.942	30.495	31.650	303.763
Iceland	6.415	5.342	5.726	9.376	8.549	15.059	18.159	13.904	14.267	96.797
India	2	602	627	533	767	421	149	230	5.537	8.868
Indonesia	39	178	91		5.801	1.000	237	6.530	131	14.006
Iran (Islamic Republic of)	349		77	809			30	55	28	1.347
Iraq							23.264	45.532		68.796
Ireland	334.691	650.505	217.698	226.879	240.614	117.352	265.477	162.572	137.282	2.353.070
Israel	3.823	7.053	10.583	6.623	6.087	10.803	23.899	19.582	13.856	102.309
Italy	1.054.190	1.265.907	1.412.715	1.356.044	1.537.633	986.663	948.162	908.216	887.503	10.357.033
Jamaica	29					2.591	4.544	4.115		11.279
Japan	1.243	41.257	163.754	203.237	89.745	128.249	2.576	126.780	1.314	758.156
Jordan	258	929			542		212	691	1.081	3.713
Kazakhstan	116	81	17.343	208.690	127.792		1.267	975	170	356.434
Kenya		45	12			38		10	6	111
Kiribati		603	250	190					3	1.046
Kuwait		4.419	4.419	675	666		1.766	1.249	393	13.587
Kyrgyzstan			1.366		3.672	1.916	3.112	3.700		13.766
Latvia	8.308	6.442	10.163	16.375	13.936	11.701	7.919	18.344	21.318	114.507
Lebanon	10			17				88	158	273
Lesotho	15.270					35	1.373	753	2.392	19.823
Liberia									80	80
Libya			912	33	1.726	2.119	1.000		75	5.865
Liechtenstein	60	874	366	65.539	300	4.894	2.556	4.651	439	79.679
Lithuania	5.673	10.033	11.751	18.127	25.612	23.004	24.248	22.423	20.717	161.589
Luxembourg	170.223	262.984	414.770	363.580	146.396	374.943	243.592	237.082	268.844	2.482.413
Madagascar		1.650					36.000			37.650
Malaysia	23.353	4.026	1.478	699	2.184	1.935	3.640	3.811	4.709	45.833
Malta	16.952	1.490	1.394	4.790	2.696	5.499	8.502	14.218	22.729	78.270
Marshall Islands		200	150							350
Mauritania							1.912	968	862	3.741
Mauritius	526	2.225		1.200	6.200		324	28		10.503

Annex > 6

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Mexico	132.439	28.286	28	16.593	14.053	1.147	7.719	6.522	7.537	214.325
Monaco	92									92
Montenegro	526	2.331	1.889	2.049	1.843	5.251	1.756	2.516	2.107	20.269
Morocco	130	203	259		1.296	9.054	612	20.210	15.449	47.213
Mozambique	25.235	349		27.392		17.414	718	124.940	17.560	213.608
Namibia	4.000			1.212		7.941	9.633	1.960	2.100	26.846
Nepal						103	73			176
Netherlands	1.089.961	1.849.823	1.721.535	1.556.715	810.852	820.603	823.568	726.685	842.438	10.242.181
New Zealand	12.841	10.766	8.840	17.237	26.811	36.275	17.621	20.629	26.526	177.548
Nicaragua		1.697					565	1.363	793	4.418
Niger								77		77
Nigeria	20.199		1.906	406	101.225	21.847	6.040	19.549	36.721	207.893
Norway	242.695	286.549	118.602	609.393	464.542	416.475	538.141	519.107	346.905	3.542.410
Oman	1.482	558	14.014	32.145	12.947	31.436	24.821	3.967	41.857	163.226
Pakistan			50					337		387
Panama	22	1.200	1.275		23.900	15.505		2.097	2.428	46.427
Papua New Guinea		70		3	15	585	1.363	948	10.560	13.544
Paraguay					139				43	183
Peru	23	35			148	518	73	282	19	1.097
Philippines	6.056	3.417	3.054	9.446	8.864	5.861	11.329	3.371	15.331	66.728
Poland	14.267	16.678	41.893	29.708	12.814	13.715	13.590	22.226	35.094	199.986
Portugal	136.186	175.357	70.054	65.777	5.095	17.513	68.154	54.915	23.533	616.584
Qatar				15	10	5.938	444	202	20	6.628
Republic of Congo		226				130			214	570
Republic of Korea	5.951	1.104	552	147	551	46	303	164	57	8.876
Republic of Moldova	12	2.061	1.000	1.000		160	3.476	9.199	3.060	19.968
Romania	17.608	6.240	11.444	9.606	1.062	12.573	15.301	23.813	20.359	118.007
Russian Federation	119.430	16	1.002	1.325	2	128	811		86.585	209.298
Saint Kitts and Nevis				7				10		18
Saint Lucia	44.210	112								44.322
Samoa		125					22	56		203

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
San Marino	711	1.666		4.118	2.449			1.501	2.465	12.910
Saudi Arabia							68	1.304	9.000	10.373
Senegal	96	92	1.846						2	2.037
Serbia	493	4.818	3.230	4.333	10.236	5.421	10.685	24.670	24.038	87.924
Sierra Leone									44	44
Singapore	129.382	26.267	36.550	45.336	25.625	14.029	41.394	46.778	29.107	394.468
Slovakia	4.998	2.623	2.780	4.995	5.278	5.286	7.679	10.538	11.252	55.428
Slovenia	27.405	49.846	28.220	34.198	44.747	52.339	53.701	56.601	57.128	404.184
Solomon Islands		50	50	20	10		2			132
South Africa	10.469	2.200	2.474	23.533	2.310	42.463	111.571	23.764	74.496	293.280
Spain	59.454	62.025	44.873	31.407	15.000	7.928	77.114	72.811	79.514	450.125
Sri Lanka	3.449		1	39	4.565	2	927	35	3.600	12.617
Sudan			5.044	14.000						19.044
Suriname							619	320	225	1.163
Swaziland	6.090			1.804		3.695	1.659	3.913	4.610	21.771
Sweden	135.061	186.265	155.266	231.258	270.549	158.070	163.896	200.732	159.500	1.660.597
Switzerland	210.058	324.218	752.602	585.826	283.169	265.771	457.864	541.160	583.825	4.004.492
Syrian Arab Republic								15.414		15.414
Tanzania	0	107	2	45	0	398	549		6	1.108
Thailand	5.959	3.041	2.656	2.520	5.152	2.429	12.293	12.320	33.674	80.043
The former Yugoslav Republic of Macedonia	13.232	5.052	7.276	6.403	2.109	2.051	1.523	3.869	1.901	43.414
Timor-Leste		50		200	20		5			275
Togo		2.098	2.098	1.171			41.980	2.085	3.434	52.866
Tonga		56	56		30				9	151
Trinidad and Tobago	1.029		628			31	33		2.410	4.132
Tunisia	706	609	213	548	939	2.148	640	1.007	695	7.505
Turkey	3.894	917	1.070	223	140	6.519	15.702	8.391	38.731	75.587
Ukraine	4.795	6.046	6.560	7.908	29.765	15.918	156.607	7.544	300.191	535.333
United Arab Emirates	3.004	14	16	13.009	21.712	19	76.412	81.566	98.556	294.309
United Kingdom of Great Britain and Northern Ireland	161.215	166.420	260.298	360.851	185.141	238.404	280.961	224.840	216.976	2.095.106
United States of America	1.179.979	1.033.348	937.044	1.196.788	1.509.800	361.240	1.656.431	1.144.087	1.090.115	10.108.831

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Uruguay	56	68	25	259	133		1.223	110	6.304	8.178
Uzbekistan			4.222	9.272	21.503					34.997
Vanuatu				3.690						3.690
Venezuela (Bolivarian Republic of)	134	1.727	4.884	7.658	2.109			109	159	16.780
Vietnam		1	1	1		57	117	244	802	1.224
Zambia	1.000			2.964		1.272		375	800	6.411
Total	8.464.775	9.554.816	9.299.214	10.793.665	9.445.638	7.191.012	9.847.839	9.618.788	9.049.175	83.264.922

Annex 6.3 Import of other wastes per country

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Andorra		4.632	240							4.872
Australia		132	170	158	184			32	85	761
Austria	5.154	943	7.403	24.019	36.612	40.396	51.338	44.856	51.723	262.445
Belgium	8.206	9.156	647			2.232	806	12.131	26.789	59.966
Brazil								20		20
Cyprus	14.725		1.962	14.725				2.000	8.306	41.717
Czech Republic									19	19
Denmark	1.333	27	91	188	126	828	185.715		425.733	614.041
Estonia					19.332		27.972	46.464	77.774	171.542
Finland	3.813	1.983	1.127	1.250	1.886	845	14.628	9.537	21.524	56.593
France	35.240	67.905	29.027	34.445	29.083	46.573	91.535	56.620	32.667	423.094
Germany	501.701	665.810	499.783	772.045	580.604	569.746	626.812	705.368	879.585	5.801.454
Hungary									101.437	101.437
India						70				70
Ireland			1.959	2.890	24		123		2.991	7.986
Italy	6.921	15.695	15.253	15.975	15.507		175	8.162	11.913	89.601
Latvia						123.419	115.423	118.496	105.387	462.724
Lithuania	1.800									1.800
Luxembourg					550		69			619
Monaco	14.699									14.699

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Morocco		36.385							1.316	37.701
Netherlands	101.265	84.342	157.598	155.784	201.591	858.539	2.667.549	2.013.623	2.213.868	8.454.159
Norway	76.019	135.156	163.618	99.428	156.398	154.523	270.002	237.806	234.218	1.527.168
Portugal								25.200	49.440	74.640
Romania							582	262	43	888
Slovakia								363	2.285	2.649
South Africa								20		20
Spain	11.403	13.393	8.321			1.065	1.176	2.731	2.571	40.658
Sweden	41.232	37.036	538.517	218.120	164.411	320.405	497.971	1.016.577	1.073.931	3.908.200
Switzerland		147.963	135.611	193.254	222.140	216.636	214.627	224.030		1.354.261
United Arab Emirates		4.191								4.191
United Kingdom		31.447	43.452	31.470	45.021	65.951	45.429	72.755	17.824	353.348
Total	823.511	1.256.194	1.604.776	1.563.750	1.473.469	2.401.228	4.811.931	4.597.054	5.341.427	23.873.341

Annex 6.4 Exports of other waste per country

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Andorra	12.333	19.433	9.559	1.028	976	943	648	1.063	2.290	48.272
Austria	70.162	61.331	47.374	90.700	88.028	76.844	71.393	89.997	20.368	616.196
Belgium	150.085	140.876	194.391	199.659	118.506	199.155	176.226	185.720	171.706	1.536.325
Bulgaria							3	1		4
China							188		114	303
Cyprus						70	342	143		555
Czech Republic						535	144	47	25	750
Denmark	71.211	68.719	97.366		68.399	44.520	143.599	78.711	69.589	642.115
Estonia						12.269	12.873	8.707	20.632	54.480
Finland	3.547	4.037	3.819	11.039	9.929	8.187	23.893	43.292	47.493	155.237
France	32.605	87.237	4.304	7.202	44.102	45.666	43.079	69.930	120.682	454.807
Georgia		21								21
Germany	18.019	181.114	134.275	143.157	191.006	247.378	459.663	691.519	708.443	2.774.572
Greece	14.831	137		14.725						29.693
Hungary	673									673
Iceland		8	91	188	126		115.423		157	115.992
India					84					84
Ireland	81	21.776	44.411	46.569	47.248	85.961	1.267.986	269.468	310.042	2.093.543
Italy	226.285	338.509	182.897	118.760	66.569	2.851	18.372	11.627	68.502	1.034.372
Latvia							6.018	20		6.038
Liechtenstein				2.445						2.445
Lithuania							3.999	82	7.976	12.056
Luxembourg	7.395	30.315	32.492	45.427	33.282	24.135	24.230	24.583	31.969	253.827
Malta					1.495	122	449	437		2.502
Monaco								4.344	1.590	5.934
Montenegro	13.267									13.267
Netherlands	77.874	134.812	192.533	509.334	310.187	350.727	402.266	496.037	396.223	2.869.993
Norway	38.899	33.459	550.604	199.624	149.429	294.927	339.841	424.466	471.862	2.503.111
Poland					30					30
Qatar						551				551

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Republic of Moldova	200									200
San Marino	6.921	15.695		15.975	15.326			8.102	11.913	73.931
Senegal			15.253							15.253
Singapore									2.839	2.839
Slovakia									19	19
Slovenia	4.020		81	2.362	6.745	20.374	14.275	14.677	67.301	129.835
Spain	11								2.603	2.614
Swaziland								20		20
Sweden	4.155	67.979	67.141	109.746	98.329	112.802	119.467	126.394	88.246	794.259
Switzerland	70.163	50.737	28.184	33.737	64.578	67.380	74.681	86.248	86.536	562.244
United Kingdom of Great Britain and Northern Ireland	773			12.074	159.096	805.831	1.491.623	1.959.714	2.632.308	7.061.419
United States of America							1.252	1.685		2.938
Uruguay								20		20
Total	823.511	1.256.194	1.604.776	1.563.750	1.473.469	2.401.228	4.811.931	4.597.054	5.341.427	23.873.341

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