

## INTRODUCTION

The Conference of the Parties to the Basel Convention at its sixth meeting (COP-6), December 2002, by its Decision VI/27, adopted the revised questionnaire on “Transmission of Information” and its manual prepared specifically to facilitate reporting by Parties. By the same decision, COP-6 also mandated the secretariat to prepare compilation documents<sup>1</sup> based on the data and information provided by Parties for the year 2000 and to make it available to Parties and non-Parties.

The Parties to the Convention are required, in accordance with Articles 13 of the Convention, to transmit an annual report to the secretariat on issues related to the implementation of the Basel Convention. The secretariat sent the revised questionnaire to Parties to report data and information for the year 2000 and as at 21 March 2003, ninety-nine<sup>2</sup> Parties completed the questionnaire. A cut-off-date was set to 30 November 2002 to review and compile the data provided by Parties on generation and transboundary movements of hazardous wastes and other wastes as well as information on disposals which did not proceed as intended and accidents occurring during the transboundary movements and disposal of hazardous wastes and other wastes. However, data submitted after the cut-off-date by Mexico and Switzerland was also included with a view to make available a complete dataset to the extent possible.

Mr. Kees Wielenga, senior consultant of FFact management consultants, Belgium, was hired primarily to analyse the datasets by carrying out a second verification and to prepare a report summarizing the results of the analysis.

### Quality control

Quality control exercise that was carried out for the datasets (2000) received from Parties on generation and transboundary movements mainly consisted of the following issues:

The secretariat identified wastes that did not fall under the scope of the Convention yet included in the reported export/import data tables. Where confirmed by Parties that these wastes

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<sup>1</sup> The information and data provided by Parties for the year 2000 is compiled and is presented in two parts, namely: Compilation Part I: Status of information; National reporting under the Basel Convention (2000) (Basel Convention series/SBC No. 2003/6) and; Compilation Part II: Annual reporting; National reporting under the Basel Convention (2000) (Basel Convention series/SBC No. 2003/10). These are also made available at the website of the secretariat ([www.basel.int](http://www.basel.int)).

<sup>2</sup> Albania, Algeria, Andorra, Argentina, Armenia, Australia, Austria, Bahrain, Barbados, Belarus, Belgium, Bolivia, Botswana, Brazil, Bulgaria, Burkina Faso, Cambodia, Canada, Chile, China, Colombia, Comoros, Costa Rica, Croatia, Cuba, Cyprus, Czech Republic, Democratic Republic of Congo, Denmark, Dominica, Ecuador, Egypt, El Salvador, Estonia, Finland, France, Gambia (The), Georgia, Germany, Hungary, Iceland, Indonesia, Ireland, Israel, Italy, Japan, Jordan, Kiribati, Kyrgyzstan, Latvia, Lithuania, Luxembourg, Malaysia, Mauritania, Mauritius, Mexico, Micronesia (Federated States of), Monaco, Mongolia, Morocco, Mozambique, Netherlands, New Zealand, Norway, Oman, Panama, Papua New Guinea, Paraguay, Peru, Poland, Portugal, Qatar, Republic of Korea, Republic of Moldova, Romania, Russian Federation, Saint Lucia, Senegal, Serbia and Montenegro, Singapore, Slovakia, Slovenia, South Africa, Spain, Sri Lanka, Sweden, Switzerland, Thailand, Tunisia, Turkey, Uganda, Ukraine, United Kingdom, United Republic of Tanzania, Uruguay, Uzbekistan, Venezuela, Viet Nam and Zambia.

did not fall under the scope of the Convention, such entries were provided separately, in order to have the cleaned-up datasets limited to “hazardous wastes” and “other wastes” as defined under the Basel Convention.

To reduce the number of entries on transboundary movements of wastes without Y-codes, the Parties were requested to assign suitable Y-codes, wherever it was possible. Due to lack of correlation between the different waste lists used, it was not always possible for Parties to assign suitable Y-codes to wastes. It was also due to the fact that some of these wastes without Y-codes were wastes falling under Art. 1(1)b. These Art. 1(1) b wastes have been identified, where possible, and have been included in the summary tables and graphs.

Cases of large differences in generation and trans boundary movements compared to 1999 data were also identified and verified, to the extent possible.

### **Contents of the current document**

Part II of the compilation document includes summary tables of generation, export and import of hazardous wastes and other wastes; and graphical representation of datasets on generation and transboundary movements. All figures provided in these tables and graphs are in metric tonnes (mt).

For reasons of economy, the datasets as provided by Parties on generation and transboundary movements, information regarding disposals, which did not proceed as intended and accidents occurring during the transboundary movements and disposal of hazardous wastes and other wastes are not included in the current publication. However these are made available at the website of the secretariat ([www.basel.int](http://www.basel.int)). The tables containing datasets as provided by Parties on generation and transboundary movements are referred to as master tables<sup>3</sup>.

### Summary tables

There are 16 summary tables, which give an overview of the transboundary movements of hazardous wastes and other wastes:

- among all reporting Parties;
- among non-OECD reporting Parties;
- among OECD reporting Parties;
- from non-OECD to OECD reporting Parties; and
- from OECD to non-OECD reporting Parties.

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The master Tables are:

Table 1a: Total amount of hazardous wastes generated in 2000 (as reported by Parties)

Table 1b: Total amount of other wastes generated in 2000 (as reported by Parties)

Table 2a: Generation of hazardous wastes and other wastes by Y-codes by Party (2000) (as reported by Parties)

Table 2b: Generation of hazardous wastes and other wastes by Y-codes in 2000 (as reported by Parties)

Table 3: Export of hazardous wastes and other wastes in 2000 (as reported by Parties)

Table 4: import of hazardous wastes and other wastes in 2000 (as reported by Parties)

These Summary tables are based on three types of datasets:

Based on export data

The dataset consists of export data as reported by exporting Parties.

Based on import data

The dataset consists of import data as reported by importing Parties.

Based on an estimated global transboundary movements

The dataset is an estimated dataset. The estimation is based on the fact that each transboundary movement involves at least a country of origin and a country of destination. If all countries involved in transboundary movements would report to the secretariat, all movements would be reported twice and the reported amounts of export of waste would be the same as the reported amounts of imports. Since not all data from countries involved in transboundary movements have been reported for the year 2000, the reported export or import amounts cannot be assumed to represent a complete picture of the transboundary movements.

An effort is made to present a complete picture of the transboundary movements, by adding to the amounts reported by the importing countries those exports that were reported by exporting countries to countries that had not reported imports themselves. This is therefore an estimation of the total transboundary movements while correcting the amounts that were reported twice.

The dataset based on imports was chosen as basis for this calculation because it was assumed that the country of import would be in a better position to verify if the information regarding a shipment was accurate than the country of export, since the treatment takes place in the country of import. It should be noted that this total amount is still likely to be an underestimation of the transboundary movements that took place in 2000 because there may be transboundary movements between countries that both did not report such data.

In some cases, large differences among the amount exported, the amount imported and the estimated amount of total transboundary movements occur. This is due to the combination of two factors. The first is the fact that not all Parties reported their movements, which may cause differences between the reported export and imports. The other factor is that the importing and exporting country sometimes report in a different way on the same movement. These factors also explain why in some cases the estimated total amount is lower than the total reported export.

It should be noted that the % in these summary tables might not always add up to 100% due to rounding off.

Graphical representation and analysis of datasets

Based on the above summary tables a set of 21 graphics is made available.

## Tables containing the total amounts of 'hazardous wastes' and 'other wastes; generated

Since the reporting year 1999, provisions have been made, in the revised questionnaire on "Transmission of information", to report separately on the total amounts of hazardous wastes generated under Art. 1 (1)a and Art. 1(1)b; and 'other wastes'. The generation amounts provided under Art. 1(1)b is now used in the graphs.

It should be noted that the total amounts given under generation of 'hazardous wastes' and 'other wastes' always might not match with the totals of generation of 'hazardous wastes' 'other wastes' by Y-codes'. One of the main reasons is that Parties do not always have sufficient information to provide waste generation data per waste streams.

## Data on 'hazardous wastes' and 'other wastes' generated<sup>4</sup>

### Hazardous wastes

46 Parties reported on the amount of hazardous wastes generated in 2000, namely, Austria, Bahrain, Barbados, Belarus, Bulgaria, Croatia, China, Cuba, Czech Republic, Denmark, Ecuador, Egypt, Estonia, Finland, France, Georgia, Hungary, Iceland, Israel, Jordan, Kyrgyzstan, Luxembourg, Malaysia, Monaco, Mongolia, Morocco, Netherlands, Norway, Oman, Poland, Portugal, Qatar, Republic of Korea, Republic of Moldova, Romania, Russian Federation, Saint Lucia, Singapore, Slovakia, Slovenia, Spain, Sri Lanka, Sweden, Ukraine, United Kingdom and Uzbekistan.

27 Parties, namely, Argentina, Australia, Belgium, Bolivia, Brazil, Burkina Faso, Cambodia, Colombia, Dominica, Gambia (The), Germany, Indonesia, Ireland, Italy, Japan, Latvia, Mozambique, New Zealand, Papua New Guinea, Serbia and Montenegro, Thailand, Tunisia, Turkey, Uganda, United Republic of Tanzania, Uruguay and Zambia, reported that no data is available on generation of hazardous wastes.

### Other wastes<sup>5</sup>

36 Parties reported on the amount of other wastes generated in 2000, namely, Andorra, Austria, Bahrain, Barbados, Belarus, Bolivia, Bulgaria, Czech Republic, Denmark, Ecuador, Estonia, Finland, France, Gambia (The), Georgia, Hungary, Iceland, Ireland, Kyrgyzstan, Monaco, Mongolia, Morocco, Netherlands, Norway, Poland, Portugal, Republic of Korea, Romania, Saint Lucia, Singapore, Slovakia, Spain, Thailand, Tunisia, Ukraine and Uzbekistan.

38 Parties, namely, Argentina, Australia, Belgium, Brazil, Burkina Faso, Cambodia, China, Colombia, Croatia, Cuba, Dominica, Egypt, Germany, Indonesia, Israel, Italy, Japan, Jordan, Latvia, Luxembourg, Malaysia, Mozambique, New Zealand, Oman, Papua New Guinea, Qatar, Republic of Moldova, Russian Federation, Serbia and Montenegro, Slovenia, Sri Lanka,

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<sup>4</sup> Canada indicated that tracking of hazardous waste and hazardous recyclable material generation is a provincial/territorial responsibility.

<sup>5</sup> As listed under Annex II of the Basel Convention: Y46-Y47.

Sweden, Turkey, Uganda, United Kingdom, United Republic of Tanzania, Uruguay and Zambia, reported that no data is available on generation of other wastes.

#### Generation of hazardous wastes and other wastes by Y-codes

33 Parties reported on the generation of hazardous wastes and other wastes by Y-codes, namely, Andorra, Armenia, Austria, Barbados, Belarus, Botswana, Bulgaria, Costa Rica, Croatia, Cuba, Czech Republic, Denmark, Ecuador, Gambia (The), Hungary, Iceland, Kyrgyzstan, Luxemburg, Monaco, Mongolia, Morocco, Netherlands, Oman, Portugal, Republic of Korea, Republic of Moldova, Romania, Slovakia, Slovenia, Sri Lanka, Tunisia, Uzbekistan and Zambia.

#### Data on import of hazardous wastes and other wastes

40 Parties reported data on import of hazardous wastes and other wastes, namely, Australia, Austria, Belarus, Belgium, Bolivia, Brazil, Bulgaria, Canada, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Indonesia, Ireland, Israel, Italy, Japan, Latvia, Luxemburg, Malaysia, Mexico, Monaco, Netherlands, New Zealand, Norway, Portugal, Republic of Korea, Russian Federation, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Ukraine, United Kingdom and Uzbekistan.

24 Parties reported that *no import* of hazardous wastes and other wastes took place in their countries, namely, Barbados, Burkina Faso, Cambodia, China, Croatia, Dominica, Egypt, Hungary, Jordan, Mongolia, Mozambique, Oman, Papua New Guinea, Poland, Qatar, Saint Lucia, Serbia and Montenegro, Singapore, Tunisia, Turkey, Uganda, United Republic of Tanzania, Uruguay and Zambia.

7 Parties, namely, Armenia, Argentina, Bahrain, Cuba, Ecuador, Morocco and Sri Lanka reported that no information is available on such transboundary movements.

#### Data on export of hazardous wastes and other wastes

58 Parties reported data on export of hazardous wastes and other wastes, namely, Argentina, Australia, Austria, Barbados, Bahrain, Belgium, Brazil, Bulgaria, Canada, China, Colombia, Croatia, Czech Republic, Denmark, Egypt, Estonia, Finland, France, Georgia, Germany, Hungary, Iceland, Indonesia, Ireland, Israel, Italy, Japan, Jordan, Latvia, Luxemburg, Malaysia, Mexico, Monaco, Morocco, Netherlands, New Zealand, Norway, Oman, Papua New Guinea, Poland, Portugal, Republic of Korea, Romania, Russian Federation, Saint Lucia, Serbia and Montenegro, Singapore, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Thailand, Turkey, United Kingdom, Uzbekistan and Zambia.

8 Parties reported that there was *no export* of hazardous wastes and other waste, which took place from their countries, namely, Belarus, Burkina Faso, Cambodia, Dominica, Mongolia, Qatar, Tunisia and Uganda.

7 Parties, namely, Armenia, Cuba, Gambia (The), Mozambique, Sri Lanka, United Republic of Tanzania and Uruguay reported that no information is available on such transboundary movements.

## **Caution**

Due to the difference in national definitions of hazardous wastes, variation in data collection methods & reporting and the difficulties in obtaining accurate data, figures presented in this document are not directly comparable and should be used with caution.

## **Data treatment**

Wastes not falling under the scope of the Basel Convention; reported movements of wastes generated in Austria and transited through Germany before the disposal operation took place in Austria finally; and imports from the Channel islands and the Isle of Man to the United Kingdom are not included in the export and import master tables and are not considered for the purpose of data analysis. They are made available separately under the heading 'Endnotes and excluded data' along with the master tables at the secretariat's website ([www.basel.int](http://www.basel.int)).

The following datasets are also not considered for the purpose of data analysis but are retained in the generation, export and import master tables as well as made available separately under the heading 'Endnotes and excluded data' along with the corresponding master tables at the secretariat's website ([www.basel.int](http://www.basel.int)). These datasets mainly include generation data provided in m<sup>3</sup>; litres or ton per day; generation amount for class IV hazardous waste from the Russian Federation; export/import data on wastes destined to disposal operation D6 (release into a water body except seas/oceans); and waste shipments lacking information on amounts/destination etc.

### Aggregation of Y, D and R codes

Depending on the availability of data, and also for reasons of utility, the Y-codes, D-codes and R-codes are aggregated in the following manner:

#### Y-codes

- Y1- Y18 (waste streams)
- Y19 – Y45 (wastes having as constituents)
- Y46 – Y47 (wastes requiring special consideration)

#### Multiple Y-codes

Some Parties, sometimes, have assigned multiple Y-codes to a waste stream/shipment. This has been explained by Parties is due to lack of information. For the purpose of data analysis, wherever it was possible, such waste stream/shipment with multiple codes have been accommodated within the above-mentioned aggregated groups. For those where such aggregation was not possible (i.e. the Y codes cover more than one group as listed above) the information is presented as 'mixed codes'.

#### D- codes

- D1, D2 and D4 (landfill, land treatment)

D3 and D12 (underground storage)  
D5 (specially engineered landfill)  
D8 (biological treatment)  
D9 (physico-chemical treatment)  
D10 (incineration)  
D13, D14 and D15 (blending, repackaging, interim storage)

### Multiple D-codes

Some Parties assigned multiple D-codes to a waste stream/shipment to indicate the disposal operation(s), the waste stream/shipment was subjected to. For the purpose of data analysis, wherever it was possible, such multiple codes have been accommodated within the above-mentioned aggregated groups. Where this was not possible a distinction was made between operations D13 to D15 that are intermediary operations and operation with a code from D1 to D12. Combinations of such intermediary operations with one of the operations D1 to D12 were attributed to the “final” operation. If the attribution to one of the aggregations was not possible, the information was presented as ‘mixed D’.

### R – codes

R1 (energy)  
R2, R3 and R6 (solvents, organics, acids, bases)  
R4, R5 and R8 (metals, inorganics, catalysts)  
R7, R10, R11, R12 and R13 (residual materials)  
R9 (re-refining of used oil)

### Multiple R-codes

Some Parties assigned multiple R-codes to a waste stream/shipment to indicate the recovery operation(s), the waste stream/shipment was subjected to. For the purpose of data analysis, wherever it was possible, such multiple codes have been accommodated within the above-mentioned aggregated groups. Operations R12 and R13 are intermediary operations prior to a final operation with a code from R1 to R11. When combinations of operations R12 or R13 were reported by Parties, the information on the transboundary movement was attributed to the ‘final’ operation. If attribution to one of the aggregations was not possible, the information was presented as ‘mixed R’.

Some Parties assigned R-codes to a waste stream/shipment that are not listed under Annex IVB to the Basel Convention (e.g. R14 and R15). Such R codes have been treated as ‘unspecified R’.

## **Acknowledgement**

The quality checks carried out in consultation with Parties have improved data quality. It would not have been possible without cooperation from Parties. The secretariat takes this opportunity to thank all Parties who contributed to the improvement of the data quality.

## **Feedback**

While every effort is being made to ensure that the information printed and referred to is exact, the amount and complex nature of this information is such that inaccuracies could be found. The secretariat will strive to improve the content, presentation and dissemination of information, and in all cases would greatly appreciate any correction of information printed in this publication, as well as suggestions for the improvement. To send feedback to the secretariat, please contact Ms. Nalini Basavaraj at:

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