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EU Non-Energy Extractive Industry

Sustainable Development Indicators 2001-2003

This report presents a set of sustainable development indicators which have been developed for the non-energy extractive industry. It is the result of a voluntary initiative to produce 20 indicators describing the economic, social and environmental performance of the industry. The report covers data from 2001 to 2003.

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EU Non-Energy Extractive Industry

Sustainable Development Indicators 2001-2003

A report from the Raw Materials Supply Group,
a stakeholder group, chaired by the Directorate-General
for Enterprise and Industry

European Commission

PHOTO CREDITS

Cover

Top left	Holcim Áridos, S.L.
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INTRODUCTION

This is a voluntary initiative which was launched in 2000 following the publication of the Communication "Promoting Sustainable Development in the EU Non-Energy Extractive Industry" [1]. It provides the industry with an opportunity to demonstrate its commitment to sustainable development, through the use of indicators to report some of the key economic benefits the sector provides, together with its continued commitment to social welfare and environmental protection. It also aims to provide a basis for informed dialogue with interested parties, including permitting authorities, the general public and non-governmental organisations (NGOs), on how the industry can continue to provide the raw materials which are vital to modern society in a way that best contributes to a sustainable Europe. This is the second report which provides new data for 2002 and 2003, together with the data for 2001 which was first published in 2004.

There are over fifty different mineral types worked in Europe and the industry is active in all Member States. The industry has traditionally been grouped into three main sub-sectors – metallic minerals, industrial minerals and construction minerals, reflecting the different physical and chemical properties of the minerals and their predominant uses, as summarised in Box 1.

Box 1

There are about 250 companies in the **metal mining** sub-sector in the EU, which includes some major multinational mining companies which have their headquarters in the EU. Metals and their ores and concentrates are traded on international markets. As a result, European metal mines face strong competition from large-scale, high grade overseas operations able to produce ores and concentrates under low cost conditions. For most metals, the amount extracted within the EU has been declining in recent years. However, new mines continue to be developed, many providing employment and economic growth in regions which would otherwise have difficulties attracting investment. The industry has made large efforts in recent years to reduce the overall costs of its operations through rationalisations and increasing capital intensity.

Many different types of **industrial mineral** are extracted within the EU, which supply an even wider range of downstream industries. The minerals range from those which are valued for their physical properties, such as calcium carbonates, diatomite, kaolin, plastic clays, bentonite, feldspar, silica and talc, and those valued for their chemical characteristics, including borates, salt, potash and sulphur. The very varied geology of Europe means that the geographical distribution of each mineral differs, with the result that while the sub-sector operates in all Member States, the suite of minerals available in each country, and the scale of working, differs markedly. The sub-sector in the EU is largely composed of Small and Medium-sized Enterprises (SMEs), although it includes some of the world's leading mineral production companies, which operate on a global basis. Industrial minerals are traded globally. However, while there are significant exports of many industrial minerals, the EU is a net importer of most.

The **construction minerals** sub-sector is the largest in terms of the tonnage of mineral extracted, and the number of companies and employees. It also has the highest turnover and value added. It consists mainly of SMEs operating over 20,000 sites supplying local and regional markets with materials such as sand and gravel and crushed rock (i.e. aggregates) for use by the construction industry, as railway ballast and as armourstone for flood and coastal defence. Many of the companies

[1] COM(2000)265

in this sub-sector also provide the raw materials used in the manufacture of other construction products such as ready-mixed concrete, asphalt, lime and cement. In general, the widespread distribution of sand and gravel and hard rock resources, and their relatively low price, means that transport costs significantly influence the distance to markets. While there are some multinational companies which supply more distant markets, there is relatively little international trade.

As described in the first report [2], the initial aim was to produce a total of twenty indicators which described the economic, social and environmental performance of the industry. They were selected from a larger list which had been proposed by a working group set up under the umbrella of the Raw Materials Supply Group [3] and which where tested using a pilot study involving 152 companies. Of the twenty indicators, 13 cover the activity of the industry (company level indicators) and are based on data provided by individual companies, while 7 indicators were to be prepared by Member States (see Annex I). Unfortunately, many Member State representatives subsequently indicated that it would not be possible to obtain the data for most of their indicators, except where the data were already available from Eurostat. The exercise to date has therefore been limited to the company level indicators.

A questionnaire and explanatory guidance document were prepared and circulated to individual companies via their trade associations in 2003 to collect data for 2001, and in 2004 to collect data for both 2002 and 2003 (see Annex II). The explanatory documents stressed that the exercise was voluntary and that companies were being invited to participate. The questionnaire was designed to minimise the cost or organisational burden on the companies collecting the data and to a large extent requested information which most companies collect themselves and use on a routine basis to organise and manage their businesses. The responses from individual companies were returned to the European federations [4] which collated the data received, before forwarding aggregated figures to the European Commission for inclusion in the report.

As with the report on 2001 data, it is not considered appropriate to produce an 'official' interpretation of the results. The data are presented to encourage individuals and groups to make their own assessments. However, when looking at the data there are a number of important points to bear in mind.

At such an early stage in this voluntary initiative, participation by companies is far from complete. Some companies which contributed towards the figures for 2001 did not do so in 2002 or 2003. Conversely, other companies that did not participate in 2001, did so in later years. The latest results, for example, include some data for companies operating in the 10 new Member States and Romania and Bulgaria, which was not the case for 2001. The decision was taken to include the two accession countries now to provide for a consistent basis for future survey campaigns which will follow their accession.

However, even if there was full participation by all companies in the EU, year on year fluctuations in the data should still be expected, in view of the differing nature of the geological materials the industry deals with and the specific quality demands of downstream users. For example, the quality of ore can be very variable within a single mine. This will affect the amount of processing required to produce the required quality of mineral which will influence some of the indicator values, such as water use and energy efficiency. Similarly, the area of land rehabilitated in a particular year, and the rate of opening up of new land for mineral exploitation can vary considerably in response to the closure or opening respectively of a single or small number of large sites.

It is hoped that with time, many more companies will participate in the exercise, and in doing so will provide a more robust set of figures.

[2] Sustainable Development Indicators for the EU non-energy extractive industry 2001, as published on http://europa.eu.int/comm/enterprise/steel/non-energy-extractive-industry/sd-indicators.htm

[3] The Raw Materials Supply Group consists of representatives from Member States, candidate countries, industry federations, trade unions and NGOs. It discusses and exchanges information on issues of sustainable competitiveness that affect the EU non-energy extractive industry.

[4] e.g. Euromines, IMA Europe and UEPG

CHAPTER 1
Indicators for the metal mining sub-sector in the EU – as reported for 2001-2003

The data for 2001, 2002 and 2003 are presented below. It should be noted that the figures for 2001 were provided by companies operating within the EU15. In 2002 and 2003, the survey was extended to include metal mining companies operating in the new Member States and Bulgaria and Romania. This is to provide a more consistent baseline for future reporting campaigns.

It is estimated that the metal mining companies which participated represent almost 50 % of the sub-sector[5] in each reporting year.

Headline survey results[6]

		Employment	Tonnes produced	Hours worked	Turnover *(million €)*
2001	EU15	6,731	26,700,000	21,136,523	1,080
2002	EU25+2	10,052	31,200,000	18,400,656	1,852
2003	EU25+2	11,489	71,500,000	22,621,514	1,682

1.1 Employment

In 2001, the participating companies in the metal mining industry reported a workforce of 6,731 people who were directly employed and 1,275 who were either contractors or otherwise indirectly employed. The number of indirect jobs in downstream industries linked to the sub-sector is estimated to be four times as many as the number of directly employed people. In 2002 and 2003 the direct employment figures were reported to be 10,052 and 11,489 respectively; while the indirect employment figures were 2,200 and 2,408 respectively.

The total time worked was 21.1 million hours in 2001, 18.4 million hours in 2002 and 22.6 million hours in 2003.

1.2 Development of skills

The number of hours of training reported by the sub-sector during 2001 was equivalent to 1.44 % of the total hours worked. The figure was 0.97 % in 2002 and 0.29 % in 2003.

[5] Based on a comparison between Eurostat data for employment in the metal mining sub-sector and employment figures provided by the participating companies.

[6] These data only relate to those companies that reported, and not to the whole of the sub-sector.

1.3 Health & Safety of employees

The total reported working time lost as a result of accidents during the year 2001 represented 0.48 % of the total hours worked. In 2002 the rate was 0.34 %, and in 2003 it was 0.75 %.

The total number of hours of training on "Health & Safety" matters during 2001 represented 0.6 % of working hours. In 2002 the rate was 0.24 % and in 2003 it was 0.29 %. One fatal accident was reported in the metals mining sub-sector in 2001. Two were reported in 2002 and four in 2003.

1.4 Turnover and R&D Investment

The turnover of the companies that reported in 2001 was €1,080 million, while expenditure on Research & Development (R&D) was just over €18 million. This equates to an average of 1.7 % of turnover being invested in R&D. It should be noted that most R&D in this sub-sector is carried out by independent research institutes and academia rather than directly through companies. The largest metal mining houses have their own research facilities, but they are located in Australia, South Africa and Canada, and not within Europe. In 2002, total expenditure on RTD amounted to approximately €42 million which is 1.1 % of turnover. In 2003, the figure was €39 million or 2.3 % of turnover.

1.5 Exploration costs

The total exploration costs reported for the year 2001 were €18.33 million which represents on average 0.5 % of total turnover. In 2002 it was €21 million (2.2 % of turnover), and in 2003, it was nearly €21 million (1.2 %), which means between 1 and 2 % of turnover was spent on exploration. However, it should be noted that many exploration companies are SMEs which are not members of mining trade associations. Much exploration activity will not, therefore, be included in this reporting exercise. It is estimated, for example that expenditure on exploration in Ireland in 2001 was between €11 million, and in Sweden €21 million.

1.6 Communication with the community

The total number of events arranged by the reporting companies for neighbouring communities, including open days and guided tours as well as special information evenings and discussions, totalled 621 in 2001, 461 in 2002 and 512 in 2003. Most sites had a system for registration and follow-up of citizen complaints in place: 80 % in 2001 and 74 % in 2002 and 2003. The change is due to an increase in the proportion of reported sites in Eastern Europe.

1.7 Energy efficiency

The average consumption of energy per tonne of saleable product during 2001 amounted to 515 megajoules (MJ). In 2002 it was 248 MJ and in 2003 it was 224 MJ. Note that the previously reported figure for 2001 was incorrect.

1.8 Water demand

The average net water consumption per tonne of saleable product during 2001 was 1.21 m^3. In 2002 the reported consumption rate was 2.41 m^3 per tonne and in 2003 it was 4.68 m^3 per tonne. The specific water consumption has changed with the addition of some Eastern European mines in the survey. There also appears to be considerable variation within some mines from year to year depending on the ore body.

1.9 Land management

The total land area in operation for metal ore extraction as reported in 2001 was 12,083 hectares. Due to some major rehabilitation projects, the amount of rehabilitation that year was represented 17 % of the area in operation.

The area of land reported to be in operation by participating companies was 30,000 hectares in 2002 and 32,000 hectares in 2003. The large increase compared with 2001 was largely caused by the inclusion of sites in Bulgaria and Romania. The rehabilitation rate was 3.2 % in 2002 and 0.28 % in 2003.

1.10 Use of dangerous substances

The use of dangerous substances (as defined by the EU Directive[7]) used in mineral processing was approximately 257,000 tonnes in 2001 which is equivalent to 1 % of the total tonnage of material produced. In 2002 it was recorded as 0.04 % of material produced, i.e. 12,460 tonnes, whereas in 2003 it was 0.02 %, i.e. 7,112 tonnes.

1.11 Transport constraints

Reported figures for transport within the sub-sector are limited as the information about onward transport to the customer is not readily available to the industry. In many cases more than one form of transport will be used. The following figures are therefore to be understood as a general indication.

The average transport distance from the point of extraction to the point of sale in 2001 was 232 km on roads, 273 km by rail, and 4,494 km by water. Approximately 62 % of all material was transported by road, 16 % by rail, and 22 % by water.

In 2002 the average transport distance from the point of extraction to the point of sale amounted to 84 km on roads, 225 km by rail, and 1,583 km by water. Approximately 15 % of all material was transported by road, 78 % by rail, and 8 % by water.

7 Council Directive 67/548/EEC of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances

In 2003 the average transport distance from the point of extraction to the point of sale was 59 km on roads, 203 km by rail, and 912 km by water. Approximately 7 % of all material was transported by road, 81 % by rail, and 12 % by water.

The fluctuations of these figures over the 3 reported years are due to different market developments as well as the inclusion of the 10 new Member States and companies operating in Bulgaria and Romania in the reporting.

1.12 Environmental incidents

The total number of reportable environmental incidents [8] was 5 in 2001, 35 in 2002 and 34 in 2003. The higher figures in 2002 and 2003 are due to a change in some national legislation which now requires the reporting of smaller incidents than previously.

[8] Incident has been defined as an infringement of national environmental legislation. Examples include dam leakage, discharges to air, solids discharge.

CHAPTER 2
Indicators for the industrial minerals sub-sector in the EU – as reported for 2001-2003

The level of aggregation of data supplied by national governments to Eurostat, precludes the separation of the economic data for industrial minerals from that of the construction minerals sub-sector (e.g. sands and clays can be used both as aggregates and as industrial minerals). However, the European Industrial Minerals Association (IMA Europe) estimates that approximately 65 % of the sub-sector has participated in this survey.

Headline survey results [9]

		Employment	Tonnes produced	Hours worked	Turnover *(million €)*
2001	EU15	17,150	47,885,000	21,823,000	3,691
2002	EU25	26,034	74,130,157	37,755,674	3,479
2003	EU25	25,681	63,547,019	37,449,811	3,549

2.1 Employment

The reported figures for direct employment in the European industrial minerals industry were 17,150 in 2001, 26,030 in 2002 and 25,680 in 2003. IMA estimate that the number of indirect jobs in downstream industries linked to the sub-sector is four times that of the number of directly employed people. The number of hours worked by these employees in 2001 was nearly 22 million, with almost 38 million in 2002 and 37.5 million in 2003.

2.2 Development of skills

The total of hours of training reported by the sub-sector amounted to 1.23 % of the total hours worked in 2001. In 2002 and 2003 the rates were 0.70 % and 0.71 % respectively.

2.3 Health & Safety of employees

The total reported working time lost as a result of accidents in 2001 amounted to 0.48 % of the total hours worked. In 2002 the reported rate was 0.33 % and in 2003 it was 0.28 %. The total time spent on

[9] These data only relate to those companies that reported, and not to the whole of the sub-sector.

"Health & Safety" training was relatively stable over time, at 0.31 % of working hours in 2001, 0.30 % in 2002 and 0.32 % in 2003. Four fatalities were reported in the industrial minerals mining sub-sector in both 2001 and 2002. In 2003, 3 fatalities were reported.

2.4 Turnover and R&D Investment

The total reported turnover amounted to € 3,691 million in 2001, € 3,479 in 2002 and € 3,549 in 2003. It was reported that on average, 1.8 % of turnover was invested in R&D in 2001, 1 % in 2002 and 0.9 % in 2003.

2.5 Exploration costs

The reported exploration costs in 2001 represented on average 0.26 % of total turnover. In 2002 and 2003 the average annual rate was 0.23 %.

2.6 Communication with the community

The overall number of reported events, such as open days, guided tours and special information evenings that were organised by the industry for the neighbouring communities totalled 1,723 in 2001. This represents an average of 9.6 events per site that year. In 2002, there were 592 events, an average of 2.1 events per site, and in 2003, there were 667 reported events.

In 2001, over three quarters (78 %) of sites which reported implemented a system that registers and deals with citizens' complaints. In 2002, the figure was 67 %, and in 2003, 71 %.

2.7 Energy efficiency

The average reported energy used per tonne of saleable product was 505 MJ in 2001, 661 MJ in 2002 and 509 MJ in 2003.

2.8 Water demand

On average, the total reported net water consumption per tonne of saleable product was 0.57 m^3 (2001), 0.73 m^3 (2002) and 0.65 m^3 (2003).

2.9 Land management

In 2001, the reported area of land in operation for industrial minerals extraction was 14,744 hectares. In that year, 2,275 hectares were opened up for extraction. The reported area rehabilitated was 1,490 hectares in 2001, 542 hectares in 2001 and 566 hectares in 2002.

2.10 Use of dangerous substances

The reported use of dangerous substances (as defined by the EU directive [10]) used in mineral processing was 0.008 % of the total tonnage of mineral produced in 2001. In 2002 and 2003 the annual rate was 0.004 % of total tonnage.

2.11 Transport constraints

Reported figures for transport within the sub-sector are limited, as the information about onward transport to the customer is not readily available to the industry. The following figures are therefore to be understood to be estimates.

In 2001 the average transport distance from the point of extraction to the point of sale was 245 km by road, 234 km by rail and 2,482 km by water. Approximately 63 % of all material went by road, 15 % by rail, and 22 % by water. In 2002, approximately 63 % of all material was transported by road, 22 % by rail, and 15 % by water. In 2003, approximately 68 % went by road, 19 % by rail, and 13 % by water.

2.12 Environmental incidents

There were 56 reportable environmental incidents [11] in 2001, which represents an average of 0.25 incidents per site. There were on average 0.12 incidents per site in 2002 and 0.13 incidents per site in 2003.

[10] Council Directive 67/548/EEC of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances

[11] Incident has been defined as an infringement on national environmental legislation. Possible examples include dam leakage, discharge to air, solids discharge etc.

CHAPTER 3
Indicators for the construction minerals industry in the EU – as reported for 2003

Due to the very large number of small companies in this sub-sector, it encountered a number of difficulties collecting data during the first survey in 2001. The main trade association for this sub-sector therefore sought ways to improve the response of its members for the 2003 exercise. This included shortening the list of indicators to just include those which are relevant to it (for example, by not asking for data on the use of dangerous substances). The sub-sector have provided data for 2003 and it is envisaged that data will be collected on a 2 to 3 yearly basis in the future, rather than annually, as it is hoped that this will lead to a higher level of participation.

In terms of coverage, it is estimated that the companies that provided data for the survey for the year 2003 represent 15 % of the total EU25 workforce [12] in this sub-sector.

Headline survey results [13]

		Employment	Tonnes produced	Hours worked	Turnover *(million €)*
2003	EU25	25,333	570,771,000	69,810,839	Not reported

3.1 Employment

In 2003, those companies in the construction minerals industry that reported, had a total workforce of 25,333 directly employed people, and 19,375 indirectly employed people.

The total time worked during the year 2003 was nearly 70 million hours (69,810,839 hours).

3.2 Development of skills

The total number of hours of training reported by the sub-sector during the year 2003 was 246,290.

This represented 0.34 % of the total hours worked in the sub-sector.

[12] Data was obtained for the Czech Republic, Denmark, Finland, France, Germany, Portugal, Spain and the UK, although not for every indicator. According to Eurostat data (2001) a total of 171,400 people were employed in the construction minerals business in Europe.

[13] These data only relate to those companies that reported, and not to the whole of the sub-sector.

3.3 Health & Safety of employees

The total reported working time lost as a result of accidents during the year 2003 was 211,975 hours. This represented 0.32 % of the total hours worked. The total number of hours of training on "Health & Safety" during 2003 was 68,115 hours. This represented 0.10 % of working hours or 30 % of all training. Six fatal accidents were reported in the construction minerals sub-sector.

3.4 Turnover and R&D Investment

The reported R&D expenditure in 2003 was equivalent to 1 % of total turnover.

3.5 Exploration costs

The reported exploration costs in 2003 represented on average 0.01 % of total turnover

3.6 Communication with the community

The total number of events arranged for neighbouring communities, including open days and guided tours as well as special information evenings and discussions, amounted to 4,442. There was insufficient data to give a meaningful figure for the number of sites which had a system for registration and follow-up of citizens' complaints in place, but figures seem to vary from 30 % (France) to 70 % (Czech Republic).

3.7 Energy efficiency

The average consumption of energy per tonne of saleable product during 2003 was 446 MJ.

3.8 Water demand

The average net water consumption per tonne of saleable product during 2003 was 0,4 m^3.

3.9 Land management

The total land area in operation for the extraction of construction minerals as reported was 14,033 hectares.

3.10 Use of dangerous substances

This indicator was not considered relevant for the sub-sector as no dangerous substances are used in the production of aggregates.

3.11 Transport constraints

Reported figures for transport within the sub-sector are limited as the information about onward transport to the customer is not readily available to the industry. In many cases more than one form of transport is used. The following figures are therefore estimates.

The average transport distance from the point of extraction to the point of sale was 33 km on roads, 148 km by rail, and 142 km by water. Approximately 89 % of all material was transported by road, 6 % by rail, and 5 % by water.

3.12 Environmental incidents

The total number of reportable environmental incidents [14] during the year 2003 was 4 [15].

[14] Incident has been defined as an infringement of national environmental legislation. Examples include dam leakage, discharges to air, solids discharge etc.

[15] Only the Czech Republic and the UK provided data.

ANNEX I
Sustainable Development Indicators (SDI)

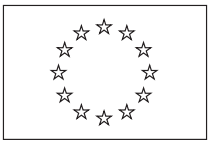
I.1. Company level

Indicators	Measure
Employment	- Total direct employment - Total indirect employment (including contractors, outsourcing, consultants)
Exploration costs	Costs for exploration / turnover
R&D Investment	Total R&D expenditure / turnover
Transport constraints	Average transport distance from source to customers and % of transport by road, rail and water
Health & safety of employees	Number of fatalities per year
	Number of working hours lost per year as a result of accidents/ total hours worked
	Number of hours of training in Health & Safety / total number of hours worked
Communication to the community	Does the company have a system for registration and follow-up complaints (YES / NO)
	Number of public meeting, including "open days", school visits, etc.
Development of skills	Number of hours of training / total number of hours worked
Energy efficiency	– energy carriers in MJ per functional unit (1 tonne product)
Water demand	– of net raw water consumption (= m^3) per functional unit (1 tonne product)
Land demand	total land area put into use for mineral extraction during the survey year
Land management	total surface land area returned to beneficial use / new surface land area put into use for mineral
Use of dangerous substances	rate of classified dangerous substances having potential risk to the environment and/or human health used in the mineral process per functional unit (%)
Environmental incidents	Number (and type) of reportable environmental incidents.

I.2. Member States level

Indicators	Measure
Sustainable access to resources	Number of extraction permits granted / number of extraction permits applied for
Land granted for minerals extraction	Land area permitted for mineral extraction / National area
Material demand	Material demand per capita
Contribution to GDP	Turnover / GDP (MSs, EU) Turnover should be given as "ex-work", i.e. without costs of transport to customers.
Trade balance	Mined/extracted products within the EU vs. mined/extracted products imported from outside the EU (tonnes)
Sensitivity	Number of Natura 2000 sites in which a company operates extraction activities (or which are adjacent to extraction sites)
External co-operation in sustainable development of the non-energy extractive industry	Existence of external co-operation programmes covering sustainable development of the non-energy extractive industry

ANNEX II
SDI Questionnaire



SUSTAINABLE DEVELOPMENT INDICATORS WORKING GROUP

Co-operation between the European Commission, Member States, industry and NGOs.

2002 SURVEY ON SUSTAINABLE DEVELOPMENT INDICATORS FOR THE NON-ENERGY EXTRACTIVE INDUSTRY

PLEASE REFER TO THE GUIDANCE DOCUMENT FOR THE 2002 SURVEY CAMPAIGN FOR ADVICE ON HOW TO COMPLETE THIS SURVEY FORM

PRELIMINARY QUESTIONS

IF YOUR COMPANY OPERATES MORE THAN 1 SITE, YOU MAY EITHER PROVIDE DATA FOR EACH SITE INDIVIDUALLY OR COMBINE THE DATA FOR ALL SITES. PLEASE INDICATE IF YOU ARE USING DATA FOR THE WHOLE COMPANY OR FOR A SPECIFIC SITE: **COMPANY / SITE**'

INDICATE THE TOTAL NUMBER OF EXTRACTION SITES YOUR COMPANY OPERATED IN THE EUROPEAN UNION IN THE YEAR 2002: _____

COUNTRY(S) COVERED BY THIS SUBMISSION: _____

INDICATE THE SALEABLE (DRY) TONNAGE FOR EACH MINERAL WORKED FOR THE YEAR 2002.

	Minerals		Tonnage

QUESTION (on calendar year 2002)	**ANSWER**	**UNIT**
Employment 1. Average number of people directly employed		**Full-time equivalent**
2. Average number of people indirectly employed		**Full-time equivalent**
3. Total number of hours worked		**Hours**
Development of skills 4. Total number of hours of training		**Hours**
Health & Safety of employees 5. Total number of working hours lost as a result occupational accidents		**Hours**
6. Total number of hours of training in "Health & Safety"		**Hours**
7. Total number of fatalities		**Number**
Total Turnover 8. Total turnover		**EUR**
R&D Investment 9. Total expenditure in R&D		**EUR**
Exploration costs 10. Total exploration costs		**EUR**
Communication with the local community 11. Total number of public events		**Number**
12. Does the company have a system for registration and follow-up of citizen complaints		**Yes/No**
Energy efficiency 13. Total of all energy carriers		**MJ per functional unit (1 tonne of total saleable product)**
Water demand 14. Total net raw water consumption		**m^3 per functional unit (1 tonne of total saleable product)**
Land demand 15.1 Total surface land area in use for mineral extraction as at the end of the reporting period		**Hectares**
15.2 Total surface area of new land brought into use for mineral extraction in 2002		**Hectares**

15.3 Total surface land area returned to beneficial use in 2002		**Hectares**
Use of dangerous substances 16. Amount of classified dangerous substances used in the mineral process		**Kilograms**
Transport constraints 17.1 Average transport distance from the point of extraction to the customer by road		**Kilometers**
17.2. Average transport distance from the point of extraction to the customer by rail		**Kilometers**
17.3 Average transport distance from the point of extraction to the customer by water		**Kilometers**
18.1 Proportion of road transport in total transport		**%**
18.2 Proportion of rail transport in total transport		**%**
18.3 Proportion of transport by water in total transport		**%**
Environmental incidents 19. Indicate the total number of significant environmental incidents		**Number**
20. Specify the number of each type of significant environmental incident		
- 20.1 Dam leakage		**Number**
- 20.2 Discharge to water (ground or surface)		**Number**
- 20.3 Discharge to air		**Number**
- 20.4 Discharge to ground (e.g. leakage of lubricants)		**Number**
- 20.5 Solids discharge		**Number**
- 20.6 Uncontrolled subsidence		**Number**
- 20.7 Other (please specify)		**Number**

[i] Draw a circle around the appropriate answer.

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