
on the practical implementation of Health and Safety at Work Directives 92/91/EEC (mineral extraction through drilling) and 92/104/EEC (surface and underground mineral extraction)
1. INTRODUCTION

This report fulfils a Commission undertaking\(^1\) to assess the practical implementation of the regulatory framework with a view to improving it. It draws mainly on the national reports supplied by the Member States\(^2\) and an independent expert report evaluating the practical implementation of the two Directives on the ground in the private and/or public economic sectors concerned. It also draws on European statistics and surveys of accidents at work and occupational diseases\(^3\) and on information from the Commission on the transposition of the Directives.

This assessment covers the transposition and implementation, in EU-15 only, of two Directives, namely Council Directive 92/91/EEC of 3 November 1992 concerning the minimum requirements for improving the safety and health protection of workers in the mineral-extracting industries through drilling\(^4\) and Council Directive 92/104/EEC of 3 December 1992 on the minimum requirements for improving the safety and health protection of workers in surface and underground mineral-extracting industries\(^5\). The Commission is of the opinion that this assessment may also provide useful information on the application of the Directives for the 12 Member States that have meanwhile joined the EU.

The extractive industries do not fall within the scope of Directive 89/654/EEC concerning the minimum safety and health requirements for the workplace (first individual directive within the meaning of Article 16(1) of Directive 89/391/EEC). Workers in the sector are likely to be exposed to particularly high levels of risk, so there are separate specific provisions for them, in two individual directives (Directives 92/91/EEC and 92/104/EEC) within the meaning of Article 16(1) of Directive 89/391/EEC on the introduction of measures to encourage improvements in the safety and health of workers at work.

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\(^2\) Sent to the Commission under Articles 12 of Directive 92/91/EEC and 13 of Directive 92/104/EEC. Those Articles were subsequently repealed by Directive 2007/30/EC. In almost all the Member States, the social partners participated in the preparation of the reports. Belgium and Luxembourg did not submit national reports.

\(^3\) European Statistics of Accidents at Work (ESAW), data on recognised occupational diseases (EODS) and Labour Force Survey (LFS) by Eurostat. Regulation (EC) No 1338/2008 on Community statistics on public health and health and safety at work (OJ L 354, 31.12.2008, p. 70), which was adopted recently, provides for close cooperation between Eurostat and the relevant national bodies for the purposes of collecting and processing data in a harmonised manner throughout the EU.


Directive 92/91/EEC applies specifically to the safety and health of workers in the extractive industries concerned with exploration for and exploitation of minerals by means of boreholes (onshore and offshore), while Directive 92/104/EEC covers the remaining sectors of the extractive industries, i.e. exploration for and exploitation of minerals in surface or underground mines and quarries.

In accordance with Articles 1(2) of Directives 92/91/EEC and 92/104/EEC, Directive 89/391/EEC applies in full to the areas covered by those two Directives.

Since the two Directives are similar in many ways in terms of practical implementation, this report will mention them individually only where a specific aspect of one or other directive needs to be highlighted.

2. LEGAL EFFECTS

The Member States’ national reports show that the Directives have had an impact formally (streamlining and codification) in all Member States, which has led them to consolidate and update the existing legislation.

As to substance: most Member States already had legislation in this field, but the Directives introduced important new concepts (such as the safety and health document) into national legislation. In one Member State, Ireland, the transposition of the Directives had the effect of making infringements of the legislation in this area, which had merely been infringements under private law, into infringements under penal law too.

3. AWARENESS-RAISING AND FLANKING MEASURES

The national measures transposing the Directives have been published in all Member States and awareness-raising campaigns have been organised, with activities such as the distribution of booklets, guidelines and press releases and seminars and conferences to train the authorities, employers and workers in the concepts in the Directives. In some cases the companies concerned were given this information directly.

For their part, the social partners spread information on the rules in the form of documentation (e.g. guides giving examples of good practice) and training in the form of conferences and seminars.

Overall, the above-mentioned information campaigns were considered satisfactory: they fostered a greater awareness of the rules and helped companies to develop a culture of accident and occupational diseases prevention.

4. TRANSPOSITION

Despite prior in-depth consultation of the social partners on each of the two Directives and their unanimous adoption by the Council, about half of the Member States failed to meet the transposition deadlines. The Commission started infringement proceedings against those Member States under Article 226 EC, which in some cases led to judgments by the Court of Justice before transposition was completed.
An analysis of the conformity of national legislation with the EC Directives seems to suggest that, with certain exceptions, the Directives’ requirements have generally been transposed faithfully. Some shortcomings were found as regards the responsibility of employers where workers from several companies are present (Articles 3(3) of the Directives), health surveillance (Articles 8 of the Directives), the derogation for mineral extraction by dredging (Article 12 of Directive 92/104/EEC), and certain points in the Annexes where the protection granted did not meet the required minimum laid down by the Directives.

5. ACTION IN THE FIELD: IMPLEMENTING THE TWO DIRECTIVES IN PRACTICE

Main aspects

A wide range of companies, both large and small, and with very different characteristics, is active in the extractive industries. In the offshore drilling sector, for example, the companies are mainly large international firms, while there are many small, family-owned businesses in the ornamental stone-mining and quarrying sectors. Each type of company has different features and the health and safety policy within each is adapted to its particular situation.

Despite efforts to improve workers’ health and safety protection, the extractive industries are still a high-risk sector, both in terms of accidents at work and occupational diseases.

According to a study referred to in the independent expert report⁶, about 10% of mining accidents (Directive 92/104/EEC) are caused by technical deficiencies, such as equipment that does not meet the standards, while the remaining 90% stem from organisational shortcomings, such as unclear orders and workers’ mistakes in estimating dangers.

The assessment of the situation in large and medium-sized companies in the extractive industries in general shows that there are no significant differences between the Member States or extractive industry sectors with regard to the main minimum safety requirements laid down in the Directives. Overall application seems satisfactory regarding the safety and health document, the responsibility of the coordinating employer, workers’ training and supervision, and emergency precautions.

On the other hand, smaller companies tend to lack the financial resources and the knowledge needed for an effective health and safety policy. In spite of this, the national reports seem to suggest that the Member States have not adopted specific rules covering the specificities of small and medium-sized companies (‘SMEs’), apart, for example, from the authorities’ efforts to improve and streamline certain administrative procedures for SMEs. The Member States have also organised specific information campaigns for SMEs. In one Member State (Portugal), small companies that perform well in the area of health and safety at work pay lower social security and insurance contributions.

Certain proactive prevention measures have proved effective in reducing accidents.

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These include training based on ‘near misses’ (i.e. incidents of dangerous working conditions that nearly produced an accident), at which the workers concerned tell their story, and on-site pictures of children with safety messages to parents working in the extractive industry. In some cases the workers’ families are contacted by telephone to bring home the importance of health and safety measures at work.

Companies active in extraction through drilling (Directive 92/91/EEC) are mainly large and medium-sized. The on-site evaluation showed that safety and health management in various companies operating in different Member States is fairly similar. As a rule they are aware of the specific risks in the sector and even competitors generally share information on health and safety issues. Daily health and safety management involves meetings, supervision and work permits, which are required for jobs that involve especially hazardous situations in line with the Directive7.

Companies involved in the open-cast mining of coal, metal ores and industrial minerals (Directive 92/104/EEC) are mainly large and often use automated processes. They generally believe that health and safety measures can generate profits, and not only costs, and that the latter are generally lower than the costs resulting from occupational accidents and diseases. Such companies often find it a big challenge to convince their workers of the relevance of health and safety measures. By contrast, companies involved in ornamental stone-quarrying are mainly SMEs: these are often family-owned with from three to ten workers, they frequently employ manual processes, and their workers are more directly exposed to such risks as dust and falling rocks. SMEs are likely to consider health and safety measures a bother and a burden and tend not to implement the requirements of the Directive comprehensively.

BOX: SMEs need more support for putting an effective health and safety policy in place. This should be provided by the Member States, to effectively address the specific features of the companies concerned. The Member States should include this issue in their national strategies to be adopted under the Community strategy on health and safety at work (2007-12).

Workplace conditions

Articles 3(1)(a) of the two Directives require employers to take the necessary measures to safeguard workers’ health and safety by ensuring that workplaces are designed, constructed, equipped, commissioned, operated and maintained in such a way that workers can perform the work assigned to them without endangering their safety and/or health and/or those of other workers.

Companies in the extractive industries generally appear to comply with those provisions as far as accident protection is concerned, but there seem to be differences between companies in the various Member States as regards the potential adverse long-term health effects. The problems here may be related to incorrect working positions, old equipment, manual handling of heavy equipment or a lack of proper protection against unhealthy environmental conditions, such as excessively high or low temperatures, humidity, noise, vibration or dust.

Some of these problems arise because upgrading equipment may be very expensive and/or may cause practical problems in some cases, or the workers involved may lack training.

The picture seems fairly positive as regards extraction through drilling (Directive 92/91/EEC), where outdated equipment is frequently replaced by new equipment, mechanical processes are improving the situation in potentially dangerous workplaces, and measures are being taken to abate noise and reduce pollutants.

Worker’s qualifications

Articles 3(1)(c) of the two Directives require employers to take the necessary measures to ensure that work involving a special risk is entrusted to competent staff only and is carried out in line with the instructions given.

According to the on-site evaluation, companies usually have rules on the qualifications needed to perform special tasks.

For extraction through drilling (Directive 92/91/EEC), there are regulations in the offshore sector requiring workers to possess training certificates where they have to perform specific work or emergency tasks. Several Member States and companies around the North Sea are working to reach agreement on training requirements, which will facilitate the free movement of workers.

BOX: National authorities and social partners in the extractive industries are encouraged to step up their efforts to reach an agreement on training requirements applicable to workers throughout the EU, depending on the scale and/or type of risk. Assistance could come from the Advisory Committee on Safety and Health at Work and its Standing Working Party for the Mining and Other Extractive Industries.

Safety and health document

In accordance with Articles 3(2) of the Directives, which are worded similarly, employers are to ensure that a safety and health document (‘SHD’) is drawn up and kept up to date, and that it demonstrates in particular that: (i) the risks to which workers and the workplace have been exposed have been determined and assessed; (ii) adequate measures have been taken to attain the aims of the Directive; and (iii) the design, use and maintenance of the workplace and of the equipment are safe.

It was found that both large companies and SMEs generally draw up an SHD. Not all companies devote the same attention to it, however, and there are considerable differences in the length and content of SHDs. Furthermore, very small companies do not appear to update their SHDs regularly. Generally, SHDs appear to cover everyone in the company, including subcontractors and self-employed persons.

The benefits of SHDs are generally recognised and the risk assessments make for better prevention of occupational accidents and illnesses. The workers concerned often initiate updating of the SHD, for example by means of worksheets in which they note the risks they encounter. SHDs may need to be updated following accident investigations, reports and in-depth analyses of near misses, and discussions with the workers, during which they can put forward ideas to improve the situation.
Some enforcement bodies are engaged in efforts to harmonise SHDs, for instance through a standard template. Under Directive 92/91/EEC (extraction through drilling), for example, the drilling contractors in the North Sea area have drawn up a common template for an SHD in consultation with the enforcement bodies in the countries concerned. This will obviate the need to draw up new documents, for example, where a drilling platform is moved across a border to carry out similar tasks (unless there is a change in working conditions), which will make things easier for both the companies and the enforcement bodies involved.

Workers’ representatives can play an important role in a company’s safety and health policy. The on-site evaluation found that workers or workers’ representatives are generally consulted on the SHD, albeit not always and not to the same degree. The evaluation also showed that workers’ representatives were somewhat reluctant in some cases to use their influence. The evaluation also suggests that this may be due to a lack of training or experience regarding the company’s overall health and safety policy: some workers’ representatives may specialise in solving practical problems, such as wage levels, working time and job security, and have less experience in terms of introducing a prevention culture in a company.

**BOX:** To help the drawing up of effective safety and health documents and establish a prevention culture in companies, more practical information, especially in SMEs, and a greater awareness of the importance of SHDs among workers' representatives, are needed.

**Subcontractors and self-employed persons**

Articles 3(3) of the two Directives, which are identical, provide that where workers from several companies are present at the same workplace, each employer is responsible for all matters under his control. In addition, the employer in charge of the workplace is to coordinate all measures regarding workers’ health and safety and to set them down in the SHD.

The evaluation showed that subcontracting is on the increase and coordination of work is not always satisfactory. Nevertheless, companies employing subcontractors usually check their experience and understanding of safety and health requirements. The general contractor may also provide compulsory safety training, updated at regular intervals.

Problems occasionally appear to arise because workers hired by subcontractors, usually for temporary or seasonal work, lack training, which could explain the higher number of occupational accidents involving them. There seem, however, to be fewer problems with subcontracting in this area than in other high-risk sectors, such as the construction industry.

**BOX:** Given the problems arising with subcontracting in the extractive industries and other sectors and as announced in the Community strategy for 2007-12, the Commission will look at the specific problems of subcontracting. Good practice in this sector could benefit other sectors too, and could be promoted through the Advisory Committee on Safety and Health at Work, its Standing Working Party for the Mining and Other Extractive Industries and the Social Sectoral Dialogue Committee on Extractive Industries at EU Level.

**Fire-fighting and rescue**

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8 Denmark, Germany, the Netherlands, Norway and the United Kingdom.
Articles 4 and 5 of the two Directives, which are identical, lay down specific minimum requirements on protection from fire, explosions and health-endangering atmospheres, and escape and rescue facilities.

Those requirements generally appear to be met in practice, thanks to the installation of fire extinguishers and the organisation of fire-extinguishing drills and special fire and/or rescue teams. Occasionally, friction detectors are installed on belt conveyors to prevent overheating.

Stand-by transport (ambulances and helicopter) is often provided for rescues, in addition to muster points and emergency refuge chambers. Experience has shown the importance of escape and rescue facilities, including for rescue teams, who often have to operate under extremely dangerous conditions, e.g. just after an explosion.

Health surveillance

Articles 8 of the Directives require health surveillance to be provided for workers before they are assigned to duties in the extractive industries and at regular intervals subsequently. The Directives also note that such measures are to be introduced in accordance with national law and/or practices.

Health surveillance of workers is generally performed as required by the Directives. It is mostly carried out by occupational health doctors rather than general practitioners, and may extend to subjects other than occupational health issues strictly speaking, such as anti-smoking campaigns and dietary advice. In some Member States there is provision for follow-up for retired workers (for example, for ex-coalminers at five-yearly intervals).

Enforcement

In most Member States, the enforcement of national legislation transposing the Directives is the responsibility of the labour inspectorates. However, labour inspectorates in some Member States do not deal with the extractive industries: instead, special bodies have been set up to oversee the sector, often because of its relative importance for the economy and the specific risks arising. Enforcement authorities responsible for surveillance of workers’ health and safety could perhaps usefully coordinate their activities and exchange information, including know-how, because the various departments may each be dealing with different sections of the health and safety acquis and may not have an overall picture. For instance, the labour inspectorate may be enforcing the Framework Directive 89/391/EEC, while the mining inspectorate enforces Directives 92/91/EEC and 92/104/EEC.

Larger companies often have the financial and organisational resources needed to put an effective health and safety policy in place and are usually in regular contact with the enforcement authorities.

BOX: There may be several enforcement authorities dealing with enforcement of the legislation applicable to the extractive industries in the Member States. Mutual cooperation and information exchange between these bodies in each Member State
should be improved so that all aspects of health and safety policy are covered comprehensively. The Senior Labour Inspectors Committee\(^9\) could help in this regard.

6. **GENERAL ASSESSMENT**

6.1. **The two Directives’ main positive effects**

In their national reports the Member States stressed the two Directives’ positive effect in making companies more aware of the issue of health and safety at work, particularly through the risk assessment and the SHD, which has encouraged companies to give priority to health and safety and preventive policies. The measures provided for in the Directives were felt to be sufficiently exhaustive and general to deal flexibly with the risks occurring in the companies concerned. Another advantage noted was that the EU-wide minimum requirements averted competition between companies on health and safety standards, since they all had to apply them.

One important effect of the Directives was the shift towards an overall policy of occupational health and safety in companies. The provisions on the coordination of health and safety measures at sites where workers from several companies are present were also regarded as an important positive innovation brought about by the Directives.

Health and safety conditions in SMEs working in small quarries in particular appear to have improved to some extent thanks to Directive 92/104/EEC (on mining); companies of this type do not appear to have been concerned about the issue prior to the adoption of the Directive.

6.2. **Main problems in implementation**

As mentioned above, the flexibility allowed by the two Directives was praised overall, though it may mean that companies find it difficult to determine the precise standard of worker safety and health protection required and to apply the Directives’ provisions in practice. In addition, the report points out that the latitude granted to the Member States by Directive 92/91/EEC may lead to differences in implementation in the Member States, which may in turn lead to situations where some conditions may be accepted in one Member State but not in another.

The employers mention that in some cases the SHD duplicates the documents required, for example, for mining permits. This problem may be linked with the implementation of the Directives in the Member States, and could possibly be resolved by combining the various documents required for different operations in the extractive industries, provided that they comply fully with the requirements of the SHD.

**BOX: To reduce red tape, the Member States could consider combining the SHD and other documents required for various operations in the extractive industries in order to avoid the need for companies to produce several separate documents of a similar nature.**

SMEs apparently tend to view the implementation of the Directives’ requirements solely as a burden. They are likely to focus on the costs of accident insurance and preventive measures,  

and tend to overlook hidden future costs which could well be higher, such as those stemming from loss of production and the cost of materials and reorganisation required as a result of occupational accidents and diseases.

The national reports and the on-site evaluation reveal a tendency among employers in some Member States to avoid reporting all accidents that should be reported. They may avoid doing so for reasons connected with the company’s image or to avoid contractual fines. This means the authorities will not have an accurate picture of the situation in the sector concerned and will therefore not be able to ensure that worker protection is improved. Failures to report accidents are a problem that needs to be addressed in connection with improving the way enforcement authorities operate.

National reports also show that employers may avoid modernising equipment because of the cost, and the on-site evaluation found that some employers tend to give environmental concerns priority over worker health and safety.

Enforcement bodies frequently appear to apply the same approach to SMEs as to larger firms, disregarding smaller companies’ often limited resources and specificities. In the event of an accident, the potential damage to a large company’s public image has a greater dissuasive effect than a fine. According to some employers, enforcement bodies concentrate overly on the safety of the equipment and not enough on training workers (organisational aspects, training, and promotion of a safety culture).

Workers are generally consulted at certain stages in the preparation and/or use of the SHD, but to varying degrees and not systematically. The Directives make worker consultation a requirement, but it rarely seems to be fully met.

7. ASSESSING THE LEGISLATION’S EFFECTIVENESS

It is difficult to prove the existence of an objective link between the Directives’ implementation in the extractive industries and improvements in terms of accidents at work and occupational disease. Any attempt is complicated by the fact that accidents and occupational diseases occur as a result of many factors other than those covered by the rules laid down in the Directives.

There is also the fact that occupational diseases are often diagnosed long after the worker’s exposure to the risk factor, and the Directives contain some new provisions, while other provisions are grafted onto existing national regulations. Measuring the impact of the Directives is therefore not easy.

As mentioned above, despite the efforts made the extractive industries are still a high-risk sector.

(a) Effects on accidents at work and occupational diseases

The extractive industries involve major risks in terms of accidents at work. The incidence rate\(^{10}\) of accidents at work in the sector is considerably higher than the average for all sectors

\(^{10}\) The incidence rate defined by the European Statistics of Accidents at Work (ESAW) methodology is the number of accidents at work per 100,000 workers in employment.
of activity: in terms of accidents entailing more than three days’ absence it is more than double (5500 compared to 2500), and it is almost five times as high (14 compared to 3) in terms of fatal accidents\textsuperscript{11}. Interestingly, according to estimates in 1986\textsuperscript{12}, the incidence rate for fatal accidents was considerably higher in 1986 (100 compared to 14 in 2005), so accidents seem to have fallen sharply from 1986 to 2005, the period during which the Directives came into force.

The statistics\textsuperscript{13} show that the fall or collapse of a material agent (for example, the collapse of an underground tunnel) is the biggest cause of accidents, including fatal accidents, at 25\% of the total, while such events as fires and explosions account — unexpectedly perhaps — for smaller percentages (i.e. under 5\%). But those figures relate to the \textit{very last event deviating from normality and leading directly to the accident}: that last event may in turn have been triggered by other events, such as a fire or explosion in a mine that caused a tunnel to collapse. In that case, only the collapse of the tunnel will be recorded as the last event, but the fire or explosion may well have been the original cause.

\textbf{BOX: The Standing Working Party for the Mining and Other Extractive Industries should work closely with the Social Sectoral Dialogue Committee on Extractive Industries at EU level on accidents and their causes.}

Of all sectors of activity, the extractive industries sector had by far the highest incidence rate for occupational diseases, even compared with other high-risk sectors: this stood at 1949 as against 134 for construction, 41 for agriculture and 29 for transport. Furthermore, the sector’s incidence rate for respiratory diseases is the highest of all sectors of activity\textsuperscript{14}.

Since the Directives have been adopted, companies have become more aware of health and safety at work aspects, they are better organised in this field and the degree of mechanisation is higher, all of which should bring fewer accidents and occupational illnesses. Accident and occupational disease levels are still high, however, often as a result of several factors:

\begin{itemize}
\item compared with larger companies, SMEs, which seem to make up the majority of companies in this sector, have higher rates of accidents;
\item employers in smaller companies often have less knowledge of health and safety at work;
\item the pace of work has become faster;
\item employers sometimes focus on productivity or the environment rather than on worker protection;
\item in some Member States, the numbers of young and/or immigrant workers are rising, and the latter often have language problems.
\end{itemize}

\textsuperscript{11} Source: DG EMPL and Eurostat “Causes and circumstances of accidents at work in the EU”, Figure 1.11, p. 25; Eurostat ESAW and Labour Force Survey (LFS) 2005 data.
\textsuperscript{13} Source: Eurostat ESAW Phase III 2005 data.
\textsuperscript{14} Source: Eurostat EODS 2005.
(b) Impact on productivity, employment and competitiveness

Most Member States have provided no information on the impact of the Directives on productivity, employment and competitiveness. Some Member States\(^\text{15}\) consider that the measures in the Directives have fostered productivity and competitiveness.

The national reports point out that implementing the Directives encourages improvements in the working environment, which makes the work more attractive to workers and increases productivity. Lower accident rates reduce absenteeism, which constitutes a significant loss for the economy, in addition to the human suffering caused.

8. SUGGESTIONS FOR IMPROVEMENTS

Since the Directives are drafted in general terms, it has been suggested that practical guidelines, best practice or other information could be developed and disseminated to spell out the obligations under the Directives.

As regards the SHD, the evaluation points to a need for templates for specific, primarily small industries, such as ornamental stone quarries. This will help improve safety and health conditions, since it will make it easier for companies to prepare the SHD and will help them find ways of assessing and introducing improvements needed.

In terms of enforcement, specialist staff in inspection bodies could make it easier to communicate with the companies concerned: suggestions could be more convincing and companies could be more inclined to implement them. This may also be important for industries facing complex operational challenges. Furthermore, inspectorates often appear to be understaffed, so inspecting every company once a year, for example, is not feasible. Companies mention that inspectorates often focus on finding shortcomings and do not offer suggestions on how to improve the situation, even though there is a need for practical suggestions, given the general terms in which the Directives are drafted. Nevertheless it has emerged that inspectorates are developing new enforcement techniques for Directive 92/91/EEC, with audits on specific topics such as working hours and rescue operations.

There are problems related to moving workplaces across borders, because of differences in the way the Directives are implemented in different Member States. Here the Commission intends to pursue its efforts to monitor conformity of transposing legislation and initiate infringement proceedings, where needed, to correct non-compliance of national provisions with the EC Directives. However, the Directives lay down minimum requirements and the Member States may adopt or maintain stricter measures\(^\text{16}\).

There have also been suggestions for further harmonisation in this sector across the EU, which would stimulate the introduction of a level playing field and facilitate cross-border movements of people and equipment. Another suggestion is to reduce administrative burdens on companies due to the way the Directives are implemented or enforced in the Member States. As part of an ongoing action programme presented by the Commission to reduce the

\(^{15}\) Greece and Portugal.

\(^{16}\) Article 1(3) of the Framework Directive 89/391/EEC. See also the Court of Justice’s judgment in Case C-84/94 UK v Council [1996] ECR I-5755, paragraph 17.
administrative burdens on business\textsuperscript{17}, the Member States are requested to reduce such burdens on companies and set ambitious targets for this.

As regards possible amendments to Directive 92/104/EEC (on mining), the following have been suggested:

- separating out coal-mining from the extracting and mining of other minerals, because of the specific problems in these two sectors. Another suggestion was to provide practical guidance specifically covering each type of mining operation instead of amending the Directive;

- including more detailed provisions on protecting operators of equipment from the risk of undetonated explosives and those hidden in rock piles to be removed, the temporary installation of safe havens or safety chambers in tunnels where preparatory or development works take place until permanent escape routes are installed, and the fitting of fire-extinguishers and self-rescuers to vehicles.

As these practical suggestions are technical in nature, they will be discussed with the Standing Working Party for the Mining and Other Extractive Industries with a view to assessing any need for technical adaptation of the Directive (Article 11 of Directive 92/104/EEC).

\textbf{9. CONCLUSIONS}

While the two Directives’ implementation in the 15 Member States concerned appears to be relatively satisfactory and accident rates in the extractive industries sector are down, numbers of accidents and cases of occupational disease occurring are unacceptably high and workers still run great risks in this sector.

To improve the situation, the Community strategy for 2007-12 encourages the Member States to adopt national strategies establishing quantitative objectives for reducing the incidence of occupational accidents and illnesses, to target sectors and companies with the worst track records, such as the extractive industry sector, and to focus on the most common risks and the most vulnerable workers.

As in other sectors, there seems to be a clear division between types of companies: the larger companies, especially in the drilling sector, perform relatively well, while SMEs, especially in the ornamental stone-quarrying sector, seem less well-equipped to put in place an effective health and safety policy.

Companies clearly need to put health and safety higher up their agendas. Apart from the social/ethical considerations, there are important financial reasons why companies should put in place a policy for the prevention of accidents and occupational diseases. A proper prevention policy will bring clear financial benefits: companies should be made aware that they need to consider not only the cost of insurance premiums and prevention measures but also the more indirect costs of accidents and occupational diseases (such as costs relating to the worker’s replacement, loss of production and damage caused by a negative public image), which are likely to be far higher. When viewed from such a pragmatic perspective, investments in preventive measures will seem rather small and companies may be more

\textsuperscript{17} COM(2007) 23.
inclined to make them. The Member States need to be more active in raising companies’ awareness of such considerations.

Health and safety knowledge needs to be more evenly spread among companies of different type and size. This could be a task for the Member States, which could tackle it by drawing up guidelines and assisting and training smaller companies, in particular, to apply an effective health and safety policy. To make progress in this area, the Advisory Committee on Safety and Health at Work and its specific Standing Working Party for the Mining and Other Extractive Industries\(^\text{18}\) could address the particular issue of training. As the Community strategy for 2007-12 states, the Commission will look at the specific problems relating to subcontracting in greater depth. Experience with subcontracting in this sector could be exported to other sectors. In this connection, the role of people and their limits in an environment increasingly dominated by advanced technology should be borne in mind.

The Commission is of the opinion that this report, which is based on information from EU-15, also contains useful suggestions for the 12 Member States that have meanwhile joined the EU. Recent mining accidents demonstrate the need for further improvements in the situation.

One conclusion that may be drawn from this assessment is the importance of the role of workers’ representatives and the need to share best practice. The European Agency for Safety and Health at Work in Bilbao could assist in disseminating specific, targeted information, especially to the Member States that have joined the EU more recently.

Meanwhile, several Member States stress that amending the Directives is not necessary for the moment, probably because of the general wording of the Directives, which allows them to apply to a wide range of situations. In the light of the information presented in this report, the Commission agrees that there is currently no need to amend the Directives.

The Commission calls on the Advisory Committee on Safety and Health at Work through its Standing Working Party for the Mining and Other Extractive Industries to draw conclusions from this evaluation.