

THE EUROPEAN HARMONIZATION OF REGULATIONS AFFECTING INDOOR AIR QUALITY

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ABSTRACT

Among the objectives of the European Community, "the constant improvement of the living and working conditions of their peoples" and "the harmonious development of their economies" represent important goals. In this context, several Directives related to health and safety at the workplace and to environment pollution have been elaborated by the European Commission. While certain aspects of indoor air quality are addressed in a few of these Directives, a respective Comprehensive Directive is not yet in sight.

INTRODUCTION

The European Economic Community (EEC), with its combined population of 320 million people, has the potential for becoming the world's most important trading block. Whereas, in the past, the 12 member nations of the EEC have been concerned with their separate national issues, the EEC is now realizing that continued fragmentation will limit their economic growth. To correct this, one of the EEC's main goals is the consolidation of the Community by the reduction or elimination of fiscal, bureaucratic, and technical trade barriers among the member nations' markets. This goal will be achieved through the adoption of probably over three hundred Directives covering a wide variety of economic and regulatory matters. Some of these Directives are or will be related to the health and safety at the workplace and to the effects of the environment on human health and the quality of life. Measures to be taken to improve indoor air quality will therefore fall in the scope of these Directives.

THE SINGLE EUROPEAN ACT

The Single European Act, which was passed on July 1, 1987, committed member nations to greater economic and social cohesion and to completion of a single internal market by December 31, 1992. One of the important areas affected by the Single European Act is the decision-making process of the EEC. In the past, most proposals required an unanimous vote for approval. Very often,

individual nations would use the veto to protect "vital national interests". Although the progress of harmonization should not override specific interests of individual nations, achieving a supranational aim has been restrained by the necessity of maintaining a consensus. The Act now allows for changes in the voting procedures in the Council of Ministers. Under the Single European Act member states have a voting coefficient proportional to their populations, and majority rule for Council voting has been extended from internal market matters to many of the international market sectors.

THE NEED FOR HARMONIZATION

Indoor air quality at the workplace

Current legislation relating to the protection of health and safety at work differs considerably between the different Member States. In Greece, Italy and Luxembourg, some basic principles are laid down in the national constitution. In France the general provisions are contained in the Public Health Code, in the Netherlands in the Civil Code and in Germany in the Industrial Code. Protection of all individuals, whether at work or not, is provided for in the Civil Code in Belgium and in unwritten civil or common law in Denmark, Ireland and the UK.

However, not only the legal frame but also the extent to which legislation covers health and safety at work varies considerably between Member States. In addition, the existence of non-statutory provisions and self-regulation agreements of industry may introduce further differences in the level of protection and in the requirements that employers must observe in the different Member States. Obviously, these differences are not compatible with the principles of a Common Market.

In recognition of the need to harmonize the different national provisions and measures which guarantee the safety and health at the workplace, the European Parliament adopted therefore four resolutions in February 1988. In these documents, the Commission was invited to draw up a framework Directive which should serve as a basis for more specific Directives covering all the risks connected with safety and health at the workplace including those resulting from the exposure to potentially harmful chemical, physical and biological agents in the ambient air.

Indoor air quality at places other than the workplace

While outdoor air quality in general and indoor air quality at the workplace have attracted at least some regulatory interest, very limited efforts have been undertaken so far in the EC to improve the health and quality of life of citizens by encouraging improvements of indoor air quality also at places other than the workplace. Considering the potential economic and social impact that may result from a harmonization of the measures required to assure a minimum standard of indoor air quality, it appears surprising that this area has so far been largely neglected. As will be described in more detail below, involuntary smoking is the only aspect which has been addressed in isolation by a Council Resolu-

tion issued in July 1989.

HOW IS HARMONIZATION

In its efforts to create the basis for a harmonized system, the Commission observes a number of general principles, of which particularly important one is that of serving the public interest, i.e. that of serving the common good. In this respect, the Commission is kept to a high standard of effectiveness, the Commission's rules must be avoided and in preparing its proposals, the Commission must satisfy at least one of the

- protecting public health
- providing consumers with information
- ensuring fair trade
- providing for effective

In order to achieve a harmonized system, the European Commission uses legislative tools which are Regulations and Directives. Regulations are immediately applicable in all Member States, while Directives are national law and regulatory instruments. In most cases, Directives rather than Regulations are used.

Until 1987, the adoption of a Directive required unanimous approval by the Member States. However, with the entry into force of the article 100 of the Treaty, a qualified majority is required for the final approval. This change of the voting procedure has led to the adoption of new Directives.

As already explained, the Commission may modify their national legislation so as to make it fully compatible with the Directive. However, the Commission is improving the safety and health at the workplace. National law may not be used for protection already achieved.

Proposals for new Directives which is organized in two parts (XX). In relation to indoor air quality (Safety at the Workplace) particularly relevant. The Commission has submitted to the Council a proposal for the Economic and Social

tion issued in July 1989.

HOW IS HARMONIZATION OF NATIONAL REGULATIONS ACHIEVED?

In its efforts to harmonize the European legislation and create the basis for a Common Market, the Commission has to observe a number of generally applicable principles. A particularly important one is that the new rules must not go further than is genuinely necessary to achieve the desired objective, i.e. that of serving the common good. Recognizing that a legislation which is kept to the bare essentials is clearer and more effective, the Commission takes the position that superfluous rules must be avoided and that necessary rules must be improved. In preparing its proposals for putting new legislation into effect, the Commission confines its efforts to those which satisfy at least one of the following aims:

- protecting public health
- providing consumers with economic protection and adequate information
- ensuring fair trade
- providing for effective control mechanisms

In order to achieve its target and to realize a single European market, the European Community disposes of two different legislative tools which are binding for the Member States: Regulations and Directives. While Regulations are in effect immediately in all Member countries, Directives represent guidelines with a binding effect for implementation in the respective national law and regulations, normally until 1992 the latest. In most cases, Directives rather than Regulations are applied.

Until 1987, the adoption of new Directives required the unanimous approval by the Council of Ministers, i.e. each Member country was given the right to block the legislative process by its veto. However, with the Single European Act of July 1, 1987 the article 100 of the treaty of Rome was altered in the sense that a qualified majority rather than unanimity will in future be required for the final approval of new Directives (article 100A). This change of the voting procedure greatly facilitated the adoption of new Directives and speeded up the legislative process.

As already explained, Directives oblige the Member States to modify their national legislation within a given period of time so as to make it fully compatible with the provisions laid down in the Directive. However, if the provisions are aimed at improving the safety and health of workers, the approximation of national law may not result in any reduction in levels of protection already achieved in individual Member States.

Proposals for new Directives are prepared by the EC Commission which is organized in twenty different Directorate-General (DG I - XX). In relation to indoor air quality, the activities of DG V (Safety at the Workplace) and DG XI (Environment Protection) are particularly relevant. The elaborated proposals are subsequently submitted to the Council of Ministers which in consultation with the Economic and Social Committee and with specific Expert

Committees (e.g. the Advisory Committee on Safety, Hygiene and Health Protection at Work) as well as in cooperation with the European Parliament adopts the proposed Directive.

COMMUNITY ACHIEVEMENTS IN THE HARMONIZATION OF MEASURES AFFECTING INDOOR AIR QUALITY

Framework Directives related to safety and health at the workplace

Following the four 1988 parliamentary resolutions referred to above, the Council adopted a Framework Directive in June 1989 to encourage improvements in the safety and health of workers at work (32 O.J. Eur. Comm. (No. L183) 1 (1989); 89/391). This Directive establishes general principles concerning "the prevention of occupational risks, the protection of safety and health, the elimination of risk and accident factors, the informing, consultation, balanced participation in accordance with national laws and/or practices and training of workers and their representatives, as well as general guidelines for the implementation of the said principles". Applicable to all sectors of activity, both public and private, Directive 89/391 in essence provides a framework for the adoption of measures relating to specific aspects of workplace safety.

Article 16 of the Directive states that the Council shall adopt individual Directives in specific areas such as workplaces, work equipment, personal protective equipment, work with visual display units, etc. While indoor air quality is not mentioned specifically, this subject is addressed in the Directive on "workplaces", which is discussed below.

Pursuant to its resolution of 29 June 1978 concerning the first programme on safety and health at work, the Council adopted a Directive in 1980 regarding the protection of workers from risks related to exposure to chemical, physical and biological agents (23 O.J. Eur. Comm. (No. L327) 8 (1980); 80/1107), which called for measures to prevent exposure to such agents where possible.

This Directive was updated and amended in December 1988 by Directive 88/642 (31 O.J. Eur. Comm. (No. L356) 74 (1988); COM 88/642). Directive 88/642 amends Article 8 of Directive 80/1107 by further specifying the procedure for issuing individual Directives with respect to chemical, physical, and biological agents. These agents are listed in an annex (Annex I of the Directive) and include acrylonitrile, asbestos, arsenic and its compounds, benzene, cadmium and its compounds, mercury and its compounds, nickel and its compounds, lead and its compounds, as well as chlorinated hydrocarbons, specifically, chloroform, paradichlorobenzene, and carbon tetrachloride. The purpose of these individual Directives will be to establish mandatory limit values for occupational exposure, and where appropriate, other specific requirements.

Directive 88/642 also amends Article 8 to authorise the Council to adopt for other agents indicative limit values that "reflect expert evaluations based on scientific data". These indicative limit values (which are in effect recommendations) are

intended to provide Member States taken into account when est

Under the amendments essentially required to do exposure might occur, the any resulting risk; (2) sampling and measuring procedures where a limit value has been measures are appropriate to are to be guided by the set forth in Annex II to the such terms as "dust", "fume" how they are to be underpinned by medicine and toxicology. An "Assessment of Exposure" is to evaluate the presence and chemical, and physical agents makes clear, however, that minimum requirements, and from taking other, more str

Specific Directives on measures at the workplace

On 30 November 1989, the Council adopted a Directive on minimum safety and health requirements for the use of work equipment (19 O.J. Eur. Comm. (No L393) 1 (1989); 89/655). Article 16 of Directive 89/655 sets a general minimum requirement and issues in the workplace emergency routes and fire exits for handicapped workers, rest areas for workers, and the form of notices. The form of notices neither specific nor exact

With regard to indoor air quality, that "steps shall be taken to ensure that fresh air in enclosed workplaces is renewed by methods used and the physical conditions further provides that forced ventilation must be maintained in working conditions. It must be indicated by a control system or mechanical ventilation to avoid exposing workers at regular intervals and to create a hazard by pollution immediately. Finally, it should be taken in staff workplaces to protect non-smokers from tobacco smoke".

On 30 November 1989, the Council adopted a Directive concerning the minimum safety and health requirements for work equipment by workers (19 O.J. Eur. Comm. (No L393) 1 (1989); 89/655). The term "work equipment" means any machine, tool, or

In 1987 the Commission submitted a proposed Directive on the protection of workers from risks related to exposure to carcinogens at work (30 O.J. Eur. Comm. (No. C34) 9 (1987); COM 87/641). This first proposal was subsequently amended by proposed Directive 89/405 (32 O.J. Eur. Comm. (No. C229) 8 (1989); COM 89/405) submitted in August of 1989. Recently, a common position has been reached on this proposal.

Proposed Directive 89/405 provides a method for defining various classes of carcinogens and suspected carcinogens, calls for the use of closed systems in the production and use of carcinogens, and, where this is not possible, for the reduction of exposure to the lowest level practicable. Under the current version of the Directive, employers would be required to avoid or at least minimise exposure, and to provide warnings of exposure risks. Member States would be obliged to develop methods for assessing the risk of exposure and measures for minimising such risks. The carcinogens covered by this Directive include a number which can be airborne.

In addition to other preventive measures, employers would be required to post "No Smoking" signs in areas where workers are exposed or likely to be exposed to carcinogens. Directive 89/405 provides general guidelines for employers on scope and determination of exposure risk, and surveillance and protective measures. It also contains requirements for providing information to, and consultations with, workers, as well as training and refresher training on "potential risks to health, including the additional risks resulting from tobacco use".

On 28 July 1982 the Council adopted a Directive on the protection of workers from the risks related to exposure to metallic lead and its ionic compounds at work (25 O.J. Eur. Comm. (No. L247) 12 (1982); 82/605). This Directive requires that any work involving a risk of absorbing lead be assessed in such a way as to determine the nature and degree of workers' exposure to lead. Employers are obligated to take measures to prevent risks of absorption of lead. In general, exposure to certain specified levels of concentrations of lead in the air, or the presence of lead concentrations above certain specified levels in a worker's blood, will trigger various requirements under the Directive, including medical examinations, efforts to minimise risks of absorption, and ongoing surveillance programmes. The Directive sets forth specific limit values for lead-in-air concentrations and biological parameters, as well as acceptable methods of sampling lead-in-air concentrations. It also states that workers and their representatives are to be given adequate information on the potential health risks of lead exposure and statutory limit values, precautions to be taken to minimise exposure, and hygiene requirements.

On 19 September 1983, the Council adopted a Directive on the protection of workers from risks related to exposure to asbestos (26 O.J. Eur. Comm. (No. L263) 25 (1983); 83/477). This Directive sets forth binding limit values for exposure to asbestos, and established requirements relating to the handling and use of asbestos in the workplace. Under its provisions, employers must provide workers with information regarding the risks of asbestos.

must ensure that exposure is reduced to the minimum possible level, and must monitor measurements of asbestos exposure.

On 9 June 1988 the Council adopted a Directive banning specified agents and work activities (31 O.J. Eur. Comm. (No. L179) 44 (1988); 88/364). This Directive seeks to protect workers from agents and activities which are considered to pose serious health and safety risks and against which adequate precautions may not be taken. The Annex to the Directive lists certain agents that may not be produced or used (2-naphtylamine, 4-aminobiphenyl, benzidine and their salts, as well as 4-nitrodiphenyl).

In December 1985 the Commission submitted a proposed Directive on the protection of workers from risks related to exposure to benzene at work (23 O.J. Eur. Comm. (No. C349) 32 (1985); COM 85/669). This first proposal was amended in December 1987 by proposed Directive 87/526 (30 O.J. Eur. Comm. (No. C333) 13 (1987); COM 87/526).

This Directive would establish specific binding limit values for exposure to benzene at the workplace. It calls for the use of less dangerous substitutes where available, and would regulate the handling of waste containing benzene, including waste from the cleaning of extracted air. It would also require employers to monitor measurements of exposure to benzene, and to ensure medical surveillance of workers who have been exposed.

PROSPECTS AND CONCLUSIONS

Among the objectives set out in the preamble to the Treaty establishing the European Community, the signatories affirmed as goal: "the constant improvement of the living and working conditions of their peoples" and "the harmonious development of their economies". It is within the context of those social and economic tasks that a number of Directives related to health and safety at the workplace and to environment pollution have been elaborated by the European Commission during the past few years.

While certain aspects of indoor air quality are addressed in a few of these Directives, a respective Comprehensive Directive is not yet in sight.

With regard to indoor air quality at places other than the workplace, Directives are so far lacking completely. Directives in relation to environmental pollution are focusing primarily on outdoor pollutants which are currently of greatest concern (sulphur and nitrogen oxides, hydrocarbons, photochemical oxidants, etc.). However, in the fourth Action Programme on the Environment (OJ C 328, 7. Dec. 87) it is stipulated that outdoor and indoor pollutants should be identified and that measures against indoor air pollution should be defined and implemented. It is to be expected, therefore, that this so far neglected area will attract regulatory interest in due course.