

# Information about waste management facilities in EEA member countries

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# 1. Introduction

One of the tasks of the European Topic Centre on Waste (ETC/W), as part of its work programme for the European Environment Agency (EEA), is to develop a catalogue on safe recovery and disposal facilities in EEA member countries. This catalogue will contain data on type, location and capacity of waste management facilities. In the long term, the catalogue should provide additional information about permits, environmental management and pollution control systems as well as allow an assessment of transboundary shipment of wastes. As a first step the catalogue should concentrate on hazardous waste treatment facilities and landfills.

For the development of the catalogue a step-by-step procedure was chosen. First of all a survey on already existing databases and the availability of information on waste management facilities should be elaborated. To ensure that the catalogue will meet the needs of the future users, a short description of the design and structure of the catalogue was sent to the National Reference Centres (NRCs), Eurostat and DG Environment for comments. In a test phase core data have been collected first from ETC/W partner countries or regions, later they will be collected from all EEA member countries. A proposal for an extended data set (with data to be reported to the European Commission, waste flows, permits, emission data) will be agreed with member countries and can be integrated into the catalogue at a later stage.

This study describes the present situation on available data and databases for waste management facilities in EEA member countries based on a questionnaire inquiry. Strong and weak points are discussed and possible requirements for improvements are evaluated.

## 2. Objective

Ensuring that the capacity of recovery and safe disposal facilities is adequate to handle the quantities of waste generated is an important objective of EU policy. However, the information about waste management facilities, which is presently available, is very scarce and incomparable.

Furthermore, a thorough knowledge about existing treatment facilities is a prerequisite for setting realistic and achievable targets for the various waste management options such as material recycling and incineration with energy recovery, taking into account the required time for planning and investments in the member countries.

In addition, the information would support the requirements of Directive 91/156/EEC, according to which the Member States shall take appropriate measures to establish an integrated and adequate network of disposal installations thereby enabling the European Union as a whole to become self-sufficient in waste disposal. At present, however, the necessary information is lacking with only limited data compiled through Directive 91/692/EEC concerning questionnaires for Member States' reports on the implementation of certain Directives in the waste sector.

As a matter of fact, the availability of accurate information is crucial for good waste management planning. The catalogue to be developed by ETC/W on waste management facilities will contribute to improving information on waste management issues within the EEA member countries in the next years. It will also help the development of a sustainable approach to waste management options by providing the information on the capacities of recovery and disposal facilities to handle the quantities of different types of waste generated.

### 3. Design of the questionnaire

The use of questionnaires has proven to be a successful method to collect and compare information from member countries on specific topics.

A draft questionnaire was designed by the Federal Environment Agency – Austria, which was adapted to recommendations and comments from ETC/W partners.

Two questions in the questionnaire deal with the sources of information; 1) Does a database on waste management facilities exist in your country? 2) What other sources of information about waste management facilities are available in your country? It is assumed that the authorities which elaborate the national, regional, etc. waste management plans would have the best overview on the situation concerning waste management facilities in their country. Therefore the intention was to use data from national, provincial, regional and/or local authorities. Additionally, in the long term the catalogue should be a tool for competent authorities, e.g. in waste management planning activities, to fulfil the reporting obligations to the Commission, etc. But in general, any organisation which could provide reliable data on waste management facilities in a country should be taken as information source. The decision on what kind of data source would be provided has to be made by experts in the member countries themselves.

Based on practical experiences with the collection of waste management data, we decided to distinguish between ‘available’ and ‘deliverable’ data. One of the reasons was that we had to keep in mind that the planned European catalogue on waste management facilities should cover all 15 EU Member States and the three EEA member countries outside the EU (Norway, Liechtenstein and Iceland) and that all these countries have different levels of information about waste management facilities.

- **Available data:** By ‘availability’ is meant that the data in principle ‘exists’ at the competent authorities, e.g. in permission documents. The intention is to find out which data exists in the member countries for all types of recovery and disposal facilities, which could be included in the catalogue. This information is necessary for the elaboration of the catalogue concept.
- **Deliverable data:** This means that the data should be delivered to ETC/W within a period of maximum 6 to 8 months. We assume, that the information needed has to be collected and compiled via the NRCs for waste from e.g. competent authorities. This implies that the data will have to be aggregated, which probably will take some time in most of the EEA member countries. The data will be used for the construction of the catalogue in a first step and should have good statistical coverage within the 18 countries.

Before this questionnaire was finalised and ready to be sent to all member countries, there was a need to discuss the use of a common classification on the type of operation at the facility. It was decided to use Annex IIA and IIB in the Framework Directive on Waste, despite the fact that use of the system is not fully incorporated in the member countries.

The last point on the questionnaire was concerned with the EEA report *Environment in the European Union at the turn of the century*, the waste chapter of which had to be elaborated by the ETC/W. As it was the first questionnaire of

ETC/W, the opportunity of updating the information for this report could be taken, special emphasis being placed on the data for landfilling and incineration. For this purpose already existing data was collected from different data sources, for instance: *Europe's Environment – the second assessment* (EEA, 1998), ISWA Energy from Waste Study and OECD Environmental Data Compendium 1997, compiled and pre-filled in the questionnaire.

Finally, the questionnaire was approved by the EEA, DG Environment and Eurostat at the ETC/W Management Committee Meeting in Vienna, 22 and 23 January 1998. The consolidated questionnaire is presented in Annex I and includes the following main questions:

1. Does a database on waste management facilities exist in your country?
2. What other sources of information about waste management facilities are available in your country?
3. What kind of data on waste management facilities is available in your country?
4. What kind of data on waste management facilities can be obtained by NRCs?
5. Data is necessary for the elaboration of the turn of the century report, special emphasis being placed on the data on incineration and landfilling.

Referring to questions 3 and 4 the kind of data required were specified as follows:

- Location
- Information about the operator: name, address, contact person
- Capacity
- Waste flow data: input, output
- Technologies used
- Emissions to air and water: permits, monitoring data
- Environmental management system: according to Council Regulation 1836/93 (EMAS), ISO 14000, BS 7750, etc.
- Other.

## 4. Results

In the middle of March 1998 the questionnaire was submitted to NRCs for waste and NFPs in all 18 EEA member countries. The rate of response to the questionnaire was 100 %. This was partly due to the personal contacts, which could be made during the first workshop of the ETC/W in Copenhagen from 17 to 18 September 1998, in which most NRCs and NFPs participated.

By the 4 of December 1998, each of the 18 EEA countries had returned a completed questionnaire, thus answering all five questions:

1. Does a database on waste management facilities exist in your country?
2. What other sources of information about waste management facilities are available in your country?
3. What kind of data on waste management facilities is available in your country?
4. What kind of data on waste management facilities can be obtained by NRCs?
5. Data for the EU State of the Environment Report 1998

Since question five concerns data which have been reported in the waste chapter of the report *Environment in the European Union at the turn of the century*, the present report will not cover the result of this question.

## 5. Summary of information reviewed

### 5.1. Contact persons

For the successful development and construction of the catalogue it is important to know the future users. This questionnaire inquiry was the first contact with NRCs for waste in EEA member countries to find out the responsible contact persons. The following table compiles information on the contact persons in EEA member countries, who returned the filled-in questionnaires and therefore are assumed to be the future partners in the countries for development of the catalogue on waste management facilities.

#### Contact Persons in EEA member countries (as of 1 October 1999)

Name	Institution	Address	Tel Fax Email
<b>EU Member States</b>			
<b>Austria</b>			
Brigitte Karigl	Umweltbundesamt Wien	Spittelauer Lände 5, A-1090 Wien	+43 1 31304 5512 +43 1 31304 5400 karigl@ubavie.gv.at
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## 5.2. Databases and other information sources on waste management facilities in EEA member countries

According to the answers to question one in the questionnaire, there exist some computerised **databases** for waste management facilities (with different purposes, contents, update periods, etc.) in the following countries:

- Austria has a computerised database at the national level, run by the Austrian Federal Environment Agency. Additionally, there exist databases at some provincial governments;
- Denmark has an information system for waste and recycling (ISAG), run by the Danish EPA, which is annually updated with data from reports from companies which receive waste;
- Finland has a waste sector monitoring system (VAHTI data system), which is located at the regional environment centres and which stores information relating to waste permits and notifications, etc. Annual summaries are carried out and forwarded to the supervising authorities on an annual summary form;
- France has a database on household waste facilities and public waste collection centres;
- Germany has a MS Access-Database on waste management facilities for hazardous waste to fulfil the reporting obligation according to the Directive 91/689/EEC;
- Iceland did not give further information on the kind of database(s) available;
- Ireland has a database at the national level, but did not provide information on the contents and the update modus etc.;
- The Netherlands run a database for disposal facilities mainly for non-hazardous waste. The results are presented in an annual report;
- Norway did not give further information on the kind of database(s) available;
- Spain operates a database in MS Access, for the National Plan of municipal waste;
- United Kingdom has a database on landfill sites in England and Wales, compiled by the Environment Agency. At the moment most of the information on facilities is held on regional public registers.

The knowledge about existing databases is important for the future data transmission purposes. Those countries, which are already in the possession of databases, can more easily transfer the data to the planned catalogue. In this case, the files can be generated either by using already existing data processing applications in the member countries or by transferring the data to commonly used spreadsheet applications, such as MS Excel.

All countries, which returned the questionnaire, stated that they have waste management plans or reports on national, provincial and/or on regional level. These plans can be used as *other information sources* for waste management facilities. Detailed information on the countries, content, updating periods and other information about the waste management plans are under investigation in a separate task within the ETC/W work programme.

### **5.3. Availability of information on waste management facilities**

The catalogue on waste management facilities is strongly dependant on the quality of input data. Therefore the design of the catalogue should reflect the realistic chances to obtain sufficient and good quality data for all EEA member countries. In order to achieve proper information a step-by-step procedure leads to the highest possible information level.

Some countries did not make a difference between data that are in principle available at local level (e.g. in permission documents) and data, which can be delivered to the ETC/W. They assume that available data can also be delivered in most cases. The problem seems not to be the time period for collecting data, but the efforts to be made for selecting and compiling the needed information, since no 'ready made' databases exist. Furthermore, most countries have different update periods for their databases and therefore reference years will be different. Some countries will need more than 6 to 8 months to send data, because of such updating periods.

The following graphs use the R/D-codes for the classification of recovery and disposal operations according to Commission Decision 96/350/EC which are listed in the table below. At present the Member States do not use these codes for the classification of existing waste management facilities. This is partly due to lack of common understanding of the R/D-codes. Since no guidelines exist it is very difficult to find the suitable R/D-code(s) for each kind of installation. Nevertheless, NRCs tried to give this information in the best way possible.

**Commission Decision of 24 May 1996 adapting Annexes IIA and IIB  
to Council Directive 75/442/EEC on waste (96/350/EC)**

**Annex IIA: Disposal Operations**

D1	Deposit into or onto land (e.g. landfill, etc.)
D2	Land treatment (e.g. biodegradation of liquid or sludgy discards in soil, etc.)
D3	Deep injection (e.g. injection of pumpable discards into wells, salt domes or naturally occurring repositories, etc.)
D4	Surface impoundment (e.g. placement of liquid or sludgy discards into pits, ponds or lagoons, etc.)
D5	Specially engineered landfill (e.g. placement into lined discrete cells which are capped and isolated from one another and the environment, etc.)
D6	Release into a water body except seas/oceans
D7	Release into seas/oceans including sea bed insertion
D8	Biological treatment not specified elsewhere in this Annex which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D12
D9	Physico-chemical treatment not specified elsewhere in this Annex which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D12 (e.g. evaporation, drying, calcinations, etc.)
D10	Incineration on land
D11	Incineration at sea
D12	Permanent storage (e.g. emplacement of containers in a mine, etc.)
D13	Blending or mixing prior to submission to any of the operations numbered D1 to D12
D14	Repackaging prior to submission to any of the operations numbered D1 to D13
D15	Storage pending any of the operations numbered D1 to D14 (excluding temporary storage, pending collection, on the site where it is produced)

**Annex IIB: Recovery Operations**

R1	Use principally as a fuel or other means to generate energy
R2	Solvent reclamation/regeneration
R3	Recycling/reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes)
R4	Recycling/reclamation of metals and metal compounds
R5	Recycling/reclamation of other inorganic materials
R6	Regeneration of acids or bases
R7	Recovery of components used for pollution abatement
R8	Recovery of components from catalysts
R9	Oil re-refining or other reuses of oil
R10	Land treatment resulting in benefit to agriculture or ecological improvement
R11	Use of wastes obtained from any of the operations numbered R1 to R10
R12	Exchange of wastes for submission of any of the operations numbered R1 to R11
R13	Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)

Each of the 18 EEA member countries returned the questionnaire, which gives a 100 % response rate. In the following graphs the results of the questionnaire inquiry concerning available data are shown separately for recovery and disposal facilities for each country.

Countries, where specific information about facilities of the relevant R/D-Code is available, are marked with a box (■). Information about a facility is defined as available, as soon as one kind of data (location, operator, etc.) about the facility exists. Where absolutely no data about a facility is available or where the questionnaire has not been filled in, the box is left out. Countries, that have no facilities of the relevant R/D-Code, are marked with a star (\*).

Detailed information for each recovery and disposal operation as well as for each country is given in Annex 2.

#### **Recovery facilities for hazardous waste**

- Information should be available from all countries.
- No information was given in the questionnaire from Portugal and Belgium-Brussels on facilities classified as R1 and from Belgium-Brussels and Norway on facilities classified as R10 to R13.

#### **Recovery facilities for non-hazardous waste**

- In general information should be available from all countries.
- All countries have recovery facilities for non-hazardous waste installed, only Liechtenstein did not give information in the questionnaire on any kind of recovery facilities for non-hazardous waste.
- Belgium-Flanders and Greece have no facilities classified as R1 for non-hazardous waste.
- Greece and the Netherlands have no facilities classified as R10 to R13 for non-hazardous waste.
- Belgium-Brussels did not give information in the questionnaire on the data situation for facilities classified as R1 and R10 to R13.
- Portugal and Norway did not give information in the questionnaire on facilities classified as R10 to R13.

#### **Disposal facilities for hazardous waste**

- Landfills (D1 or D5): Data should be available from all countries, with the exception of those 6 countries, where no landfills for hazardous waste exist (Austria, Belgium-Brussels, Greece, Luxembourg, Iceland and Liechtenstein).
- Biological treatment (D8): All countries have information, except Portugal and Spain; 6 countries have no biological treatment facilities for hazardous waste (Belgium-Flanders, Belgium-Brussels, Greece, Luxembourg, Iceland and Liechtenstein).
- Physico-chemical treatment (D9): Data should be available from all countries; only 4 countries (Belgium-Brussels, Greece, Iceland and Liechtenstein) have no such facilities.
- Incineration (D10): Data should be available from all countries; no incineration plants for hazardous waste (classified as D10 facilities) are installed in Denmark, Luxembourg, Iceland and Liechtenstein.
- Permanent storage (D12): The majority of the Member States do not have such facilities; data should be available from France, Germany, Ireland, Italy, Spain, United Kingdom and Norway.
- Others: Information should be available from Finland, Ireland, Italy, Luxembourg and Portugal, all other countries did not give information in the questionnaire or have no such facilities installed.

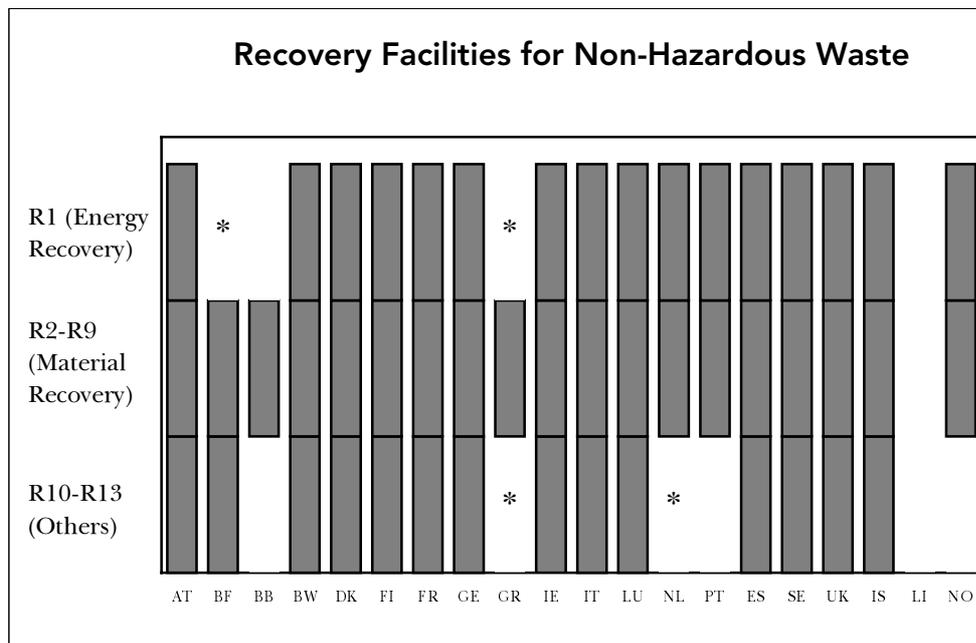
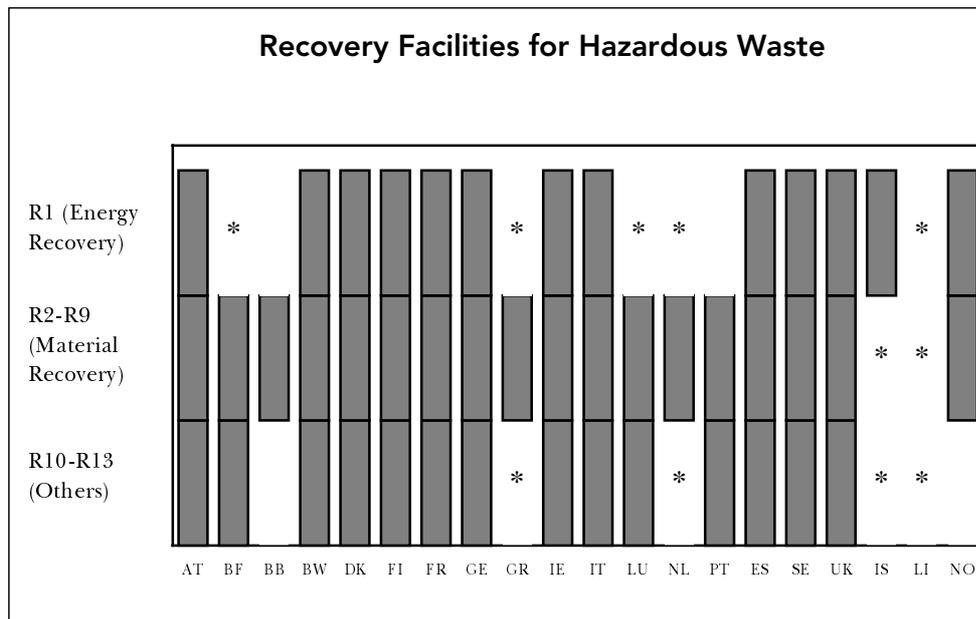
#### **Disposal facilities for non-hazardous waste**

- Landfills (D1 or D5): All countries, except Belgium-Brussels, have landfills for non-hazardous waste and data should be available.
- Biological treatment (D8): Information should be available from all countries, except Portugal; biological treatment plants for non-hazardous waste do not exist in Belgium-Flanders, Belgium-Brussels, Denmark, Iceland and Liechtenstein.
- Physico-chemical treatment (D9): Information should be available from all countries, except Sweden; 6 countries have no such facilities installed

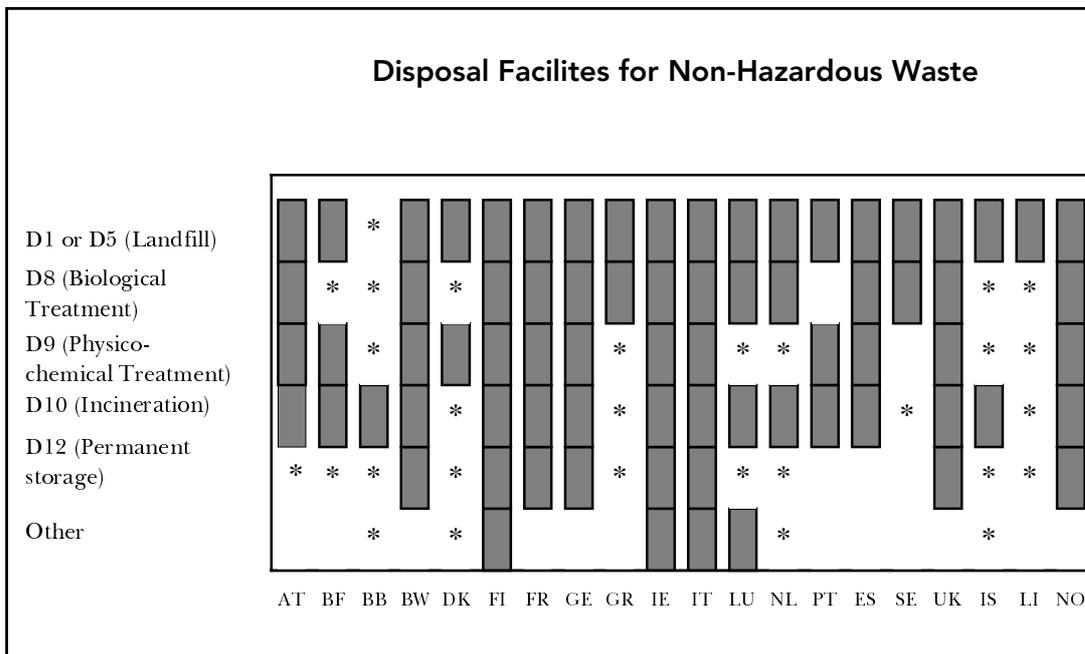
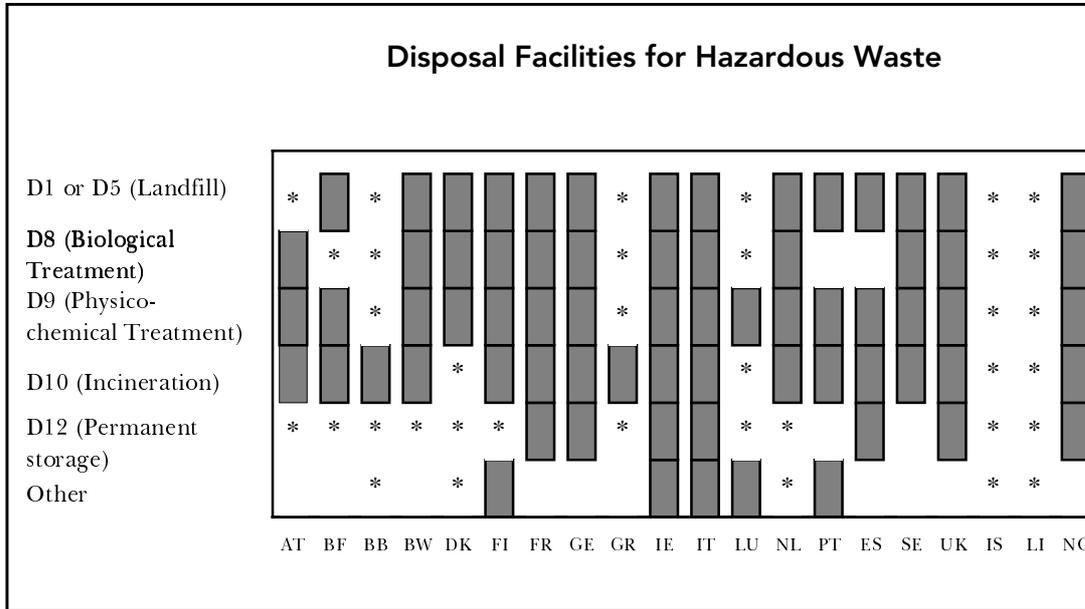
(Belgium-Brussels, Greece, Luxembourg, the Netherlands, Iceland, Liechtenstein).

- Incineration (D10): All countries, except Denmark, Greece, Sweden and Liechtenstein, have incineration facilities classified as D10 and information should be available.
- Permanent storage (D12): The majority of the countries have no such facilities installed; information should be available from Belgium-Wallonia, Finland, France, Germany, Ireland, Italy, United Kingdom and Norway, while 3 countries (Portugal, Spain and Sweden) did not give information in the questionnaire.
- Others: Most countries did not give any information on such facilities in the questionnaire; so far data should be available from Finland, Ireland, Italy and Luxembourg, 4 countries have no such facilities (Belgium-Brussels, Denmark, Netherlands and Iceland).

**Availability of information for recovery facilities for hazardous and non-hazardous waste**



Availability of information for *disposal* facilities for hazardous and non-hazardous waste



#### 5.4. Deliverable information in detail

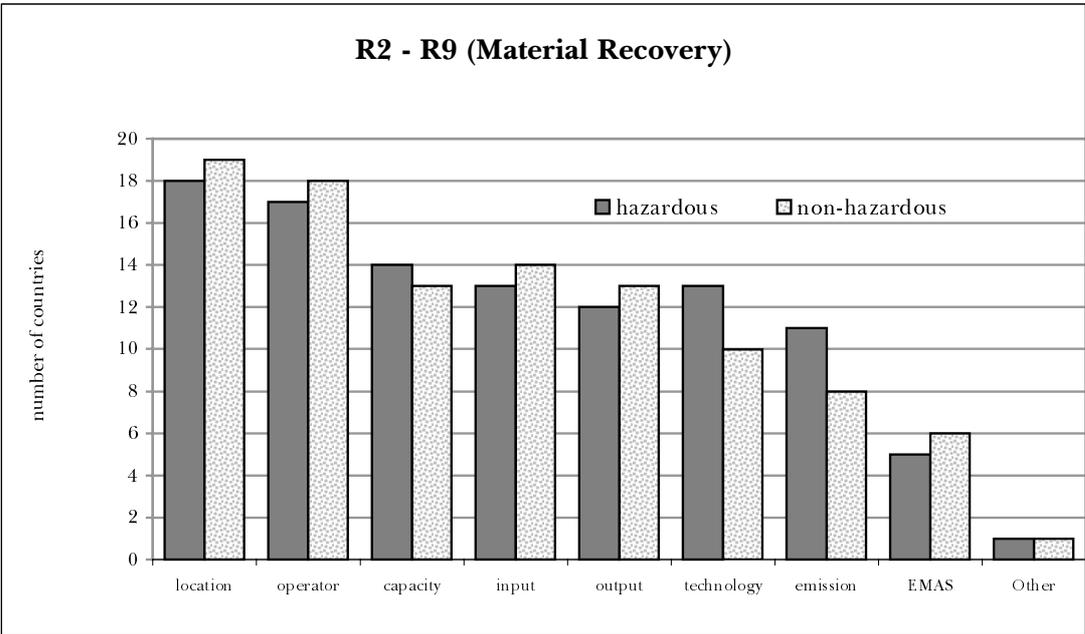
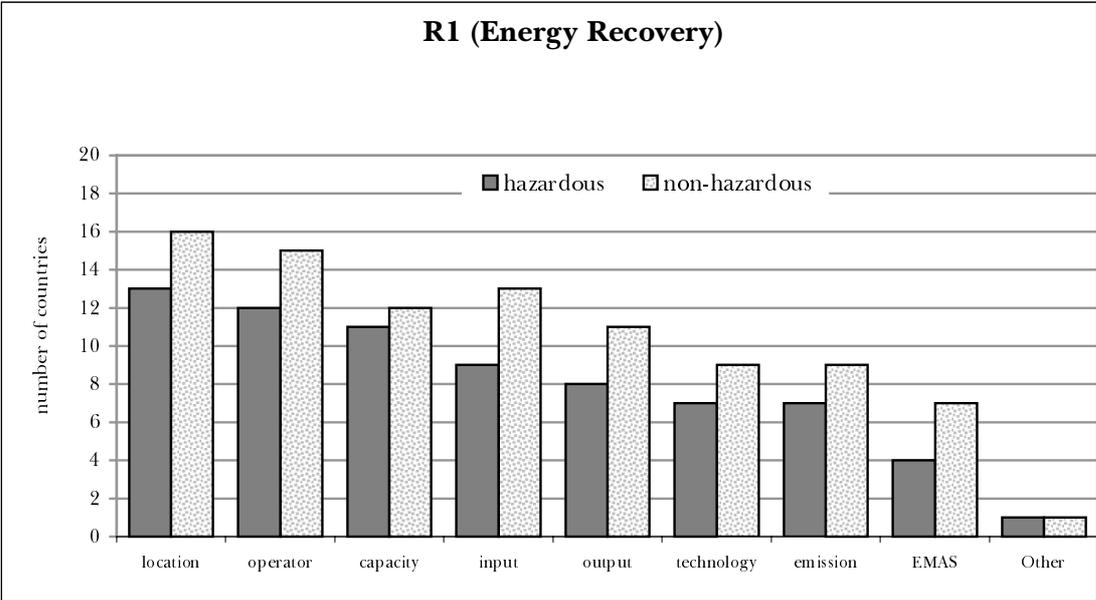
For the construction of the catalogue it is important to know, which information about waste management facilities for hazardous and non-hazardous waste realistically can be obtained by NRCs. In the questionnaire the *required information* was divided as follows:

- Qu 1: location of the facility
- Qu 2: information about the operator
- Qu 3: capacity (i.e. available disposal volume for landfills)
- Qu 4: waste flow data – input
- Qu 5: waste flow data – output
- Qu 6: technologies used
- Qu 7: emissions to air and water
- Qu 8: environmental management system
- Qu 9: other.

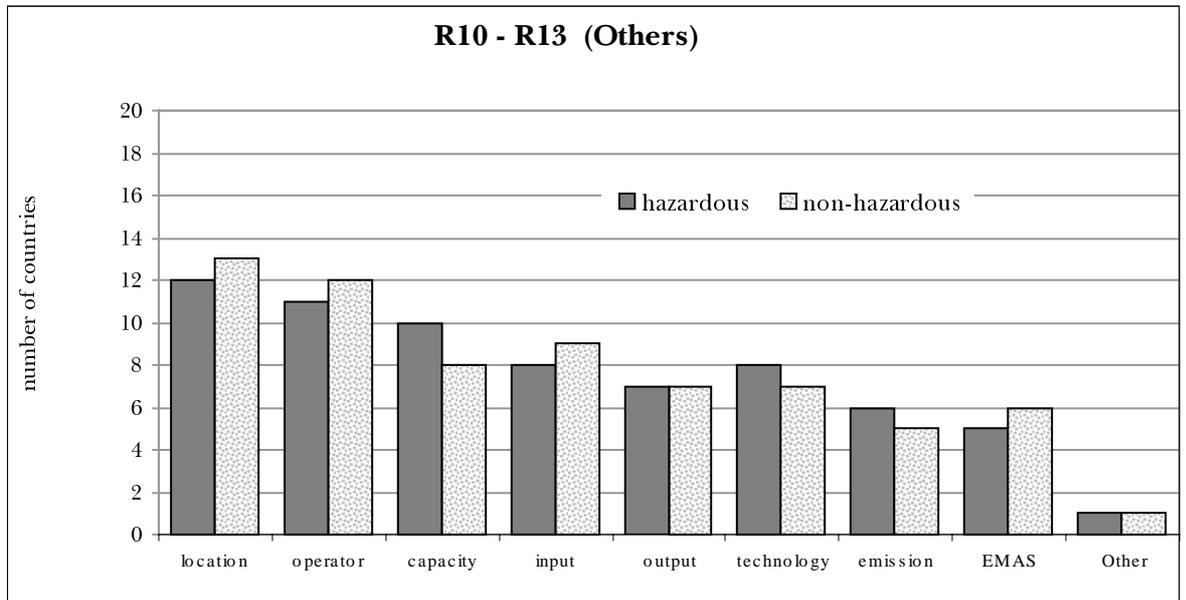
As already mentioned, all 18 EEA member countries returned the questionnaire. As far as the 3 Belgium regions Brussels, Flanders and Wallonia answered separately, 20 questionnaires were evaluated. The following graphs show, how many of these 20 countries/regions are able to deliver data on the specific question. Of course countries, which replied that they have no facilities of a special category were not included in the evaluations. For more detailed information see Annex 2.

The figures show, that nearly all countries can deliver information about the location (Qu1) and the operator of a facility (Qu2). Furthermore, most countries are able to give information about the capacity of the facilities in operation in their countries (Qu3). Other information (Qu4 to Qu9) seems to be less available, but this depends on the kind of facility and on the country. Italy for example is not allowed to give information on the name and the address of facilities for non-hazardous waste to third parties because of national data protection laws.

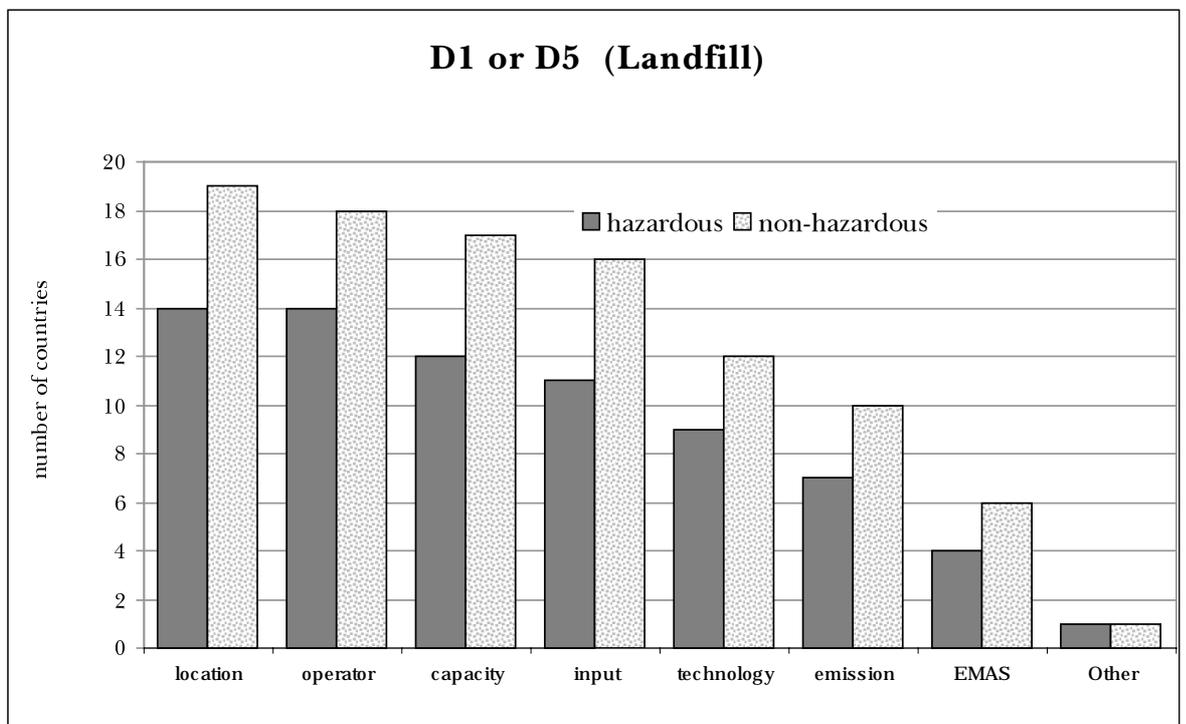
**Deliverable information for recovery facilities for hazardous and non-hazardous waste**



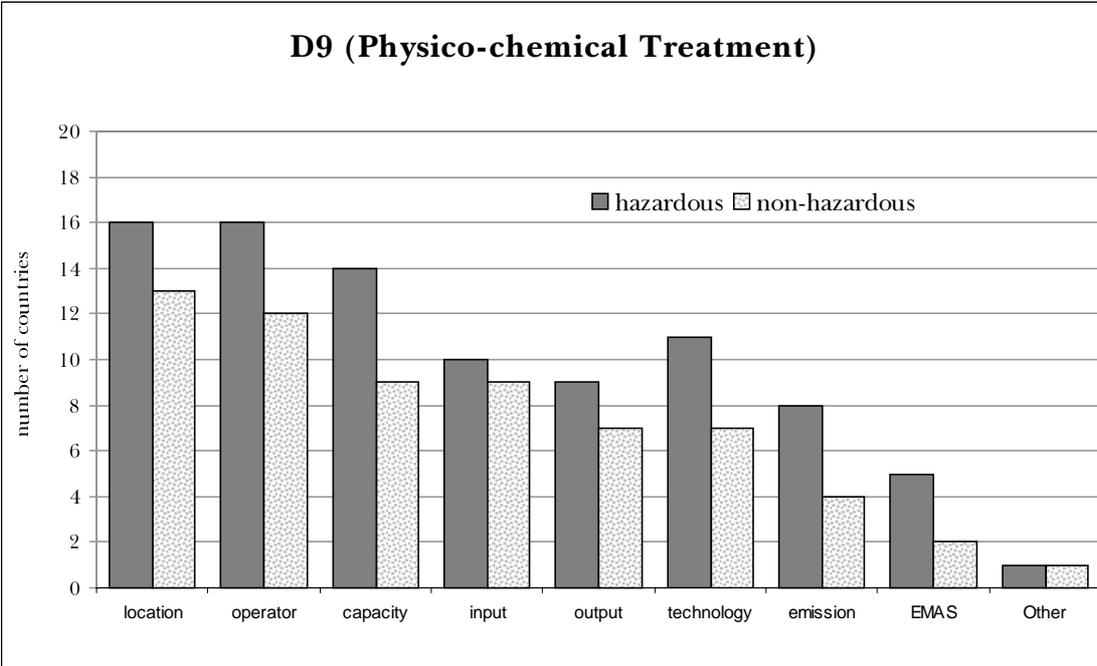
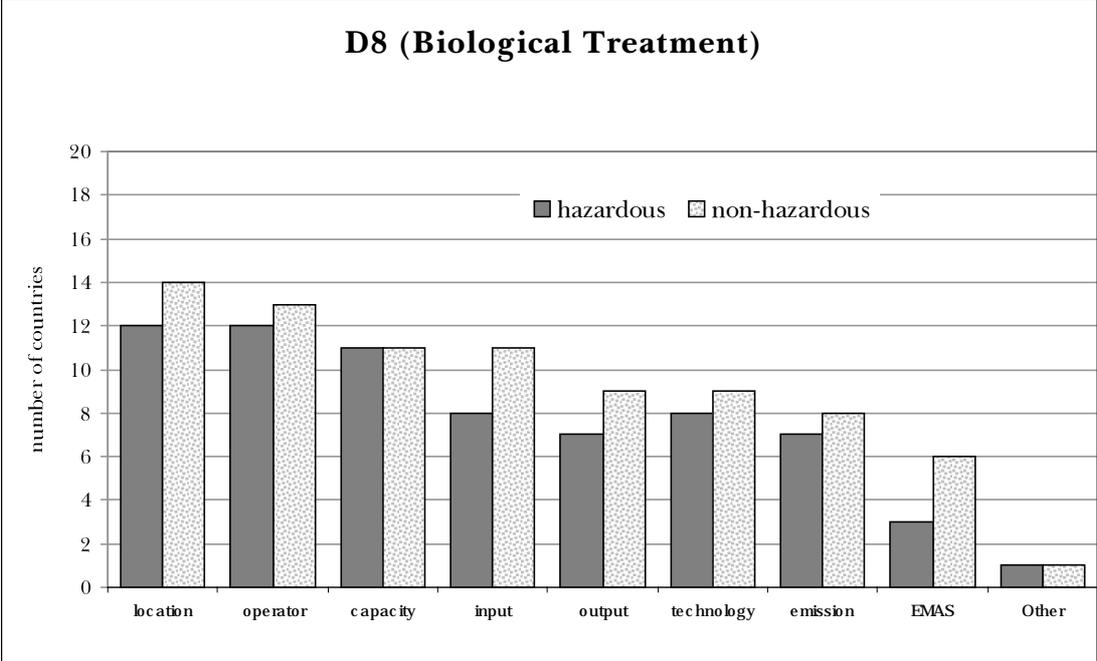
**Deliverable information for *recovery* facilities for hazardous and non-hazardous waste (continued)**



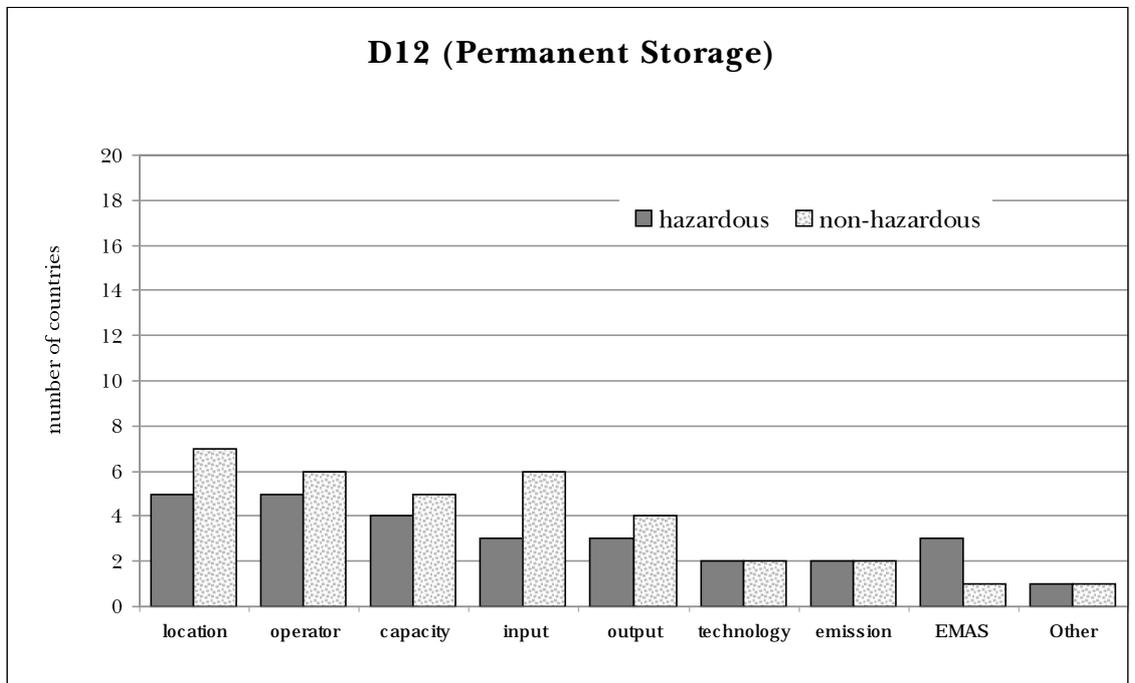
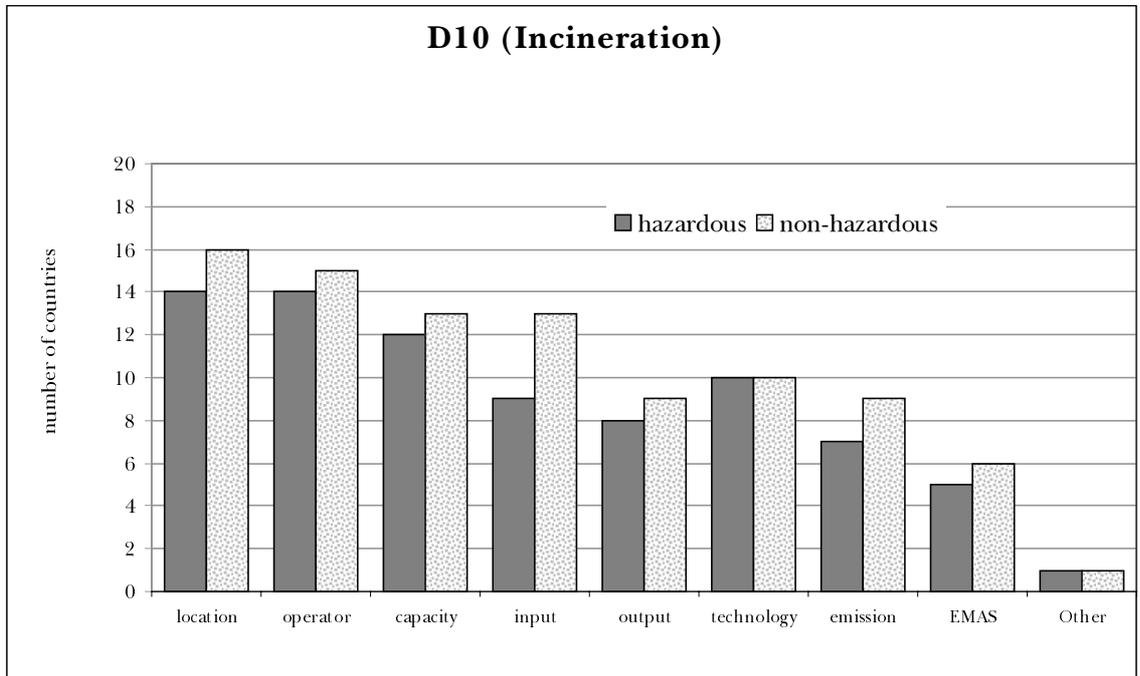
**Deliverable information for *disposal* facilities for hazardous and non-hazardous waste**



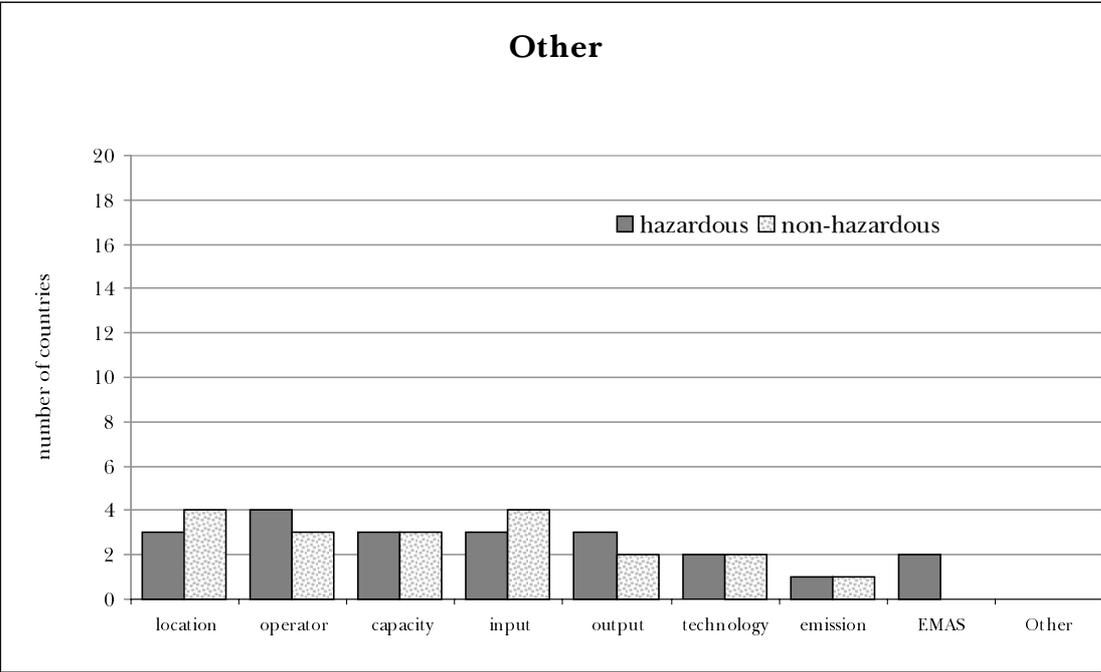
**Deliverable information for *disposal* facilities for hazardous and non-hazardous waste (continued)**



**Deliverable information for *disposal* facilities for hazardous and non-hazardous waste (continued)**



Deliverable information for *disposal* facilities for hazardous and non-hazardous waste (continued)



## 6. Conclusions

All 18 EEA member countries returned the questionnaire. This gives a 100 % return rate and thus a very good geographical coverage. The evaluation of the returned questionnaires shows that the countries will be able to deliver information on recovery and disposal facilities for hazardous as well as for non-hazardous waste. As the catalogue in future can be used as a tool for the Member States to facilitate their reporting obligations to the Commission the information collection activities should first concentrate on recovery and disposal facilities for hazardous waste.<sup>1</sup> The collected information should be used as first input into the catalogue.

It is also apparent from the survey that in nearly all countries information about the location of a facility and the operator could be obtained. Furthermore, most NRCs seem to be able to give information about the capacity and waste flow data of the facilities in operation in their country. All other information seems to be less available. In cases, when the countries did not give any information on specific types of facilities that could either mean that there exist no such facilities or that there is no information available.

In order to achieve an input level as high as possible covering nearly all of the member countries a step-by-step procedure seems to achieve the best results. In the first step a core set of information should be defined. The core set of information should cover that information which is available from all member countries. According to the results of the questionnaires, it should comprise the following parameters:

- **Company (operator)**

Name

Address, NUTS-code

Company type

- **Facility**

**Type<sup>2</sup>**

Waste disposal facilities: classification according to Annex IIA  
'Disposal operations' of Council Directive 75/442/EEC

Waste recovery facilities: classification according to Annex IIB  
'Recovery operations' of Council Directive 75/442/EEC

**Location**

Address of site, NUTS-code

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<sup>1</sup> In the meantime the ETC/W already started collecting data on recovery and disposal facilities for hazardous waste in EEA member countries.

<sup>2</sup> Due to the lack of a common understanding of R/D-codes at present, guidelines will have to be developed.

### **Capacity**

For landfills: total and available disposal volume in m<sup>3</sup>, for other recovery and disposal facilities: total capacity (according to a permit) in tonnes per year

### **Waste**

Waste types approved for handling in the facility according to the European Waste Catalogue (EWC)<sup>3</sup>

The core set of information should be the basis for data collection in all EEA member countries and the first data input into the catalogue. The concept of the catalogue and the data model make it possible to integrate additional parameters at different stages of the construction process. The extension process can occur step by step as well and should cover the needs of the involved users.

This extended data set should be worked out carefully with respect to the fact that the information must be accessible in at least the majority of the member countries to give a realistic overview on the situation in the European Community. The results of the questionnaires show that such an extended set could include information on the following topics:

- Waste flow
- Technologies used
- Emissions to air and water including information on permits and measured data
- Environmental management systems installed at the facility.

According to the returned questionnaires most of this information could be obtained for recovery and disposal facilities for hazardous as well as for non-hazardous waste. However, the collection of extended information on waste management facilities surely will be a long-term activity and has to be coordinated with relevant European institutions. In this process the objectives and purposes of the extension of the catalogue have to be defined carefully. Most Member States agree that the catalogue can be a useful tool to contribute to the reporting obligations according to EU waste legislation. To fulfil this purpose properly a common understanding of used classifications, e.g. R/D-codes and waste codes, is a prerequisite. As stated above, this is at the moment not the case and must be improved in future by developing guidelines.

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<sup>3</sup> It has to be clarified, if the Member States will actually be able to deliver the information according to the European Waste Catalogue (EWC).

## **Annex 1: Questionnaire on the availability of data on waste management facilities**

## Questionnaire on the Availability of Data on Waste Management Facilities

**Country:**

**Contact:**

Institution: ...  
 Name of contact person: ...  
 Address: ...  
 Tel/Fax/E-mail: ...

1. Does a database on waste management facilities exist in your country?

no

yes → Please send us by post or e-mail a short description or report, if already available, of your database concept and the database contents!

2. What other sources of information about waste management facilities are available in your country?

national waste management plan/s or report/s

provincial/regional/local authority waste management plan/s or report/s

other (please specify):

.....

3. What kind of data on waste management facilities are available in your country?

By 'availability' is meant that the data are available from national, provincial or regional competent authorities.

Please use: y ... yes n ... no s ... some

<b>Availability of Data on Waste <i>Disposal</i> Facilities Related to Directive 75/442/EEC</b>											
Kind of Information	hazardous waste						non-hazardous waste				
	Incineration (D10)	Physico-chemical treatment (D9)	Biological treatment (D8)	Landfill (D1 or D5)	Permanent storage (D12)	Other (please specify):	Incineration (D10)	Physico-chemical treatment (D9)	Biological treatment (D8)	Landfill (D1 or D5)	Permanent storage (D12)
Location											
Information about the operator (e.g. name, address, contact person)											
Capacity											
Waste flow data - input											
Waste flow data - output											
Technologies used											
Emissions to air and water (e.g. permits, monitoring data)											
Environmental management system acc. to Council Regulation 1836/93 (EMAS), ISO 14000, BS7750 etc.											
Other (please specify):											

<b>Availability</b> of Data on Waste <b>Recovery</b> Facilities Related to Directive 75/442/EEC						
Kind of Information	hazardous waste			non-hazardous waste		
	Energy recovery (R1)	Material recovery (R2 - R9)	Others (R10 - R13)	Energy recovery (R1)	Material recovery (R2 - R9)	Others (R10 - R13)
Location						
Information about the operator (e.g. name, address, contact person)						
Capacity						
Waste flow data - input						
Waste flow data - output						
Technologies used						
Emissions to air and water (e.g. permits, monitoring data)						
Environmental management system acc. to Council Regulation 1836/93 (EMAS), ISO 14000, BS 7750 etc.						
Other (please specify):						

4. What kind of data on waste management facilities can be obtained by NRCs?  
This means that the data should be deliverable to ETC/W within a period of 6-8 months.

Please use: y ... yes n ... no s ... some

<b>Deliverable</b> Data to ETC/W on Waste <b>Disposal</b> Facilities Related to Directive 75/442/EEC												
Kind of Information	hazardous waste						non-hazardous waste					
	Incineration (D10)	Physico-chemical treatment (D9)	Biological treatment (D8)	Landfill (D1 or D5)	Permanent storage (D12)	Other (please specify):	Incineration (D10)	Physico-chemical treatment (D9)	Biological treatment (D8)	Landfill (D1 or D5)	Permanent storage (D12)	Other (please specify):
Location												
Information about the operator (e.g. name, address, contact person)												
Capacity												
Waste flow data - input												
Waste flow data - output												
Technologies used												
Emissions to air and water (e.g. permits, monitoring data)												
Environmental management system acc. to Council Regulation 1836/93 (EMAS), ISO 14000, BS 7750 etc.												
Other (please specify):												

<b>Deliverable</b> Data to ETC/W on Waste <b>Recovery</b> Facilities Related to Directive 75/442/EEC						
Kind of Information	hazardous waste			non-hazardous waste		
	Energy recovery (R1)	Material recovery (R2 - R9)	Others (R10 - R13)	Energy recovery (R1)	Material recovery (R2 - R9)	Others (R10 - R13)
Location						
Information about the operator (e.g. name, address, contact person)						
Capacity						
Waste flow data - input						
Waste flow data - output						
Technologies used						
Emissions to air and water (e.g. permits, monitoring data)						
Environmental management system acc. to Council Regulation 1836/93 (EMAS), ISO 14000, BS 7750 etc.						
Other (please specify):						

5. The following data are necessary for the elaboration of the "EU-State of Environment Report 1998" prepared by the EEA, special emphasis being placed on the data on incineration and landfilling. Please fill in the missing data and check the given figures.

<b>Data for the "EU-State of Environment Report 1998"</b>								
<i>Incineration Plants</i>	Waste management facilities in operation				Treatment price in ECU (excl. VAT)			Waste Tax *
	Number	Total capacity in 1,000 t/y	Remaining capacity in 1,000 t/y	Input in 1,000 t l.y.a.: 1996	Min	Max	Average	
<b>Hazardous waste</b>								
Incineration plants with energy recovery								
Incineration plants without energy recovery								
<b>Non-hazardous waste</b>								
Incineration plants with energy recovery								
Incineration plants without energy recovery								

\* Please use: y ...yes n ...no

l.y.a. .... latest year available

Data for the "EU-State of Environment Report 1998"							
Landfills	No.	Capacity in 1,000 t **	Input in 1,000 t in 1995 or l.y.a.	Treatment price in ECU (excl. VAT)			Waste Tax *
				Min	Max	Average	
<b>Licensed *** landfills in operation</b>							
<b>for non-hazardous waste</b>							
- of which for predominantly municipal waste							
- of which with leachate collection system							
- of which for other non-hazardous waste							
- of which with leachate collection system							
<b>for hazardous waste</b>							
- of which with leachate collection system							
<b>for inert waste</b>							
<b>Unlicensed landfills in operation</b>							
<b>for non-hazardous waste</b>							
- of which for predominantly municipal waste							
<b>for hazardous waste</b>							
<b>for inert waste</b>							
<b>Planned landfills</b>							
<b>for non-hazardous waste</b>							
- of which for predominantly municipal waste							
<b>for hazardous waste</b>							
<b>for inert waste</b>							

\* Please use: y ...yes n ...no

l.y.a. .... latest year available

\*\* Capacity refers to the remaining disposal volume (=permitted volume minus already landfilled volume).

Please give data in tonnes, if possible. Otherwise please state the suitable conversion factor.

We suggest 1.3 m<sup>3</sup> per ton for municipal and mixed industrial waste and 0.7 m<sup>3</sup> per ton for inert waste.

\*\*\* Licensed means, that the landfills have a formal permit granted by authorities. Normally such landfills have permitted maximum volume and advanced control systems, e.g. liners, leachate collection.

Data Sources:

OECD Environmental Data, Compendium 1997

ISWA Energy from Waste State-of-the-Art Report, Copenhagen 1997

Dobris +3-Report

**Remarks:** Please provide any additional information, comments, or available reports, etc. to help interpreting the data!

**Many thank for your contribution!**

Please address any questions and return this questionnaire to:  
Patrizia Dreier  
C/o Federal Environment Agency – Austria, Southern Branch Office  
Siriusstraße 3  
A-9020 Klagenfurt  
Austria  
Tel: +43-46334150-22  
Fax: +43-463-34150-10  
E-mail: DREIER@UBAVIE.GV.AT

## **Annex 2: Evaluation of the questions three and four of the questionnaire**

3. What kind of data on waste management facilities is available in your country?
4. What kind of data on waste management facilities can be obtained by NRCs?

### **Annex 2.1**

**Data sorted by R/D-Codes**

### **Annex 2.2**

**Data sorted by countries**

Note: In the following tables those data that are classified as ‘available’ (Question 3) are described with a letter system. For data classified as ‘deliverable’ by NRCs (Question 4), the corresponding table boxes are marked with grey colour.

## Annex 2.1: Data sorted by R/D-Codes

Availability of data and deliverable data on waste recovery facilities (sorted by r-codes)

Kind of information	Energy Recovery (R1)																	
	HAZARDOUS WASTE									NON-HAZARDOUS WASTE								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
<b>EU-Member States</b>																		
Austria	y	y	y	y	y	y	y	y	nd	y	y	y	y	y	y	y	y	nd
Belgium – Flanders	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belgium – Brussels	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Belgium – Wallonia	y	y	y	y	y	y	s	n	nd	s	s	s	s	s	s	s	n	nd
Denmark	y	y	s	s	s	s	s	nd	nd	y	y	s	s	s	s	s	s	nd
Finland	y	y	y	y	y	y	y	s	nd	y	y	y	y	y	y	y	n	nd
France	y	y	y	y	nd	y	nd	nd	nd	y	y	nd	y	y	nd	nd	nd	nd
Germany	y	y	y	n	n	nd	n	n	s	s	s	s	nd	nd	nd	nd	n	s
Greece	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ireland	y	y	s	s	s	s	s	y	nd	y	y	nd	s	s	nd	s	s	nd
Italy	y	y	y	y	n	y	y	y	y	y	y	y	y	n	y	y	y	y
Luxembourg	0	0	0	0	0	0	0	0	0	y	y	y	y	y	y	y	y	nd
The Netherlands	0	0	0	0	0	0	0	0	0	y	y	y	y	y	y	y	y	nd
Portugal	nd	nd	nd	nd	nd	nd	nd	nd	nd	y	y	y	y	y	y	y	n	nd
Spain	y	y	y	y	y	y	y	y	nd	y	y	y	y	nd	s	y	y	nd
Sweden	y	s	y	s	s	s	s	nd	nd	y	y	y	y	y	y	y	s	nd
United Kingdom	s	s	s	s	s	s	s	s	nd	s	s	s	s	s	s	s	s	nd
<b>EEA member countries outside the EU</b>																		
Iceland	y	y	y	y	y	y	s	n	nd	y	y	y	s	s	y	s	n	nd
Liechtenstein	0	0	0	0	0	0	0	0	0	nd	nd	nd	nd	nd	nd	nd	nd	nd
Norway	y	y	y	y	y	s	y	n	nd	y	y	y	y	y	s	y	n	nd

y...yes n...no s...some 0...no such facilities nd...no data (=no information given in the questionnaire)

### Kind of information

- 1 ... Location
- 2 ... Information about the operator  
(e.g. name, address, contact person)
- 3 ... Capacity
- 4 ... Waste flow data – input
- 5 ... Waste flow data – output
- 6 ... Technologies used
- 7 ... Emissions to air and water (e.g. permits, monitoring data)
- 8 ... Environmental management system acc. to  
Council Regulation 1836/93 (EMAS), ISO 14000 etc.
- 9 ... Other

Availability of data and deliverable data on waste recovery facilities (sorted by r-codes)

Kind of information	Material Recovery (R2 - R9)																	
	HAZARDOUS WASTE									NON-HAZARDOUS WASTE								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
<b>EU-Member States</b>																		
Austria	y	y	y	y	y	y	y	y	nd	y	y	y	y	y	y	y	y	nd
Belgium – Flanders	y	y	y	y	y	y	y	n	nd	y	y	y	y	y	y	y	n	nd
Belgium – Brussels	y	y	y	y	y	y	s	nd	nd	y	s	s	s	s	nd	s	nd	nd
Belgium – Wallonia	y	y	y	y	y	y	s	n	nd	s	s	s	s	s	s	s	n	nd
Denmark	y	y	s	s	s	s	s	nd	nd	y	y	s	s	s	s	s	s	nd
Finland	y	y	y	y	y	y	y	s	nd	y	y	y	y	y	y	y	n	nd
France	y	y	y	y	nd	y	nd	nd	nd	y	y	nd	y	y	nd	nd	nd	nd
Germany	y	y	y	n	n	nd	n	n	s	s	s	s	n	n	nd	n	n	s
Greece	y	y	y	y	y	y	y	nd	nd	y	y	y	y	y	y	y	nd	nd
Ireland	y	y	s	s	s	s	s	s	nd	y	y	nd	s	s	nd	s	s	nd
Italy	y	y	y	y	n	y	y	y	y	y	y	y	y	n	y	y	y	y
Luxembourg	y	y	y	y	y	y	y	y	nd	y	y	y	y	y	y	y	y	nd
The Netherlands	y	y	n	n	n	s	s	nd	nd	y	y	s	s	s	y	n	n	nd
Portugal	y	y	y	s	s	y	s	n	nd	s	s	s	s	s	s	s	n	nd
Spain	y	y	s	s	s	s	s	s	nd	y	y	y	y	nd	y	y	y	nd
Sweden	y	s	y	s	s	s	s	nd	nd	s	s	s	s	s	s	s	s	nd
United Kingdom	s	s	s	s	s	s	s	s	nd	s	s	s	s	s	s	s	s	nd
<b>EEA member countries outside the EU</b>																		
Iceland	0	0	0	0	0	0	0	0	0	y	y	y	s	s	s	s	n	nd
Liechtenstein	0	0	0	0	0	0	0	0	0	nd	nd	nd	nd	nd	nd	nd	nd	nd
Norway	y	y	s	s	s	s	s	n	nd	y	y	s	s	s	s	s	s	nd

y...yes n...no s...some 0...no such facilities nd...no data (=no information given in the questionnaire)

**Kind of information**

1 ... Location

2 ... Information about the operator  
(e.g. name, address, contact person)

3 ... Capacity

4 ... Waste flow data – input

5 ... Waste flow data – output

6 ... Technologies used

7 ... Emissions to air and water (e.g. permits, monitoring data)

8 ... Environmental management system acc. to  
Council Regulation 1836/93 (EMAS), ISO 14000 etc.

9 ... Other

Availability of data and deliverable data on waste recovery facilities (sorted by r-codes)

Kind of information	Others (R10 - R13)																	
	HAZARDOUS WASTE									NON-HAZARDOUS WASTE								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
<b>EU-Member States</b>																		
Austria	y	y	y	y	y	y	y	y	nd	y	y	y	y	y	y	y	y	nd
Belgium – Flanders *	y	y	y	y	y	y	y	n	nd	y	y	y	y	y	y	y	n	nd
Belgium – Brussels	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Belgium – Wallonia	y	y	nd	y	y	nd												
Denmark	y	y	s	s	s	s	s	nd	nd	y	y	s	s	s	s	s	s	nd
Finland	y	y	y	y	y	y	y	s	nd	y	y	y	y	y	y	y	n	nd
France	y	y	y	y	nd	y	nd	nd	nd	y	y	nd	y	y	nd	nd	nd	nd
Germany	y	y	y	n	n	nd	n	n	s	s	s	s	n	n	nd	n	n	s
Greece	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ireland	n	n	n	n	n	n	n	s	nd	y	y	nd	s	s	nd	s	s	nd
Italy **	y	y	y	y	n	y	y	y	y	y	y	y	y	n	y	y	y	y
Luxembourg	y	y	y	y	y	y	y	y	nd	s	s	s	s	s	s	s	s	nd
The Netherlands	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Portugal	y	y	y	y	y	y	s	n	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Spain	s	y	s	s	s	s	s	s	nd	y	y	y	y	nd	s	nd	nd	nd
Sweden	y	s	y	s	s	s	s	nd	nd	s	s	s	s	s	s	s	s	nd
United Kingdom	s	s	s	s	s	s	s	s	nd	s	s	s	s	s	s	s	s	nd
<b>EEA member countries outside the EU</b>																		
Iceland	0	0	0	0	0	0	0	0	0	y	y	y	y	y	y	y	n	nd
Liechtenstein	0	0	0	0	0	0	0	0	0	nd	nd	nd	nd	nd	nd	nd	nd	nd
Norway	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

y...yes n...no s...some 0...no such facilities nd...no data (=no information given in the questionnaire)

\* ... R10 Composting, R13 Storage of wastes before material recovery \*\* ... Sorting facilities for municipal waste

**Kind of information**

- 1 ... Location
- 2 ... Information about the operator  
(e.g. name, address, contact person)
- 3 ... Capacity
- 4 ... Waste flow data – input
- 5 ... Waste flow data – output
- 6 ... Technologies used
- 7 ... Emissions to air and water (e.g. permits, monitoring data)
- 8 ... Environmental management system acc. to  
Council Regulation 1836/93 (EMAS), ISO 14000 etc.
- 9 ... Other

Availability of data and deliverable data on waste disposal facilities (sorted by d-codes)

Kind of information	Landfill (D1 or D5)																	
	HAZARDOUS WASTE									NON-HAZARDOUS WASTE								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
<b>EU-Member States</b>																		
Austria	0	0	0	0		0	0	0	0	y	y	y	y		y	y	y	nd
Belgium – Flanders	y	y	y	y		y	y	n	nd	y	y	y	y		y	y	n	nd
Belgium – Brussels	0	0	0	0		0	0	0	0	0	0	0	0		0	0	0	0
Belgium – Wallonia	y	y	y	y		nd	s	n	nd	y	y	y	y		y	s	n	nd
Denmark	y	y	y	y		y	y	nd	nd	y	y	y	y		s	s	s	nd
Finland	y	y	y	y		y	y	s	nd	y	y	y	y		y	y	s	nd
France	y	y	y	y		y	nd	nd	nd	y	y	nd	y		nd	nd	nd	nd
Germany	y	y	y	n		nd	n	n	s	s	s	s	n		nd	n	n	s
Greece	0	0	0	0		0	0	0	0	y	y	y	y		y	s	nd	nd
Ireland	y	y	y	y		y	y	y	nd	y	y	s	y		n	s	nd	nd
Italy	y	y	y	y		y	y	y	y	y	y	y	y		y	y	y	y
Luxembourg	0	0	0	0		0	0	0	0	y	y	y	y		y	y	y	nd
The Netherlands	y	y	y	y		y	y	y	nd	y	y	y	y		y	s	s	nd
Portugal	y	y	n	s		y	n	n	nd	y	y	y	y		y	s	n	nd
Spain	y	y	s	s		s	nd	s	nd	y	y	y	y		y	y	y	nd
Sweden	y	s	y	s		s	s	nd	nd	s	s	s	s		s	s	s	nd
United Kingdom	s	s	s	s		s	s	s	nd	s	s	s	s		s	s	s	nd
<b>EEA member countries outside the EU</b>																		
Iceland	0	0	0	0		0	0	0	0	y	y	y	s		y	s	n	nd
Liechtenstein	0	0	0	0		0	0	0	0	y	y	y	y		n	n	n	nd
Norway	y	y	s	y		s	y	n	nd	y	y	s	s		s	s	n	nd

y...yes n...no s...some 0...no such facilities nd...no data (=no information given in the questionnaire)

**Kind of information**

1 ... Location

2 ... Information about the operator  
(e.g. name, address, contact person)

3 ... Capacity

4 ... Waste flow data – input

5 ... Waste flow data – output

6 ... Technologies used

7 ... Emissions to air and water (e.g. permits, monitoring data)

8 ... Environmental management system acc. to  
Council Regulation 1836/93 (EMAS), ISO 14000 etc.

9 ... Other

Availability of data and deliverable data on waste disposal facilities (sorted by d-codes)

Kind of information	Biological treatment (D8)																	
	HAZARDOUS WASTE									NON-HAZARDOUS WASTE								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
<b>EU-Member States</b>																		
Austria	y	y	y	y	y	y	y	y	nd	y	y	y	y	y	y	y	y	nd
Belgium – Flanders	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belgium – Brussels	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belgium – Wallonia	y	y	y	y	y	y	s	n	nd	s	s	s	s	s	s	s	n	nd
Denmark	y	y	y	y	y	y	s	nd	nd	0	0	0	0	0	0	0	0	0
Finland	y	y	y	y	y	y	y	n	nd	y	y	y	y	y	y	y	n	nd
France	y	y	y	y	nd	y	nd	nd	nd	y	y	nd	y	y	nd	nd	nd	nd
Germany	y	y	y	n	n	nd	n	n	s	s	s	s	n	n	nd	n	n	s
Greece	0	0	0	0	0	0	0	0	0	y	y	y	y	y	y	y	nd	nd
Ireland	y	y	y	y	y	y	y	s	nd	y	y	nd	y	nd	nd	nd	nd	nd
Italy	y	y	y	y	n	y	y	y	y	y	y	y	y	n	y	y	y	y
Luxembourg	0	0	0	0	0	0	0	0	0	y	y	y	y	y	y	s	y	nd
The Netherlands	y	y	s	n	n	y	y	nd	nd	y	y	y	s	s	y	s	s	nd
Portugal	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Spain	nd	nd	nd	nd	nd	nd	nd	nd	nd	y	y	nd	nd	nd	y	y	y	nd
Sweden	y	s	y	s	s	s	s	nd	nd	s	s	s	s	s	s	s	s	nd
United Kingdom	s	s	s	s	s	s	s	s	nd	s	s	s	s	s	s	s	s	nd
<b>EEA member countries outside the EU</b>																		
Iceland	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Liechtenstein	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Norway	y	y	s	y	y	s	y	n	nd	y	y	s	s	s	s	s	n	nd

y...yes n...no s...some 0...no such facilities nd...no data (=no information given in the questionnaire)

**Kind of information**

- 1 ... Location
- 2 ... Information about the operator  
(e.g. name, address, contact person)
- 3 ... Capacity
- 4 ... Waste flow data – input
- 5 ... Waste flow data – output
- 6 ... Technologies used
- 7 ... Emissions to air and water (e.g. permits, monitoring data)
- 8 ... Environmental management system acc. to  
Council Regulation 1836/93 (EMAS), ISO 14000 etc.
- 9 ... Other

Availability of data and deliverable data on waste disposal facilities (sorted by d-codes)

Kind of information	Physico-chemical treatment (D9)																	
	HAZARDOUS WASTE									NON-HAZARDOUS WASTE								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
<b>EU-Member States</b>																		
Austria	y	y	y	y	y	y	y	y	nd	y	y	y	y	y	y	y	y	nd
Belgium – Flanders	y	y	y	y	y	y	y	n	nd	y	y	y	y	y	y	y	n	nd
Belgium – Brussels	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belgium – Wallonia	y	y	y	y	y	y	s	n	nd	s	s	s	s	s	s	s	n	nd
Denmark	y	y	y	y	y	y	y	nd	nd	y	y	y	y	y	s	s	s	nd
Finland	y	y	y	y	y	y	y	n	nd	y	y	y	y	y	y	y	n	nd
France	y	y	y	y	nd	y	nd	nd	nd	y	y	nd	y	y	nd	nd	nd	nd
Germany	y	y	y	n	n	nd	n	n	s	s	s	s	n	n	nd	n	n	s
Greece	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ireland	y	y	s	n	n	s	n	s	nd	y	y	n	y	nd	nd	nd	nd	nd
Italy	y	y	y	y	n	y	y	y	y	y	y	y	y	n	y	y	y	y
Luxembourg	y	y	y	y	y	y	y	y	nd	0	0	0	0	0	0	0	0	0
The Netherlands	s	s	s	nd	nd	nd	nd	nd	nd	0	0	0	0	0	0	0	0	0
Portugal	y	y	y	s	s	y	s	n	nd	y	y	y	s	s	y	s	n	nd
Spain	y	y	s	s	s	s	s	s	nd	y	y	nd	nd	nd	y	nd	nd	nd
Sweden	y	s	y	s	s	s	s	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
United Kingdom	s	s	s	s	s	s	s	s	nd	s	s	s	s	s	s	s	s	nd
<b>EEA member countries outside the EU</b>																		
Iceland	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Liechtenstein	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Norway	y	y	s	y	y	s	y	n	nd	y	y	s	s	s	s	s	n	nd

y...yes n...no s...some 0...no such facilities nd...no data (=no information given in the questionnaire)

**Kind of information**

1 ... Location

2 ... Information about the operator  
(e.g. name, address, contact person)

3 ... Capacity

4 ... Waste flow data – input

5 ... Waste flow data – output

6 ... Technologies used

7 ... Emissions to air and water (e.g. permits, monitoring data)

8 ... Environmental management system acc. to  
Council Regulation 1836/93 (EMAS), ISO 14000 etc.

9 ... Other

Availability of data and deliverable data on waste disposal facilities (sorted by d-codes)

Kind of information	Incineration (D10)																	
	HAZARDOUS WASTE									NON-HAZARDOUS WASTE								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
<b>EU-Member States</b>																		
Austria	y	y	y	y	y	y	y	y	nd	y	y	y	y	y	y	y	y	nd
Belgium – Flanders	y	y	y	y	y	y	y	n	nd	y	y	y	y	y	y	y	n	nd
Belgium – Brussels	y	y	y	y	s	y	s	nd	nd	y	y	y	s	s	y	s	nd	nd
Belgium – Wallonia	y	y	y	y	y	y	s	n	nd	y	y	y	y	y	y	y	n	nd
Denmark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Finland	y	y	y	y	y	y	y	s	nd	y	y	y	y	y	y	y	n	nd
France	y	y	y	y	nd	y	nd	nd	nd	y	y	nd	y	y	nd	nd	nd	nd
Germany	y	y	y	n	n	nd	n	n	s	y	y	y	y	n	nd	n	n	s
Greece	y	y	y	y	nd	y	s	nd	nd	0	0	0	0	0	0	0	0	0
Ireland	y	y	n	n	n	s	n	y	nd	y	y	n	y	nd	n	y	y	nd
Italy	y	y	y	y	n	y	y	y	y	y	y	y	y	n	y	y	y	y
Luxembourg	0	0	0	0	0	0	0	0	0	y	y	y	y	y	y	y	y	nd
The Netherlands	y	y	y	y	y	y	y	y	nd	y	y	y	y	y	y	y	y	nd
Portugal	y	y	y	s	s	s	s	n	nd	y	y	y	y	y	y	y	n	nd
Spain	y	y	s	s	s	s	s	s	nd	y	y	y	y	nd	y	y	y	nd
Sweden	y	s	y	s	s	s	s	nd	nd	0	0	0	0	0	0	0	0	0
United Kingdom	s	s	s	s	s	s	s	s	nd	s	s	s	s	s	s	s	s	nd
<b>EEA member countries outside the EU</b>																		
Iceland	0	0	0	0	0	0	0	0	0	y	y	y	s	s	y	s	n	nd
Liechtenstein	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Norway	y	y	y	y	y	s	y	n	nd	y	y	s	s	s	s	s	n	nd

y...yes n...no s...some 0...no such facilities nd...no data (=no information given in the questionnaire)

**Kind of information**

- 1 ... Location
- 2 ... Information about the operator  
(e.g. name, address, contact person)
- 3 ... Capacity
- 4 ... Waste flow data – input
- 5 ... Waste flow data – output
- 6 ... Technologies used
- 7 ... Emissions to air and water (e.g. permits, monitoring data)
- 8 ... Environmental management system acc. to  
Council Regulation 1836/93 (EMAS), ISO 14000 etc.
- 9 ... Other

Availability of data and deliverable data on waste disposal facilities (sorted by d-codes)

Kind of information	Permanent storage (D12)																	
	HAZARDOUS WASTE									NON-HAZARDOUS WASTE								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
<b>EU-Member States</b>																		
Austria	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belgium – Flanders	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belgium – Brussels	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belgium – Wallonia	0	0	0	0	0	0	0	0	0	s	s	s	n	nd	nd	nd	nd	nd
Denmark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Finland	0	0	0	0	0	0	0	0	0	y	y	y	y	y	y	n	n	nd
France	y	y	y	y	nd	y	nd	nd	nd	y	y	nd	y	y	nd	nd	nd	nd
Germany	y	y	y	n	n	nd	n	n	s	n	n	n	n	n	nd	n	n	s
Greece	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ireland	n	n	n	n	n	n	n	s	n	y	y	n	y	nd	nd	nd	n	nd
Italy	y	y	y	y	n	y	y	y	y	y	y	y	y	n	y	y	y	y
Luxembourg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The Netherlands	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Portugal	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Spain	y	y	s	s	s	s	nd	s	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Sweden	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
United Kingdom	s	s	s	s	s	s	s	s	nd	s	s	s	s	s	s	s	s	nd
<b>EEA member countries outside the EU</b>																		
Iceland	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Liechtenstein	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Norway	y	y	s	y	y	s	y	n	nd	y	y	s	s	s	s	s	n	nd

y...yes n...no s...some 0...no such facilities nd...no data (=no information given in the questionnaire)

**Kind of information**

1 ... Location

2 ... Information about the operator  
(e.g. name, address, contact person)

3 ... Capacity

4 ... Waste flow data – input

5 ... Waste flow data – output

6 ... Technologies used

7 ... Emissions to air and water (e.g. permits, monitoring data)

8 ... Environmental management system acc. to  
Council Regulation 1836/93 (EMAS), ISO 14000 etc.

9 ... Other

Availability of data and deliverable data on waste disposal facilities (sorted by d-codes)

Kind of information	Other																	
	HAZARDOUS WASTE									NON-HAZARDOUS WASTE								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
<b>EU-Member States</b>																		
Austria	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Belgium – Flanders	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Belgium – Brussels	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belgium – Wallonia	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Denmark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Finland *	y	y	y	y	y	y	y	n	nd	y	y	y	y	y	y	y	n	nd
France	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Germany	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Greece	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Ireland **	s	s	n	n	n	n	n	s	nd	y	y	n	y	nd	nd	nd	nd	nd
Italy	y	y	y	y	n	y	y	y	y	y	y	y	y	n	y	y	y	y
Luxembourg	y	y	y	y	y	y	y	y	nd	y	y	y	y	y	y	y	nd	nd
The Netherlands	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Portugal	y	y	y	y	y	y	s	n	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Spain	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Sweden	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
United Kingdom	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
<b>EEA member countries outside the EU</b>																		
Iceland	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Liechtenstein	0	0	0	0	0	0	0	0	0	nd	nd	nd	nd	nd	nd	nd	nd	nd
Norway	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

y...yes n...no s...some 0...no such facilities nd...no data (=no information given in the questionnaire)

\* ... D2, D4 \*\* ... D6, D7, D13

### Kind of information

- 1 ... Location
- 2 ... Information about the operator  
(e.g. name, address, contact person)
- 3 ... Capacity
- 4 ... Waste flow data – input
- 5 ... Waste flow data – output
- 6 ... Technologies used
- 7 ... Emissions to air and water (e.g. permits, monitoring data)
- 8 ... Environmental management system acc. to  
Council Regulation 1836/93 (EMAS), ISO 14000 etc.
- 9 ... Other

## Annex 2.2: Data sorted by countries

### Availability of data and deliverable data on waste management facilities (sorted by countries)

Kind of information	Austria																		
	HAZARDOUS WASTE									NON-HAZARDOUS WASTE									
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9	
<b>Recovery</b>																			
Energy Recovery (R1)	y	y	y	y	y	y	y	y	nd	y	y	y	y	y	y	y	y	y	nd
Material Recovery (R2-R9)	y	y	y	y	y	y	y	y	nd	y	y	y	y	y	y	y	y	y	nd
Others (R10-R13)	y	y	y	y	y	y	y	y	nd	y	y	y	y	y	y	y	y	y	nd
<b>Disposal</b>																			
Landfill (D1 or D5)	0	0	0	0		0	0	0	0	y	y	y	y		y	y	y	y	nd
Biological treatment (D8)	y	y	y	y	y	y	y	y	nd	y	y	y	y	y	y	y	y	y	nd
Physico-chemical treatment (D9)	y	y	y	y	y	y	y	y	nd	y	y	y	y	y	y	y	y	y	nd
Incineration (D10)	y	y	y	y	y	y	y	y	nd	y	y	y	y	y	y	y	y	y	nd
Permanent storage (D12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Kind of information	Belgium – Flanders																		
	HAZARDOUS WASTE									NON-HAZARDOUS WASTE									
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9	
<b>Recovery</b>																			
Energy Recovery (R1)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Material Recovery (R2-R9)	y	y	y	y	y	y	y	n	nd	y	y	y	y	y	y	y	n	nd	nd
Others (R10-R13)*	y	y	y	y	y	y	y	n	nd	y	y	y	y	y	y	y	n	nd	nd
<b>Disposal</b>																			
Landfill (D1 or D5)	y	y	y	y		y	y	n	nd	y	y	y	y		y	y	n	nd	nd
Biological treatment (D8)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Physico-chemical treatment (D9)	y	y	y	y	y	y	y	n	nd	y	y	y	y	y	y	y	n	nd	nd
Incineration (D10)	y	y	y	y	y	y	y	n	nd	y	y	y	y	y	y	y	n	nd	nd
Permanent storage (D12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

y ...yes n ...no s ...some 0 ...no such facilities nd ...no data (=no information given in the questionnaire)

\* ... R10 Composting, R13 Storage of wastes before material recovery

#### Kind of information

1 ... Location

2 ... Information about the operator  
(e.g. name, address, contact person)

3 ... Capacity

4 ... Waste flow data – input

5 ... Waste flow data – output

6 ... Technologies used

7 ... Emissions to air and water (e.g. permits, monitoring data)

8 ... Environmental management system acc. to  
Council Regulation 1836/93 (EMAS), ISO 14000 etc.

9 ... Other

Availability of data and deliverable data on waste management facilities  
(sorted by countries)

Kind of information	Belgium – Brussels																	
	HAZARDOUS WASTE									NON-HAZARDOUS WASTE								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
<b>Recovery</b>																		
Energy Recovery (R1)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Material Recovery (R2-R9)	y	y	y	y	y	y	s	nd	nd	y	s	s	s	s	nd	s	nd	nd
Others (R10-R13)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
<b>Disposal</b>																		
Landfill (D1 or D5)	0	0	0	0		0	0	0	0	0	0	0	0		0	0	0	0
Biological treatment (D8)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Physico-chemical treatment (D9)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Incineration (D10)	y	y	y	y	s	y	s	nd	nd	y	y	y	s	s	y	s	nd	nd
Permanent storage (D12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kind of information	Belgium – Wallonia																	
	HAZARDOUS WASTE									NON-HAZARDOUS WASTE								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
<b>Recovery</b>																		
Energy Recovery (R1)	y	y	y	y	y	y	s	n	nd	s	s	s	s	s	s	s	n	nd
Material Recovery (R2-R9)	y	y	y	y	y	y	s	n	nd	s	s	s	s	s	s	s	n	nd
Others (R10-R13)	y	y	nd	y	y	nd												
<b>Disposal</b>																		
Landfill (D1 or D5)	y	y	y	y		nd	s	n	nd	y	y	y	y		y	s	n	nd
Biological treatment (D8)	y	y	y	y	y	y	s	n	nd	s	s	s	s	s	s	s	n	nd
Physico-chemical treatment (D9)	y	y	y	y	y	y	s	n	nd	s	s	s	s	s	s	s	n	nd
Incineration (D10)	y	y	y	y	y	y	s	n	nd	y	y	y	y	y	y	y	n	nd
Permanent storage (D12)	0	0	0	0	0	0	0	0	0	s	s	s	n	nd	nd	nd	nd	nd
Other	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

y...yes n...no s...some 0...no such facilities nd...no data (=no information given in the questionnaire)

**Kind of information**

- 1 ... Location
- 2 ... Information about the operator  
(e.g. name, address, contact person)
- 3 ... Capacity
- 4 ... Waste flow data – input
- 5 ... Waste flow data – output
- 6 ... Technologies used
- 7 ... Emissions to air and water (e.g. permits, monitoring data)
- 8 ... Environmental management system acc. to  
Council Regulation 1836/93 (EMAS), ISO 14000 etc.
- 9 ... Other

Availability of data and deliverable data on waste management facilities  
(sorted by countries)

Kind of information	Denmark																	
	HAZARDOUS WASTE									NON-HAZARDOUS WASTE								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
<b>Recovery</b>																		
Energy Recovery (R1)	y	y	s	s	s	s	s	nd	nd	y	y	s	s	s	s	s	s	nd
Material Recovery (R2-R9)	y	y	s	s	s	s	s	nd	nd	y	y	s	s	s	s	s	s	nd
Others (R10-R13)	y	y	s	s	s	s	s	nd	nd	y	y	s	s	s	s	s	s	nd
<b>Disposal</b>																		
Landfill (D1 or D5)	y	y	y	y		y	y	nd	nd	y	y	y	y		s	s	s	nd
Biological treatment (D8)	y	y	y	y	y	y	s	nd	nd	0	0	0	0	0	0	0	0	0
Physico-chemical treatment (D9)	y	y	y	y	y	y	y	nd	nd	y	y	y	y	y	s	s	s	nd
Incineration (D10)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Permanent storage (D12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Finland</b>																		
Kind of information	Finland																	
	HAZARDOUS WASTE									NON-HAZARDOUS WASTE								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
<b>Recovery</b>																		
Energy Recovery (R1)	y	y	y	y	y	y	y	s	nd	y	y	y	y	y	y	y	n	nd
Material Recovery (R2-R9)	y	y	y	y	y	y	y	s	nd	y	y	y	y	y	y	y	n	nd
Others (R10-R13)	y	y	y	y	y	y	y	s	nd	y	y	y	y	y	y	y	n	nd
<b>Disposal</b>																		
Landfill (D1 or D5)	y	y	y	y		y	y	s	nd	y	y	y	y		y	y	s	nd
Biological treatment (D8)	y	y	y	y	y	y	y	n	nd	y	y	y	y	y	y	y	n	nd
Physico-chemical treatment (D9)	y	y	y	y	y	y	y	n	nd	y	y	y	y	y	y	y	n	nd
Incineration (D10)	y	y	y	y	y	y	y	s	nd	y	y	y	y	y	y	y	n	nd
Permanent storage (D12)	0	0	0	0	0	0	0	0	0	y	y	y	y	y	y	n	n	nd
Other*	y	y	y	y	y	y	y	n	nd	y	y	y	y	y	y	y	n	nd

y...yes n...no s...some 0...no such facilities nd...no data (=no information given in the questionnaire)

\* ... D2, D4

**Kind of information**

- 1 ... Location
- 2 ... Information about the operator  
(e.g. name, address, contact person)
- 3 ... Capacity
- 4 ... Waste flow data – input
- 5 ... Waste flow data – output
- 6 ... Technologies used
- 7 ... Emissions to air and water (e.g. permits, monitoring data)
- 8 ... Environmental management system acc. to  
Council Regulation 1836/93 (EMAS), ISO 14000 etc.
- 9 ... Other

Availability of data and deliverable data on waste management facilities  
(sorted by countries)

Kind of information	France																	
	HAZARDOUS WASTE									NON-HAZARDOUS WASTE								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
<b>Recovery</b>																		
Energy Recovery (R1)	y	y	y	y	nd	y	nd	nd	nd	y	y	nd	y	y	nd	nd	nd	nd
Material Recovery (R2-R9)	y	y	y	y	nd	y	nd	nd	nd	y	y	nd	y	y	nd	nd	nd	nd
Others (R10-R13)	y	y	y	y	nd	y	nd	nd	nd	y	y	nd	y	y	nd	nd	nd	nd
<b>Disposal</b>																		
Landfill (D1 or D5)	y	y	y	y		y	nd	nd	nd	y	y	nd	y		nd	nd	nd	nd
Biological treatment (D8)	y	y	y	y	nd	y	nd	nd	nd	y	y	nd	y	y	nd	nd	nd	nd
Physico-chemical treatment (D9)	y	y	y	y	nd	y	nd	nd	nd	y	y	nd	y	y	nd	nd	nd	nd
Incineration (D10)	y	y	y	y	nd	y	nd	nd	nd	y	y	nd	y	y	nd	nd	nd	nd
Permanent storage (D12)	y	y	y	y	nd	y	nd	nd	nd	y	y	nd	y	y	nd	nd	nd	nd
Other	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
<b>Germany</b>																		
Kind of information	Germany																	
	HAZARDOUS WASTE									NON-HAZARDOUS WASTE								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
<b>Recovery</b>																		
Energy Recovery (R1)	y	y	y	n	n	nd	n	n	s	s	s	s	nd	nd	nd	nd	n	s
Material Recovery (R2-R9)	y	y	y	n	n	nd	n	n	s	s	s	s	n	n	nd	n	n	s
Others (R10-R13)	y	y	y	n	n	nd	n	n	s	s	s	s	n	n	nd	n	n	s
<b>Disposal</b>																		
Landfill (D1 or D5)	y	y	y	n		nd	n	n	s	s	s	s	n		nd	n	n	s
Biological treatment (D8)	y	y	y	n	n	nd	n	n	s	s	s	s	n	n	nd	n	n	s
Physico-chemical treatment (D9)	y	y	y	n	n	nd	n	n	s	s	s	s	n	n	nd	n	n	s
Incineration (D10)	y	y	y	n	n	nd	n	n	s	y	y	y	y	n	nd	n	n	s
Permanent storage (D12)	y	y	y	n	n	nd	n	n	s	n	n	n	n	n	nd	n	n	s
Other	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

y...yes n...no s...some 0...no such facilities nd...no data (=no information given in the questionnaire)

**Kind of information**

- 1 ... Location
- 2 ... Information about the operator  
(e.g. name, address, contact person)
- 3 ... Capacity
- 4 ... Waste flow data – input
- 5 ... Waste flow data – output
- 6 ... Technologies used
- 7 ... Emissions to air and water (e.g. permits, monitoring data)
- 8 ... Environmental management system acc. to  
Council Regulation 1836/93 (EMAS), ISO 14000 etc.
- 9 ... Other

Availability of data and deliverable data on waste management facilities  
(sorted by countries)

Kind of information	Greece																	
	HAZARDOUS WASTE									NON-HAZARDOUS WASTE								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
<b>Recovery</b>																		
Energy Recovery (R1)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Material Recovery (R2-R9)	y	y	y	y	y	y	y	nd	nd	y	y	y	y	y	y	y	nd	nd
Others (R10-R13)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Disposal</b>																		
Landfill (D1 or D5)	0	0	0	0	0	0	0	0	0	y	y	y	y	0	y	s	nd	nd
Biological treatment (D8)	0	0	0	0	0	0	0	0	0	y	y	y	y	y	y	y	nd	nd
Physico-chemical treatment (D9)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Incineration (D10)	y	y	y	y	nd	y	s	nd	nd	0	0	0	0	0	0	0	0	0
Permanent storage (D12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

Kind of information	Ireland																	
	HAZARDOUS WASTE									NON-HAZARDOUS WASTE								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
<b>Recovery</b>																		
Energy Recovery (R1)	y	y	s	s	s	s	s	y	nd	y	y	nd	s	s	nd	s	s	nd
Material Recovery (R2-R9)	y	y	s	s	s	s	s	s	nd	y	y	nd	s	s	nd	s	s	nd
Others (R10-R13)	n	n	n	n	n	n	n	s	nd	y	y	nd	s	s	nd	s	s	nd
<b>Disposal</b>																		
Landfill (D1 or D5)	y	y	y	y	0	y	y	y	nd	y	y	s	y	0	n	s	nd	nd
Biological treatment (D8)	y	y	y	y	y	y	y	s	nd	y	y	nd	y	nd	nd	nd	nd	nd
Physico-chemical treatment (D9)	y	y	s	n	n	s	n	s	nd	y	y	n	y	nd	nd	nd	nd	nd
Incineration (D10)	y	y	n	n	n	s	n	y	nd	y	y	n	y	nd	n	y	y	nd
Permanent storage (D12)	n	n	n	n	n	n	n	s	nd	y	y	n	y	nd	nd	nd	n	nd
Other*	s	s	n	n	n	n	n	s	nd	y	y	n	y	nd	nd	nd	nd	nd

y...yes n...no s...some 0...no such facilities nd...no data (=no information given in the questionnaire)

\*... D6,D7,D13

**Kind of information**

- 1 ... Location
- 2 ... Information about the operator  
(e.g. name, address, contact person)
- 3 ... Capacity
- 4 ... Waste flow data – input
- 5 ... Waste flow data – output
- 6 ... Technologies used
- 7 ... Emissions to air and water (e.g. permits, monitoring data)
- 8 ... Environmental management system acc. to  
Council Regulation 1836/93 (EMAS), ISO 14000 etc.
- 9 ... Other

Availability of data and deliverable data on waste management facilities  
(sorted by countries)

Kind of information	Italy																	
	HAZARDOUS WASTE									NON-HAZARDOUS WASTE								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
<b>Recovery</b>																		
Energy Recovery (R1)	y	y	y	y	n	y	y	y	y	y	y	y	y	n	y	y	y	y
Material Recovery (R2-R9)	y	y	y	y	n	y	y	y	y	y	y	y	y	n	y	y	y	y
Others (R10-R13)*	y	y	y	y	n	y	y	y	y	y	y	y	y	n	y	y	y	y
<b>Disposal</b>																		
Landfill (D1 or D5)	y	y	y	y		y	y	y	y	y	y	y	y		y	y	y	y
Biological treatment (D8)	y	y	y	y	n	y	y	y	y	y	y	y	y	n	y	y	y	y
Physico-chemical treatment (D9)	y	y	y	y	n	y	y	y	y	y	y	y	y	n	y	y	y	y
Incineration (D10)	y	y	y	y	n	y	y	y	y	y	y	y	y	n	y	y	y	y
Permanent storage (D12)	y	y	y	y	n	y	y	y	y	y	y	y	y	n	y	y	y	y
Other	y	y	y	y	n	y	y	y	y	y	y	y	y	n	y	y	y	y
<b>Luxembourg</b>																		
Kind of information	Luxembourg																	
	HAZARDOUS WASTE									NON-HAZARDOUS WASTE								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
<b>Recovery</b>																		
Energy Recovery (R1)	0	0	0	0	0	0	0	0	0	y	y	y	y	y	y	y	y	nd
Material Recovery (R2-R9)	y	y	y	y	y	y	y	y	nd	y	y	y	y	y	y	y	y	nd
Others (R10-R13)	y	y	y	y	y	y	y	y	nd	s	s	s	s	s	s	s	s	nd
<b>Disposal</b>																		
Landfill (D1 or D5)	0	0	0	0		0	0	0	0	y	y	y	y		y	y	y	nd
Biological treatment (D8)	0	0	0	0	0	0	0	0	0	y	y	y	y	y	y	s	y	nd
Physico-chemical treatment (D9)	y	y	y	y	y	y	y	y	nd	0	0	0	0	0	0	0	0	0
Incineration (D10)	0	0	0	0	0	0	0	0	0	y	y	y	y	y	y	y	y	nd
Permanent storage (D12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	y	y	y	y	y	y	y	y	nd	y	y	y	y	y	y	y	nd	nd

y...yes n...no s...some 0...no such facilities nd...no data (=no information given in the questionnaire)

\* ... Sorting facilities for municipal waste

**Kind of information**

- 1 ... Location
- 2 ... Information about the operator  
(e.g. name, address, contact person)
- 3 ... Capacity
- 4 ... Waste flow data – input
- 5 ... Waste flow data – output
- 6 ... Technologies used
- 7 ... Emissions to air and water (e.g. permits, monitoring data)
- 8 ... Environmental management system acc. to  
Council Regulation 1836/93 (EMAS), ISO 14000 etc.
- 9 ... Other

Availability of data and deliverable data on waste management facilities  
(sorted by countries)

Kind of information	The Netherlands																	
	HAZARDOUS WASTE									NON-HAZARDOUS WASTE								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
<b>Recovery</b>																		
Energy Recovery (R1)	0	0	0	0	0	0	0	0	0	y	y	y	y	y	y	y	y	nd
Material Recovery (R2-R9)	y	y	n	n	n	s	s	nd	nd	y	y	s	s	s	y	n	n	nd
Others (R10-R13)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Disposal</b>																		
Landfill (D1 or D5)	y	y	y	y		y	y	y	nd	y	y	y	y		y	s	s	nd
Biological treatment (D8)	y	y	s	n	n	y	y	nd	nd	y	y	y	s	s	y	s	s	nd
Physico-chemical treatment (D9)	s	s	s	nd	nd	nd	nd	nd	nd	0	0	0	0	0	0	0	0	0
Incineration (D10)	y	y	y	y	y	y	y	y	nd	y	y	y	y	y	y	y	y	nd
Permanent storage (D12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Kind of information	Portugal																	
	HAZARDOUS WASTE									NON-HAZARDOUS WASTE								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
<b>Recovery</b>																		
Energy Recovery (R1)	nd	nd	nd	nd	nd	nd	nd	nd	nd	y	y	y	y	y	y	y	n	nd
Material Recovery (R2-R9)	y	y	y	s	s	y	s	n	nd	s	s	s	s	s	s	s	n	nd
Others (R10-R13)	y	y	y	y	y	y	s	n	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
<b>Disposal</b>																		
Landfill (D1 or D5)	y	y	n	s		y	n	n	nd	y	y	y	y		y	s	n	nd
Biological treatment (D8)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Physico-chemical treatment (D9)	y	y	y	s	s	y	s	n	nd	y	y	y	s	s	y	s	n	nd
Incineration (D10)	y	y	y	s	s	s	s	n	nd	y	y	y	y	y	y	y	n	nd
Permanent storage (D12)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Other	y	y	y	y	y	y	s	n	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

y...yes n...no s...some 0...no such facilities nd...no data (=no information given in the questionnaire)

**Kind of information**

- 1 ... Location
- 2 ... Information about the operator  
(e.g. name, address, contact person)
- 3 ... Capacity
- 4 ... Waste flow data – input
- 5 ... Waste flow data – output
- 6 ... Technologies used
- 7 ... Emissions to air and water (e.g. permits, monitoring data)
- 8 ... Environmental management system acc. to  
Council Regulation 1836/93 (EMAS), ISO 14000 etc.
- 9 ... Other

Availability of data and deliverable data on waste management facilities  
(sorted by countries)

Kind of information	Spain																	
	HAZARDOUS WASTE									NON-HAZARDOUS WASTE								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
<b>Recovery</b>																		
Energy Recovery (R1)	y	y	y	y	y	y	y	y	nd	y	y	y	y	nd	s	y	y	nd
Material Recovery (R2-R9)	y	y	s	s	s	s	s	s	nd	y	y	y	y	nd	y	y	y	nd
Others (R10-R13)	s	y	s	s	s	s	s	s	nd	y	y	y	y	nd	s	nd	nd	nd
<b>Disposal</b>																		
Landfill (D1 or D5)	y	y	s	s		s	nd	s	nd	y	y	y	y		y	y	y	nd
Biological treatment (D8)	nd	nd	nd	nd	nd	nd	nd	nd	nd	y	y	nd	nd	nd	y	y	y	nd
Physico-chemical treatment (D9)	y	y	s	s	s	s	s	s	nd	y	y	nd	nd	nd	y	nd	nd	nd
Incineration (D10)	y	y	s	s	s	s	s	s	nd	y	y	y	y	nd	y	y	y	nd
Permanent storage (D12)	y	y	s	s	s	s	nd	s	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Other	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
<b>Sweden</b>																		
Kind of information	Sweden																	
	HAZARDOUS WASTE									NON-HAZARDOUS WASTE								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
<b>Recovery</b>																		
Energy Recovery (R1)	y	s	y	s	s	s	s	nd	nd	y	y	y	y	y	y	y	s	nd
Material Recovery (R2-R9)	y	s	y	s	s	s	s	nd	nd	s	s	s	s	s	s	s	s	nd
Others (R10-R13)	y	s	y	s	s	s	s	nd	nd	s	s	s	s	s	s	s	s	nd
<b>Disposal</b>																		
Landfill (D1 or D5)	y	s	y	s		s	s	nd	nd	s	s	s	s		s	s	s	nd
Biological treatment (D8)	y	s	y	s	s	s	s	nd	nd	s	s	s	s	s	s	s	s	nd
Physico-chemical treatment (D9)	y	s	y	s	s	s	s	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Incineration (D10)	y	s	y	s	s	s	s	nd	nd	0	0	0	0	0	0	0	0	0
Permanent storage (D12)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Other	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

y...yes n...no s...some 0...no such facilities nd...no data (=no information given in the questionnaire)

**Kind of information**

- 1 ... Location
- 2 ... Information about the operator  
(e.g. name, address, contact person)
- 3 ... Capacity
- 4 ... Waste flow data – input
- 5 ... Waste flow data – output
- 6 ... Technologies used
- 7 ... Emissions to air and water (e.g. permits, monitoring data)
- 8 ... Environmental management system acc. to  
Council Regulation 1836/93 (EMAS), ISO 14000 etc.
- 9 ... Other

Availability of data and deliverable data on waste management facilities  
(sorted by countries)

Kind of information	United Kingdom																	
	HAZARDOUS WASTE									NON-HAZARDOUS WASTE								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
<b>Recovery</b>																		
Energy Recovery (R1)	s	s	s	s	s	s	s	s	nd	s	s	s	s	s	s	s	s	nd
Material Recovery (R2-R9)	s	s	s	s	s	s	s	s	nd	s	s	s	s	s	s	s	s	nd
Others (R10-R13)	s	s	s	s	s	s	s	s	nd	s	s	s	s	s	s	s	s	nd
<b>Disposal</b>																		
Landfill (D1 or D5)	s	s	s	s		s	s	s	nd	s	s	s	s		s	s	s	nd
Biological treatment (D8)	s	s	s	s	s	s	s	s	nd	s	s	s	s	s	s	s	s	nd
Physico-chemical treatment (D9)	s	s	s	s	s	s	s	s	nd	s	s	s	s	s	s	s	s	nd
Incineration (D10)	s	s	s	s	s	s	s	s	nd	s	s	s	s	s	s	s	s	nd
Permanent storage (D12)	s	s	s	s	s	s	s	s	nd	s	s	s	s	s	s	s	s	nd
Other	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
<b>Iceland</b>																		
Kind of information	Iceland																	
	HAZARDOUS WASTE									NON-HAZARDOUS WASTE								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
<b>Recovery</b>																		
Energy Recovery (R1)	y	y	y	y	y	y	s	n	nd	y	y	y	s	s	y	s	n	nd
Material Recovery (R2-R9)	0	0	0	0	0	0	0	0	0	y	y	y	s	s	s	s	n	nd
Others (R10-R13)	0	0	0	0	0	0	0	0	0	y	y	y	y	y	y	y	n	nd
<b>Disposal</b>																		
Landfill (D1 or D5)	0	0	0	0		0	0	0	0	y	y	y	s		y	s	n	nd
Biological treatment (D8)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Physico-chemical treatment (D9)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Incineration (D10)	0	0	0	0	0	0	0	0	0	y	y	y	s	s	y	s	n	nd
Permanent storage (D12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

y ...yes n...no s...some 0...no such facilities nd...no data (=no information given in the questionnaire)

**Kind of information**

- 1 ... Location
- 2 ... Information about the operator  
(e.g. name, address, contact person)
- 3 ... Capacity
- 4 ... Waste flow data – input
- 5 ... Waste flow data – output
- 6 ... Technologies used
- 7 ... Emissions to air and water (e.g. permits, monitoring data)
- 8 ... Environmental management system acc. to  
Council Regulation 1836/93 (EMAS), ISO 14000 etc.
- 9 ... Other

Availability of data and deliverable data on waste management facilities  
(sorted by countries)

Kind of information	Liechtenstein																	
	HAZARDOUS WASTE									NON-HAZARDOUS WASTE								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
<b>Recovery</b>																		
Energy Recovery (R1)	0	0	0	0	0	0	0	0	0	nd	nd	nd	nd	nd	nd	nd	nd	nd
Material Recovery (R2-R9)	0	0	0	0	0	0	0	0	0	nd	nd	nd	nd	nd	nd	nd	nd	nd
Others (R10-R13)	0	0	0	0	0	0	0	0	0	nd	nd	nd	nd	nd	nd	nd	nd	nd
<b>Disposal</b>																		
Landfill (D1 or D5)	0	0	0	0		0	0	0	0	y	y	y	y		n	n	n	nd
Biological treatment (D8)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Physico-chemical treatment (D9)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Incineration (D10)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Permanent storage (D12)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	nd	nd	nd	nd	nd	nd	nd	nd	nd
Kind of information	Norway																	
	HAZARDOUS WASTE									NON-HAZARDOUS WASTE								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
<b>Recovery</b>																		
Energy Recovery (R1)	y	y	y	y	y	s	y	n	nd	y	y	y	y	y	s	y	n	nd
Material Recovery (R2-R9)	y	y	s	s	s	s	s	n	nd	y	y	s	s	s	s	s	s	nd
Others (R10-R13)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
<b>Disposal</b>																		
Landfill (D1 or D5)	y	y	s	y		s	y	n	nd	y	y	s	s		s	s	n	nd
Biological treatment (D8)	y	y	s	y	y	s	y	n	nd	y	y	s	s	s	s	s	n	nd
Physico-chemical treatment (D9)	y	y	s	y	y	s	y	n	nd	y	y	s	s	s	s	s	n	nd
Incineration (D10)	y	y	y	y	y	s	y	n	nd	y	y	s	s	s	s	s	n	nd
Permanent storage (D12)	y	y	s	y	y	s	y	n	nd	y	y	s	s	s	s	s	n	nd
Other	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

y...yes n...no s...some 0...no such facilities nd...no data (=no information given in the questionnaire)

**Kind of information**

- 1 ... Location
- 2 ... Information about the operator  
(e.g. name, address, contact person)
- 3 ... Capacity
- 4 ... Waste flow data – input
- 5 ... Waste flow data – output
- 6 ... Technologies used
- 7 ... Emissions to air and water (e.g. permits, monitoring data)
- 8 ... Environmental management system acc. to  
Council Regulation 1836/93 (EMAS), ISO 14000 etc.
- 9 ... Other