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**Health, Safety and Hygiene at Work**

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**Subject: Open call for tender VT/2012/056 - Evaluation of the practical implementation of EU occupational safety and health (OSH) directives in EU Member States with a view to assessing their relevance, effectiveness and coherence, and identifying possible improvements to the regulatory framework – Q & A**

**Question:**

The technical specifications refer in point 5.1.2 to a final study report on a common evaluation methodology for evaluation of EU OSH Directives. Is this report available?

**Answer:**

The final study report is attached. It comprises the following six documents:

1. Generic methodology report;
2. Generic methodology report – Annexes;
3. Work Place Directive (WPD) analysis report;
4. WPD analysis report – Annexes;
5. WPD analysis report – Annexes 2;
6. Assessing the compliance costs and benefits of European OSH Directives.

These documents are the result of a study carried out by independent experts and do not necessarily represent the European Commission's views. The documents cannot be quoted as reflecting the Commission's position and cannot be reproduced or disseminated for commercial purposes without prior consent given by the Commission.

One of the documents contains personal data, i.e. Annex VI "List of stakeholders" of the WPD analysis report (part of "WPD analysis report – Annexes 2", mentioned as number 5 of the above list). The applicable legislation in this field is Regulation (EC) No 45/2001 of the European Parliament and of the Council of 18 December 2000 on the protection of individuals with regard to the processing of personal data by the Community institutions and bodies and on the free movement of such data<sup>1</sup>. According to Article 8(b) of this Regulation, personal data shall only be transferred to recipients if they establish the necessity of having the data transferred to them and if there is no reason to assume that the legitimate rights of the persons concerned might be prejudiced. Therefore, the documents are attached without these personal data.

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<sup>1</sup> OJ L 8 of 12.1.2001, p. 1

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# **Generic Methodology Report**

## Methodology for Evaluation of EU OSH Directives –

Progress Project 2010-2011, extended April 2012

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April 2012

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## Summary

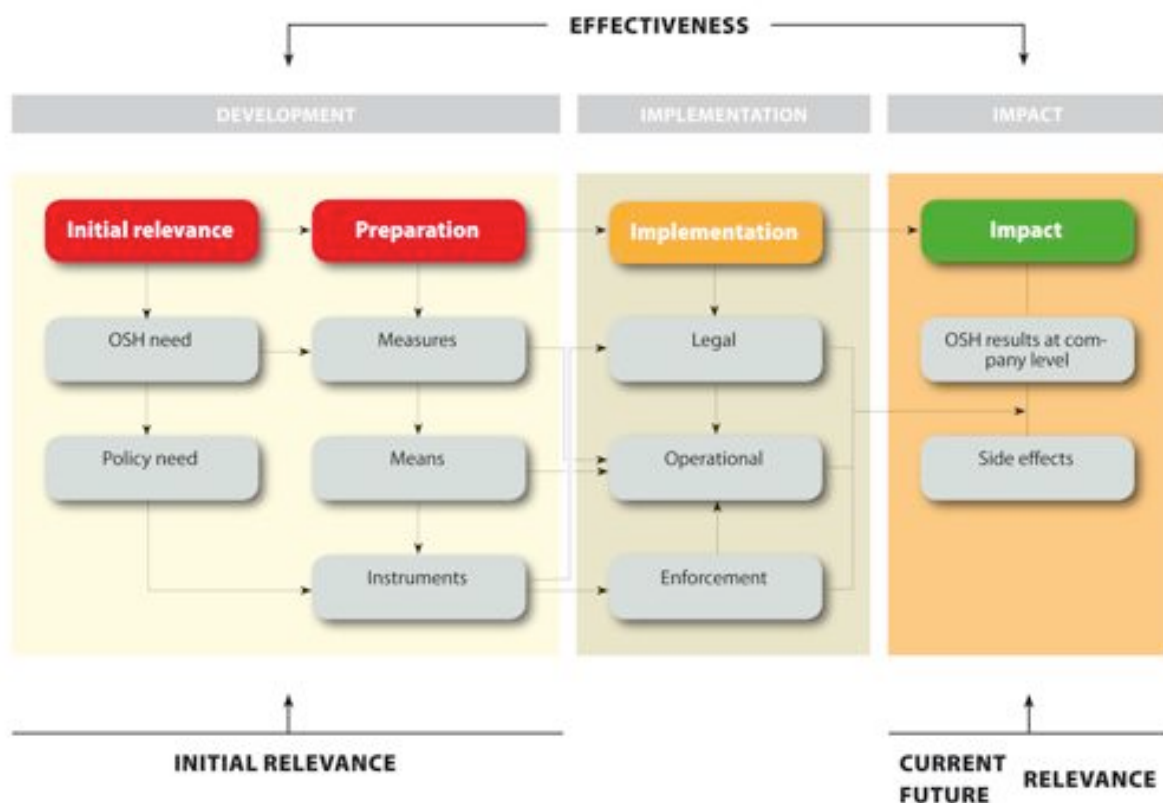
The current project aims to develop a generic methodology for the systematic evaluation of Health and Safety at Work Directives and to test the methodology in a pilot evaluation of Directive 89/654/EEC concerning the minimum safety and health requirements for the workplace.

This report presents the principles of a generic evaluation methodology, with regard to the effectiveness, the relevance and the cost-benefit of a EU OSH Directive. The specific evaluation goals were pre-defined by 17 mandatory tender questions.

### Generic evaluation model

The methodology introduces an evaluation model, which is based on the chronology and the dynamics of the legislative process. The evaluation covers all consecutive steps of the legislative process in a number of steps: initial relevance, preparation of the legislation, implementation and impact.

Figure: Generic evaluation methodology model



In order to evaluate each of the consecutive steps, a set of 17 questions and subquestions have been proposed. They constitute the framework of the evaluation methodology. Each question corresponds to a specific aspect that the evaluation will examine, a so-called 'indicator'. Indicators are needed to describe how well legislation has led to progress towards the objectives. They aim to evaluate specific parts of the legislative process and they provide the link between the evaluation questions and the available data.

### **Initial relevance**

The first step investigates the initial relevance of a new legislative initiative or a modification of an existing regulation, on two levels. The *operational or OSH policy relevance* refers to the need to intervene because of the existence of a problem and its extent. Once the operational relevance and the need for intervention have been demonstrated, the question about the *legislative relevance* arises, i.e. whether this OSH issue should be dealt with by legislation.

*Question 1: Does/did the EU Directive respond to an OSH need?*

### **Preparation of the legislation**

Once the existence and the extent of an OSH risk or OSH problem have been demonstrated, the next step consists of preparing the appropriate response, which may be legislation or other forms of intervention. First, *objectives* or targets should be defined such as the protection of a specific category of workers or the reduction of a specific type of risk. Secondly, once the objectives to be achieved are made explicit, the adequate *measures* to deal with the problem should be identified. Measures refer to the obligations, such as carrying out a risk analysis, relying on external OSH services. Thirdly, implementing the range of chosen measures requires *means*. Means refer to the human, financial, technical and other resources that are necessary to implement the prescribed measures. Only when these steps have been taken, is it possible to choose (an) appropriate *instrument(s)*. Instruments refer to the type of intervention, i.e. legislation in the case of the evaluation of the Workplace Directive.

*Question 2: Are/were the objectives of the EU OSH Directive clearly formulated and do they correspond with the defined OSH needs?*

*Question 3: Have the measures required to achieve the desired objectives been chosen adequately?*

*Question 4: Have the necessary means to apply the chosen measures been estimated?*

*Question 5: Have the instruments required to achieve the desired objectives/results been chosen adequately?*

### **Implementation of the legislation**

Once the legislation has been qualitatively prepared and adopted, the main responsibility shifts towards the national level. The legal and operational implementation needs to be evaluated. The *legal implementation* refers to the transposition of the EU regulations into national regulations. The *operational implementation* concerns the application of the national provisions on the work floor and the knowledge and awareness of all stakeholders concerned.

*Question 6: Has the EU Directive been transposed into national regulations in a qualitative way?*

*Question 7: Have the national provisions transposing the EU legislation been applied in a qualitative way?*

*Question 8: To what extent are the national provisions transposing the EU OSH Directive known by the stakeholders?*

*Question 9: How coherent is the perception of the fulfilment of the national provisions transposing the EU OSH Directive (legal and operational)?*

## National impact of the legislation

Qualitative EU legislation, through successful transposition and practical implementation, should have a national impact. Evaluation includes quantitative evidence, qualitative perceptions, possible side effects and a level playing field.

*Question 10: What are the objective and subjective results at the national level of the EU OSH Directive?*

*Question 11: Are there sector specific national results or diversified results for specific categories of workers?*

*Question 12: What are the observable side effects at the national level related to the scope of the EU OSH Directive?*

*Question 13: Is there an observable level playing field between the Member States, after x years of implementation?*

## Evaluation of effectiveness and relevance

The objective of an ex-post evaluation of existing legislation is to evaluate the effectiveness “*have the objectives been achieved*” and the current relevance “*do the objectives still correspond to the needs and problems*”.

*Question 14: Have the objectives and the expected impact been achieved x years after the adoption of the EU OSH legislation?*

*Question 15: What is the (actual and future) relevance of the EU OSH Directive?*

The evaluation is based on information from the evaluations of the initial relevance, the preparation, the implementation and the results (see figure). Information on *effectiveness* – have the objectives been achieved - is obtained through an evaluation of the impact, compared to the results of the evaluation on initial relevance. The contextual factors play a role in the final evaluation of the capacity of the legal instrument to reach results and should be taken into account as well. Also the counterfactual dimension, referring to what would have happened if there had been no directive at all, is to be taken into account at this stage.

The *current relevance* covers two aspects: the *OSH relevance*, i.e. the need to tackle an OSH problem that requires intervention, and the *legal relevance*, i.e. whether the OSH problem needs to be dealt with by legislation. The question regarding the *OSH relevance* can be answered from the conclusions about the effectiveness and the current state of the OSH issue: is there still a problem/risk, has it disappeared, has it evolved in such a way that (public) intervention is no longer required? The question of the *legislative relevance* can be answered from the conclusions on the evaluation of the chosen measures, instruments and means: has the legislation shown any weaknesses whose rectification might improve future results?

## Contextual factors

Effectiveness and efficiency of EU OSH Directives are influenced by a number of contextual factors, situated at all levels of the legislative process: initial relevance and quality of preparation, implementation and impact. These factors need to be taken into account in the analysis phase of the evaluation results. The existing legal framework in a country before transposition of the EU OSH Directive is an important contextual factor with regard to coverage and type of regulatory approach. At company level, there are a number of indicators, which create favourable conditions for the smooth implementation of the legislative provisions, such as the information and support network, the enforcement, but also the industrial relations scheme and the economic landscape.

## Evaluation of costs and benefits

As part of the evaluation of a EU OSH Directive, an insight into the costs and benefits of the regulation is required.

*Question 16: What means have been deployed and what are the corresponding costs induced by the EU OSH Directive?*

*Question 17: What is the cost-benefit of the chosen EU measures (provisions) and the EU Directive as instrument?*

As part of the evaluation project, we developed a cost-benefit model. The goal of the analysis is to examine whether the benefits outweigh the cost. The model suggests a method for estimating the three components of a cost-benefit analysis at a macro level: global estimation of the compliance cost, impact of the compliance on accidents and diseases, and global estimation of the compliance benefit. It proposes the use of a company panel for the evaluation of the compliance cost, the help of external experts and collaboration of safety representatives for the data collection at the company level. The estimation of the impact of regulatory compliance is based on the result of the impact and effectiveness estimation established by the generic methodology. The benefits are considered as the avoided care costs, compensation costs, productivity loss and human costs related to the occupational accidents/diseases attributable to the risk factors tackled by the directive.

### **Data collection**

The data collection part of this report is conceived as a practical guidance in the search for answers to the 17 questions and their subquestions through desk research, field studies, representative surveys and stakeholder and expert surveys. The efforts for data collection depend of course on many factors, e.g. the desired coverage of countries, sectors, types of respondents, languages and time periods to be included. The level of detail and coverage is closely connected to the available budget.

A sourcebook has been added in Annex reflecting the possible sources, their usability and availability.

### **Analysis of the findings**

A framework for analysis of the collected data has been developed, which allows to categorise the collected information. The replies to the questions and subquestions enable to evaluate each of the process steps, to define the successes and shortcomings of each process step and to formulate overall conclusions on effectiveness and relevance of a EU OSH Directive.

For each of the steps of the evaluation process – initial relevance, preparation, implementation and impact – a qualitative scoring system is introduced, which enables a categorisation of the findings of the evaluation. The final effectiveness evaluation score is the result of a combination of the scores of the evaluation of initial relevance and the evaluation of impact. One of three conclusions can be drawn: that the effectiveness has been high, that it has been low (mainly with regard to the side effects), or that it is questionable.

The effectiveness can be positively or negatively influenced by other factors such as *the contextual factors*. They need to be examined when evaluating the effectiveness of a EU Directive. Especially in situations where the impact has been slightly positive, and the overall effectiveness remains questionable, contextual factors will have a major contributing role. This can be due to the existing legal framework, the information and support structures, the enforcement, the economic landscape and the industrial relations scheme. These influences have been shown by means of the WPD test case results for two Member States.



## Introduction

In the Commissions' Communication on the Community Strategy 2007-2012 it is stated that the Commission will "encourage the establishment of a common methodology for evaluating the directives on health and safety at work in the light of the forthcoming directive on simplifying and rationalising the reports on practical implementation".

The Advisory Committee on Safety and Health at Work has set up a working party on the "Evaluation of OSH Directives (the 'ACSH Working Group')". This Group has been mandated to assist the Commission in the development of a new pilot evaluation project on Council Directive 89/654/EEC of 30 November 1989 concerning the minimum safety and health requirements for the workplace (henceforth referred to as the 'Workplace Directive' or 'WPD')", taking advantage of the methodology and the results of the evaluation of the VDU Directive and its implementation in a number of Member States.

In its Tender 2009/056, the Commission sought the further development of the evaluation methodology and the evaluation of the WPD, as a test case for the improved evaluation methodology.

The project aimed to develop a common methodology for the systematic evaluation of EU OSH legislation. The evaluation methodology should make it possible to assess both the quality of the European OSH Directives and the actual practical implementation in workplaces, including promoting and inhibiting factors.

The newly developed generic methodology has been adapted to a specific evaluation instrument for the purpose of evaluating the WPD. The WPD evaluation served as a test case for the generic evaluation methodology.

An evaluation of the WPD was performed in all European countries via stakeholder interviews and literature research. The evaluation has been supplemented with a survey of workers and employers in a sample of Member States, and the results of the evaluations are presented in a cross-national evaluation report.

The following report presents the generic methodology for the evaluation of EU OSH Directives. In Chapter I, the background for the development of a standard evaluation methodology is outlined. Chapter II describes the methodological evaluation approach and the specifications that have to be taken into account when evaluating EU OSH Directives.

# I. Background for the development of a standard evaluation methodology for the impact of EU OSH Directives

## I.1. Evaluation and impact assessments

Currently a number of evaluation approaches exist at the European level, supporting evaluation tasks in different ways. As early as 1986, Article 21(2) of the Implementation Rules of the Financial Regulation<sup>1</sup> states that all Commission programmes or activities should be the subject of an interim and/or ex-post evaluation in terms of human and financial resources allocated and results obtained, in order to verify that they were consistent with the objectives set.

To date, a number of General Directorates have published such evaluation guidance, for example the *Report on Ex-Post Evaluation of EC Legislation and its Burden on Business* issued by DG Enterprise in 2005.<sup>2</sup> In 2009 the European Commission published the *Impact Assessment Guidelines*<sup>3</sup>, which aim to support the Commission services in preparing impact assessments of all types of policies, from legislation to promotional activities.

The purpose of evaluating activities and legislation that have been implemented, is to learn from the results, improve planning and management, and inform policy-makers through accountability. Such evaluations also determine the added value and effectiveness of programmes, e.g. by asking if objectives have been met.

## I.2. Specifics of EU OSH directives and their impact assessment

"The European Commission has already arranged a number of evaluations in the field of OSH, e.g. on biological agents, carcinogens, chemical agents, the Framework Directive, Workplaces Directive, work equipment, personal protective equipment, manual handling of loads and display screen equipment, temporary and mobile construction sites, safety signs at work, mineral-extracting industries through drilling, underground mineral-extracting industries as well as of fishing vessels and medical treatment on board vessels. These evaluations have mainly dealt with the practical implementation and relevance of OSH legislation. Several monitoring instruments have been developed and applied in practical evaluation, e.g. the European Scoreboard, or SLIC inspections."

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<sup>1</sup> Commission Regulation of 11 December 1986 laying down detailed rules for the implementation of certain provisions of the financial regulation of 21 December 1977 (86/610/EEC, Euratom, ECSC), in *Official Journal of the European Communities* (OJEC). 19.12.1986, No L 360, p. 1.

European Commission DG Budget: *Evaluating EU Activities – A Practical Guide for the Commission Services*, DG Budget, July 2004

<sup>2</sup> European Commission; DG Enterprise (2005): *Ex-Post Evaluation of EC Legislation and its Burden on Business. Final Report*. [http://ec.europa.eu/enterprise/newsroom/cfi/\\_getdocument.cfm?doc\\_id=5506](http://ec.europa.eu/enterprise/newsroom/cfi/_getdocument.cfm?doc_id=5506)

<sup>3</sup> European Commission: *Impact Assessment Guidelines*, 15 January 2009, SEC(2009) 92

At the European level an evaluation in the field of OSH can refer to a number of other data sources. These include European statistics on work accidents and occupational diseases<sup>4</sup>, European surveys by Eurofound or EU-OSHA<sup>5</sup>, EU-OSHA studies or risk observatory reports<sup>6</sup>, SLIC reports<sup>7</sup>, Member State reports to the Commission<sup>8</sup>, studies on national implementation by certain Member States<sup>9</sup>, and a number of opinions and statements from groups, associations and committees, e.g. from the ACSH.<sup>10</sup> Additionally, academic studies and articles on these issues have been published.<sup>11</sup>

The impact of EU Directives on national OSH practice can vary widely. Constellations of factors create different national 'adjustments' of the practical implementation of EU Directives.<sup>12</sup> E.g. at a workshop on the topic of external OSH Services (PREVENT 2006) a representative of the Senior Labour Inspectors Committee (SLIC) commented on a SLIC survey with regard to the quality of the work of external prevention services as follows:

*'The SLIC has also carried out a survey in which 27 countries took part. One of the conclusions which has come out of this study is that there is an enormous difference in the way in which the Member States are attempting to respond to the requirements of the European Directive'.<sup>13</sup>*

An evaluation methodology has to take these differences in national implementation into account. The objective and character of the directive (i.e. the type of OSH problem concerned) as well as the national OSH infrastructure and policy have a significant effect on the directive's implementation.

The consortium collaborating in this study has conducted corresponding evaluation projects in the domain of OSH at European<sup>14</sup> and national level.<sup>15</sup> On the basis of these previous studies the

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<sup>4</sup> ESAW: *European Statistics on Accidents at Work*; EU Commission, DG Employment (2009): *Causes and circumstances of accidents at work in the EU*. Luxembourg.

<sup>5</sup> Eurofound (2010): *Fifth European Working Conditions Survey*. <http://www.eurofound.europa.eu/surveys/ewcs/2010/index.htm>  
EU-OSHA (2010): *European Survey of Enterprises on New and Emerging Risks (ESENER)*.

<sup>6</sup> EU-OSHA (European Agency for Safety and Health at Work / European Risk Observatory): *Comparative studies and surveys on many OSH issues*, <http://osha.europa.eu/en/riskobservatory>  
e.g.: EU-OSHA (2009): *Labour inspectorates' strategic planning on safety and health at work. Results of a questionnaire survey to EU-OSHA's focal points*, Luxembourg.

<sup>7</sup> SLIC (2008) Committee of Senior Labour Inspectors (SLIC): *Evaluation Reference Manual Carrying out a SLIC evaluation*, Luxembourg Dec. 2008

<sup>8</sup> CEC (2007b): Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: *Communication on the practical implementation of directives on health and safety at work*

<sup>9</sup> E.g. the Netherlands: Ministerie van Sociale Zaken en Werkgelegenheid (Ministry of Social Affairs and Employment): *Rapportage tenuitvoerlegging RL 98/24 EG (Report on the implementation of EC/98/24)*, 2007

Finland: MSAH (Ministry of Social Affairs and Health) (2009): *Riskinarviointia koskevien työturvallisuus- ja työterveysäännösten vaikuttavuus – The impact of OSH legislation on risk assessment*. STMn julkaisu 2009: 22.

<sup>10</sup> ACSH Workshop on National Strategies: Panel Discussion 3 – Performance measurements, indicators and evaluation, Luxembourg, 9 October 2008

<sup>11</sup> BAuA (ed) (2011): *National OSH Strategies – Approaches and Experience from selected Countries. Report on the Research Project F 2234 of the German Federal Institute for Occupational Safety and Health, Full Report* Authors: Lißner, L., Reihlen, A, Stautz, A, Zayzon, R.

<sup>12</sup> See Versluis 2002 explaining the greater impact of the Seveso Directive compared to that of the Safety Data Sheets

<sup>13</sup> PREVENT (2006a): Karel van Damme in; Round Table on external OSH Services in 15 EU Member States, Colloquium 8 December 2006, <http://fr.prevent.be/net/net01.nsf/p/5D2260539E8D4D93C12572A5005D4B2F>

<sup>14</sup> KOOP / CIOP-PIB: CADimple (2008-2010): *Contract to analyse and evaluate the impact of the practical implementation of the requirements of Directive 98/24/EC on the protection of the health and safety of workers from risks related to chemical agents at work*, Contractor: DG Employment, Contract VT/2007/063; Consortium: Kooperationsstelle Hamburg (coordinator), Cardiff University, CIOP-PIB, TNO

KOOP: NERCLIS (2009-2011): *Contract to assess the potential impact of emerging trends and risks on labour inspection methodologies in the domain of occupational health and safety* (Coordinator: Cardiff University, Mälardalen Univ. Kooperationsstelle Hamburg IFE and CIOP-PB.

PREVENT (2006): *Organisation of external protective and preventive services in 15 Member States of the European Union, Summary of a comparative study*, <http://fr.prevent.be/net/net01.nsf/p/68708C2F500FB1B5C12572A10079B55A>

<sup>15</sup> PREVENT (2008): *Onderzoek naar de omzetting van 4 arborichtlijnen in de regelgeving van 10 lidstaten* (Study on the implementation of 4 OSH Directives in 10 Member States of the EU) Contractor Ministerie van Sociale Zaken en Werkgelegenheid, The Hague PREVENT / KOOP: benOSH: *Socio-economic costs of accidents at work and work-related ill health and the socio-economic costs of prevention measures*, Period: 2009 – 2010, Contractor: DG Employment, Tender N° VT/2008/066, Co-ordinator PREVENT, Kooperationsstelle Hamburg IFE

members of the consortium possess significant knowledge. The current evaluation methodology is designed to make use of the best available data sources and to receive the best possible feedback from all groups affected by the respective legislation and by its national acceptance and implementation. It includes respondents from associations of social partners and professionals in the area of the topic in question, e.g. the government and regulatory authorities. The methodology is designed to receive responses from all of these different groups, based on specialist knowledge or on practical everyday experience, and on statements and opinions about the level of implementation. In the same way it includes the analysis of national data and studies already performed on the implementation of the EU Directive. Additionally it involves all available quantitative data and statistics.

### I.3. Specific tender requirements

#### I.3.1. Overcoming the shortcomings of the VDU evaluation

The problems of the VDU methodology in achieving comparable results had various causes:

- a) Firstly, the Terms of Reference (TOR), specifying the indicators, were developed in order to offer a minimal common baseline in the 6 participating countries. However, the TOR were not completely mandatory and the different partners could still integrate their own priorities into the indicators they used in their own country evaluation.
- b) This approach had implications for the methodologies used in the different Member States for evaluating the VDU. The instruments were not uniform, and due to lack of standardisation the results were not properly comparable.

Some of the difficulties the VDU evaluation encountered have been resolved through the choice in this second pilot phase to appoint **a single contractor** to conduct the evaluation of the WPD.

The other difficulties have been resolved through **methodological choices**, such as

- A single mandatory list of indicators,
- Identical questions for all Member States as well as for different groups of stakeholders,
- Identical target groups.

#### I.3.2. Tender questions

The tender specified the aspects that should be taken into account for the generic evaluation method as well as for the WPD evaluation based on the generic methodology, within 17 questions. As well as these questions, the merits and shortcomings of the VDU methodology were taken into account. Only 4 of the 17 questions formed the basis for the VDU methodology (referred to henceforth as 'VDU questions'), emphasising the need to develop a much more extensive instrument. The results were merged with general implications drawn from legislation evaluation literature for developing the standard methodology for the evaluation of EU OSH directives.

#### Tender questions

##### A. On the quality of European OSH legislation:

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KOOP: GDA: Evaluation of the National German OSH-Strategy from 2008 to 2012 ('GDA Dachevaluation', Four-years contract of the National Strategy Conference (NAK) with Kooperationsstelle Hamburg IFE

TNS Infratest (2007): *The development of a methodology to assess the quality of EU-Directives: a pilot study on basis of the Directive on Visual Display Units (Directive 90/270 EEC)* Integrated cross-national report, Munich 2007

1. Have the requirements of the Directive been chosen adequately? (VDU question)
2. Have the objectives of the Directive been achieved with the instruments used (effectiveness of the instruments)? (VDU question) What intended and unintended side effects did it produce?
3. Have the instruments been used efficiently? (VDU question)
4. What is the relevance of the Directive?
5. Which changes relating to the policy and regulatory framework and/or practice would have happened anyway in the area covered by the Directive? Could the same objectives have been reached with instruments other than legislation?
6. Has the Directive led to a level playing field between Member States with regard to OSH?
7. Are the obligations laid down in the Directive clearly formulated?

## **B. On implementation at the workplace:**

### **Practical implementation:**

8. What is the level of practical implementation of the provisions of the Directive (including the (technical) requirements of the annex(es))? This also includes the question of whether the different groups involved in its implementation - in particular employers, workers and workers' representatives with specific responsibility for the safety and health of workers - are aware of the Directive and possess adequate knowledge.
9. What is the level of fulfilment by the employers of general legal obligations laid down in Directive 89/391/EEC (e.g. risk assessment, provision of information to workers, consultation of workers, workers' participation and training) in the context of the implementation at the workplace of the specific Directive under evaluation?
10. What are the results of the comparison with the workers/workers' representatives/expert's estimates as regards the fulfilment of legal obligations by the employers?

### **Overall evaluation of effectiveness and efficiency:**

11. What are the reasons for the successes/shortcomings found (e.g. the Directive itself/ the national transposition/the national enforcement strategies/other factors)?
12. Should there be changes in:
  - The legal provisions (EU and/or national);
  - Implementation at company level;
  - The enforcement strategies of national authorities;
  - Other accompanying measures for improving OSH at workplaces (e.g. economic incentives, awareness raising, practical tools)? (VDU question)
13. Has the Directive had particular effects on any type of establishments (e.g. depending on sector, size, etc.) and workers (depending on sex, age, occupation, etc.)?
14. Has the Directive had an impact on the rates of occupational accidents and diseases?

### **On economic effects:**

15. How should the compliance costs of the Directive for employers be measured? (New question)
16. Do the benefits of the Directive outweigh the costs linked to its implementation and enforcement? (New question)
17. Did the Directive have macro-economic effects (for example on employment, productivity, competitiveness)? How can these effects be measured and assessed?

## II. Approach for the development of a standard evaluation methodology for the impact of EU OSH Directives

This chapter explains the basic principles of a methodology for evaluating the EU OSH Directives.

**In Section II.1**, the dynamics and chronology of the legislative process from its initial examination of needs to its impact are explained. The process starts with the emerging and broad acceptance of an OSH-need, the decision about a **policy option** to prepare an EU directive, followed by the **implementation** of the legal text and the corresponding national legislation, which in turn feeds the debate on adaptations to the Directive or on other policy choices. The dynamic process is illustrated in Figure 1. The evaluation covers the entire chronological process, where each step is checked according to the previous steps.

**In Section II.2**, the actual evaluation model is presented in Figure 2 as a basis for evaluating each OSH Directive and, by extension, any EU Directive. It takes as its starting-point the initial investigation into the relevance of a new legislative initiative or the adaptation of existing legislation, followed by the preparation of the directive, containing the objectives and the implementation approach (instruments, measures). The next step is the implementation of the EU Directive into national legislation and its application by the responsible institutions and finally the practical implementation by enterprises. After a certain time practical results of the application can be identified, e.g. the reduction of risks or diseases etc.

The various steps in the model are discussed and illustrated with reference to the WPD case.

**Section II.3** contains the indicators needed to evaluate the process. The indicators are determined for each step in the process.

**Section II.4** introduces a common model for calculating the costs and benefits of EU OSH Directives. The model is annexed as a separate document Entitled "Assessing the compliance costs and benefits of European OSH Directives".

**In Section II.5**, the contextual factors are presented. For ex-post evaluations, it is particularly difficult to make a difference between the impacts of different policy measures and changes from other relevant influences, in order to assess how much of the observed impacts can be attributed to the policy measure in question. Using a model, the various contextual factors that play a role in each of the steps of the legislative process are discussed.

**Section II.6** treats the counterfactual dimension, referring to what would have happened if there had been no directive at all. It also refers to the influence of the "pre-existing conditions" which are particular for each country, and to what extent they play a role when evaluating the effect of a directive.

**Section II.7** introduces the important part on data collection – how to collect the data which will provide answers to the questions and enable us to perform the evaluation.

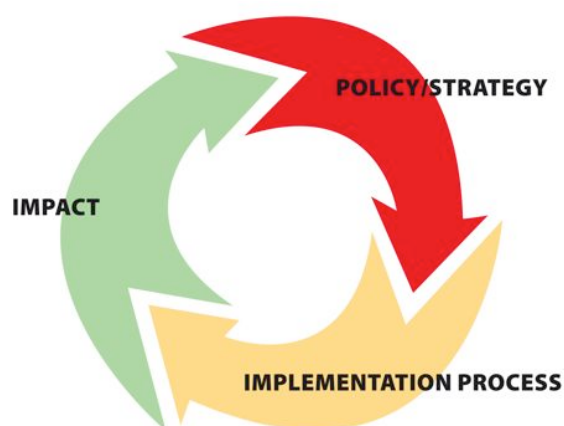
**Section II.8** introduces a framework or analysis of the collected data, which allows categorising the collected information.

## II.1. The dynamics of a qualitative legislative process

In order to gain a comprehensive picture of the implementation of a directive and to be able to evaluate all possible effects, a broad approach has to be chosen. This is in line with the 17 questions listed above. Accordingly, the evaluation method should cover aspects starting with the initial relevance of the directives, including aspects referring to the implementation of the directive into national legislation as well as the implementation of the respective legislation at company level and the question in how far differences and improvements were achieved due to the directive.

The comprehensive range that these questions cover is reflected in Figure 1, displaying the whole evaluation process. It is a dynamic process, with consecutive steps starting with the policy options and strategic choices, chronologically followed by the implementation processes and the results of the implementation at EU and Member State level. Based on these results, the policy options and strategic choices can be adjusted and complemented. The evaluation covers all consecutive steps of the process.

Figure 1: Monitoring process for legislation evaluation



## II.2 The generic evaluation methodology model

### II.2.1. Generic evaluation methodology model

The definitions refer to the basic steps included in an **evaluation process**. It is a dynamic process, with consecutive steps starting with the policy options and strategic choices, chronologically followed by the implementation processes and the results of the implementation at EU and Member State level. Based on these results, the policy options and strategic choices can be adjusted and complemented.

The methodology for evaluation of EU OSH Directives proposes to **evaluate the legislative process** from the **qualitative development of legislation and policy** to the **tangible OSH results** in the field. The evaluation covers all consecutive steps of the legislative process (the 'life' of a Directive) in four steps:

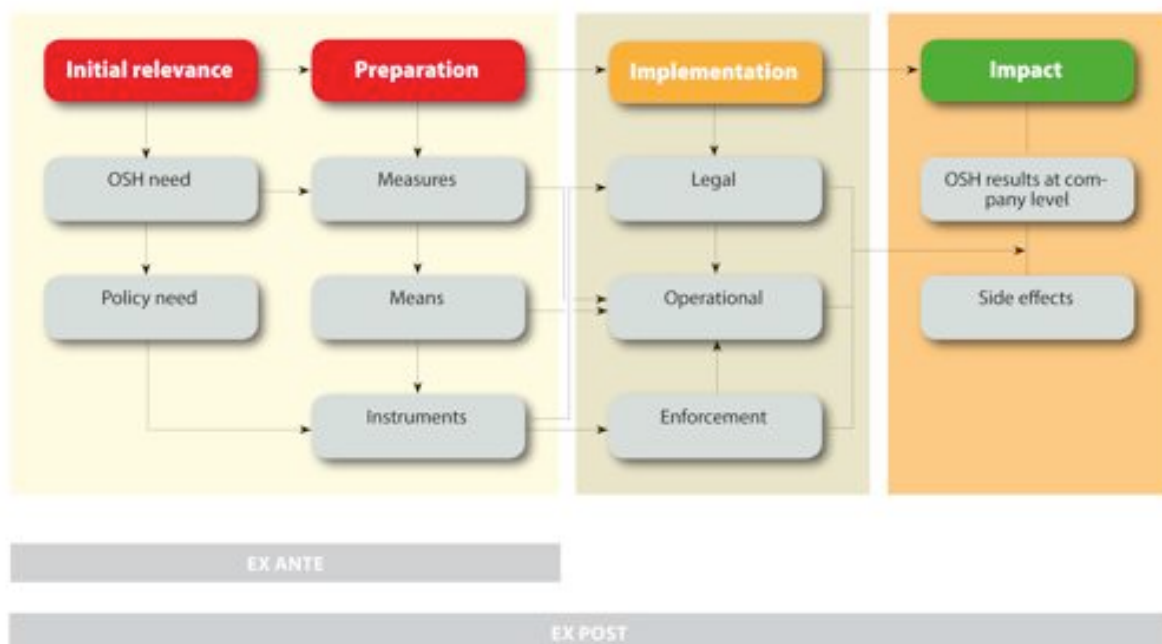


- **initial relevance**;
- **preparation of the Directive** (including the measures, means and instruments of the Directive);
- the **implementation** at the legal and operational level;
- the **impact** at the workplace and enterprise level.

The results of the evaluation of these steps will lead to the overall evaluation of the effectiveness and the relevance of the Directive.

Each of the steps needs to be evaluated. The model is based on the chronology and dynamics of the legislative process. Figure 2 demonstrates how the different steps are related to each other.

Figure 2: Generic evaluation methodology model



### II.2.2. Ex-post evaluation

The evaluation methodology model is developed for the ex-post evaluation of a EU Directive. For an ex-ante evaluation of new legislation, the first two steps of the evaluation model can be applied.

When it comes to evaluating such a process and its results it is important to differentiate between the initial relevance of legislation and its current relevance.

For existing legislation, it is useful when performing an ex-post analysis to go back to the time of the adoption of the legislation and to check what the initial OSH problem consisted of and why legislation was chosen as the appropriate instrument to deal with it. The current relevance of the legislation at the time of the ex-post evaluation can be determined based on 1) the evolution of the OSH problem since the adoption of the legislation and 2) the current state of the OSH problem. Evaluating existing legislation thus makes it necessary to compare and evaluate 1) the initial relevance and 2) the current relevance. This approach may lead to limited results when the existing legislation has already been in



place for a very long period. Contextual factors may have changed, making it difficult to compare the initial relevance with the current relevance. Difficulties in retrieving the necessary information on the initial relevance also carry the risk of misinterpretation and biases. On the other hand, evaluation of existing legislation has several advantages, such as the possibility of focusing on improving the existing legislation and adapting it to current needs.

Questions associated with the evaluation of existing legislation include the following:

Why were the desired results (not) achieved? Were the necessary steps taken? Where did things go wrong or well? Probable insights into the reasons why things went wrong or went well are exposed through insight into the process: each step has an impact on (the quality) of all the next steps.

### II.2.3. The consecutive steps of the model

In a first step, the initial relevance of a new legislative initiative or a modification of an existing regulation is investigated.

#### I. Initial relevance of existing legislation

##### *Step 1: Identifying the OSH problem and the need for policy intervention*

Before considering modifications to existing legislation, the relevance of the legislation should be demonstrated.

In the VDU report (p. 52) the relevance of EU OSH legislation was described as follows: *'The relevance of a measure – in this case a legal intervention - refers to the degree to which it influences reality. The central question is: Does it make any difference whether the law exists or not? And if it makes a difference: How much of a difference does it make? What would be different?'*

However, this covers only one specific dimension of relevance: 'legislative relevance'.

A distinction to be made is the difference between 'operational'/OSH relevance and legislative relevance:

**OSH relevance:** The operational or OSH policy relevance refers to the need to intervene because of the existence of a problem and its extent, in this case the existence of an OSH risk or OSH issue requiring preventive or other measures. This can be demonstrated by risk analysis and by surveys, asking stakeholders, employers and workers for their perceptions on the OSH issue.

**Legislative relevance:** Only once the operational relevance and the need for intervention have been demonstrated, does the question arise whether this OSH risk or OSH issue should be dealt with by public intervention, and in particular through legislation. This legislative relevance can only be considered once the operational and policy relevance are clear.

The observation of the existence of an OSH problem does not necessarily automatically lead to the conclusion that legislation is required. After the OSH problem has been clearly demonstrated, policy objectives have to be set and several aspects should be investigated **before the choice to achieve these objectives through legislative or other instruments can be made**. These investigations should provide answers to questions such as: 'What are the required measures to solve the problem (training, information, technical devices, etc.)?' and 'What means are involved (education, awareness campaigns, more research, development of new equipment, etc.)?'

Therefore the very first step in the evaluation is to determine the operational/OSH need for intervention (whether or not through legislation comes later in the process).

In this first step, the main question is whether the EU Directive responded to an OSH need requiring policy intervention:

**Question 1: Does/did the EU Directive respond to an OSH need?**

Possible subquestions relate to the major arguments to justify the actions, contextual factors at the time of considering the adoption of EU OSH legislation, the need for a EU harmonization.

The main type of source for existing legislation is the literature, such as risk analysis studies and documents demonstrating the existence of an 'OSH problem', its objective and subjective dimensions, the extent of the 'OSH problem' and describing the causes. This could be EU studies, studies of national authorities, OSH experts and institutes and academic studies. Also EU documents showing that these studies have been used in preparing the legislation; national legislation and preparatory documents demonstrating the need to regulate the given 'OSH problem' in the given member state, reactions and comments of national authorities or other stakeholders (such as OSH experts) on the desirability of the EU initiative to regulate the given 'OSH problem'.

The example of the WPD evaluation

The figure below shows the first step of the evaluation process in the case of the Workplace Directive.

*OSH relevance:* in the proposal for a Council Directive concerning the minimum safety and health requirements for the workplace COM(88)74 final of 7 March 1988, the aims of the first individual Directive within the Framework Directive are as follows:

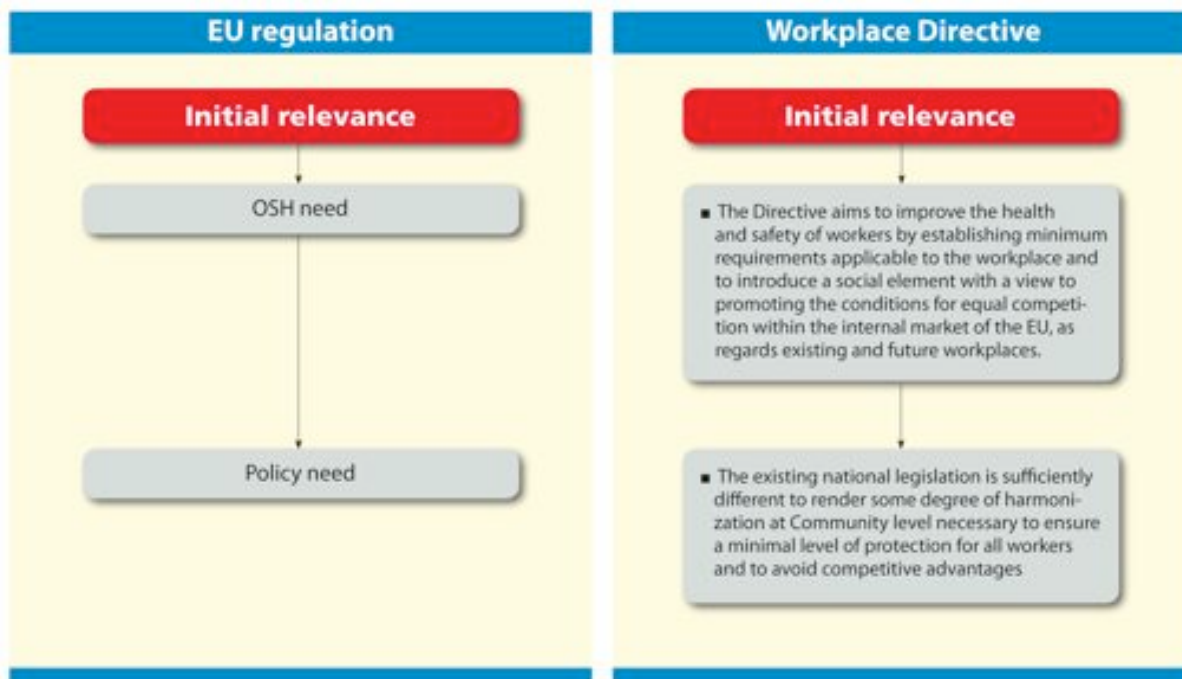
- the gradual improvement of workplaces in terms of the safety and health of the workers;
- harmonization, within the framework of the achievements of the internal market, of the minimum health and safety conditions required for all workplaces.

The proposal aims to improve the safety and health of workers by establishing minimum requirements applicable to the workplace and to introduce a social element with regard to promoting the conditions for equal competition within the internal market of the Community, as regards existing and future workplaces.

*Legislative relevance:* The proposal COM(88)74 final further states that the existing national legislation, technical regulations, guidance notices and national standards concerning the safety of workplaces is sufficiently different to render some degree of harmonization at Community level necessary to ensure a minimal level of protection for all workers and to avoid competitive advantages.

As a next step, indicators (cf chapter II.3) need to be examined in order to collect information for the evaluation of this first step of the evaluation process. They provide the link between the evaluation questions and the available data. The existing literature needs to be explored to find evidence for the OSH relevance and the legal relevance.

Figure 3: The WPD case - First step of the evaluation process



## II. Preparation of the legislation

Once the existence, the extent, the objective and subjective dimension of an OSH risk or OSH problem have been demonstrated, the next step consists of preparing the appropriate response, which may be legislation or other forms of intervention.

### Step 2: Elaborating a qualitative OSH (legislative) policy

First, **objectives** or targets should be defined such as the protection of a specific category of workers, (such as the protection of outdoor workers), or the reduction of a specific type or risk (such as exposure to dangerous substances).

Secondly, once the objectives to be achieved are made explicit, the adequate **measures** to deal with the problem should be identified. *Measures* refer to the obligations, such as carrying out a risk analysis, relying on external OSH services, having qualified staff, etc. *Measures* can include a managerial approach, preventive measures at company level, the development or use of new technical devices, more training and information, etc.

Thirdly, implementing the range of chosen measures requires **means**. *Means* refer to the human, financial, technical and other resources that are necessary to implement the prescribed measures. In the case of EU Directives, means are mainly provided by the Member States. We can distinguish between *new means* (new equipment, new training), *additional means* (more investment in training or extended training), or a *re-allocation of means* (oblige employers to call upon external services), etc. It is important to estimate from the start what the required *means* are and whether they are available (in order to be able ex-post to evaluate the efficiency, including cost-efficiency).

Only when these steps have been taken, is it possible to choose (an) appropriate **instrument(s)**. *Instruments* refer to the type of intervention, i.e. legislation, criminal penalties, administrative fines, encouragement of self-regulation, awareness campaigns, extra research, financial incentives for the industry concerned, or a combination of legislation and other instruments.

These four chronological steps are part of the elaboration process of EU OSH legislation. The corresponding questions are:

**Question 2: Are/were the objectives of the EU OSH Directive clearly formulated and do they correspond to the defined OSH needs?**

Possible subquestions relate to the context of the overall EU OSH Strategy, the common understanding of the objectives by those who are responsible for the transposition into national regulations and the expectations about the results.

**Question 3: Have the measures required to achieve the desired objectives been chosen adequately?**

Possible subquestions relate to the existing knowledge, the lessons learnt from national experiences, the opinions and statements about the measures to be applied.

**Question 4: Have the necessary means to apply the chosen measures been estimated?**

Possible subquestions relate to the estimation of organisational changes, human resources, required material, the opinions and statements about the means to be applied.

**Question 5: Have the instruments required to achieve the desired objectives/results been chosen adequately?**

Possible subquestions relate to the optional types of interventions and their merits and weaknesses, the lessons learnt from national experiences, the opinions and statements about the instruments to be applied.

For existing legislation, it is important to verify whether these **steps have been taken**, in order to evaluate the quality of the preparation of the legislation at the time of adoption. The methodology for collecting input-information (data collection) in order to answer the questions will differ, depending on how long the Directive has been in place. The older the Directive, the less information will be available, especially through surveys, because it will be difficult to find respondents that were involved in the preparation. The main source for 'old' Directives will be 'literature'. For recently adopted legislation, both 'literature' studies and surveys can provide input-information.

The example of the WPD evaluation

The figure below shows the second step of the evaluation process in the case of the Workplace Directive.

*Measures:* The EU Directive is based on a three-phase plan:

- existing workplaces must be brought into line within a period of implementation, with specific minimum requirements;
- modified or converted workplaces must, as far as is reasonably practicable, satisfy the minimum requirements for new workplaces;
- new workplaces must conform the minimum conditions listed in the Annex.

The measures defined are specified as technical maintenance, the provision of safe workplaces including fire protection and emergency routes, clean workplaces, information and consultation, provisions for specific risk groups.

*Means:* The human, financial, technical and other resources that are required to implement the prescribed measures will be mainly provided by the employers.

*Instruments:* It is the opinion of the EU policy stakeholders that the OSH targets as defined can only be achieved by EU legislation, and more specific, by a EU Directive.

Similar to the first step of the evaluation process, indicators (cf chapter II.3) need to be examined in order to collect information for the evaluation of this second step of the evaluation process. The existing literature needs to be explored and stakeholders need to be identified and questioned.

Possible subquestions will relate to:

Objectives:

- Are the targets mentioned in the WPD important for efficiently improving health and safety at workplaces in Europe?

Measures:

- Have the requirements of the WPD been chosen adequately?
- Are the obligations laid down in the WPD clearly formulated?
- Are there any unnecessary aspects mentioned in the WPD?
- Are there any important aspects missing in the WPD?

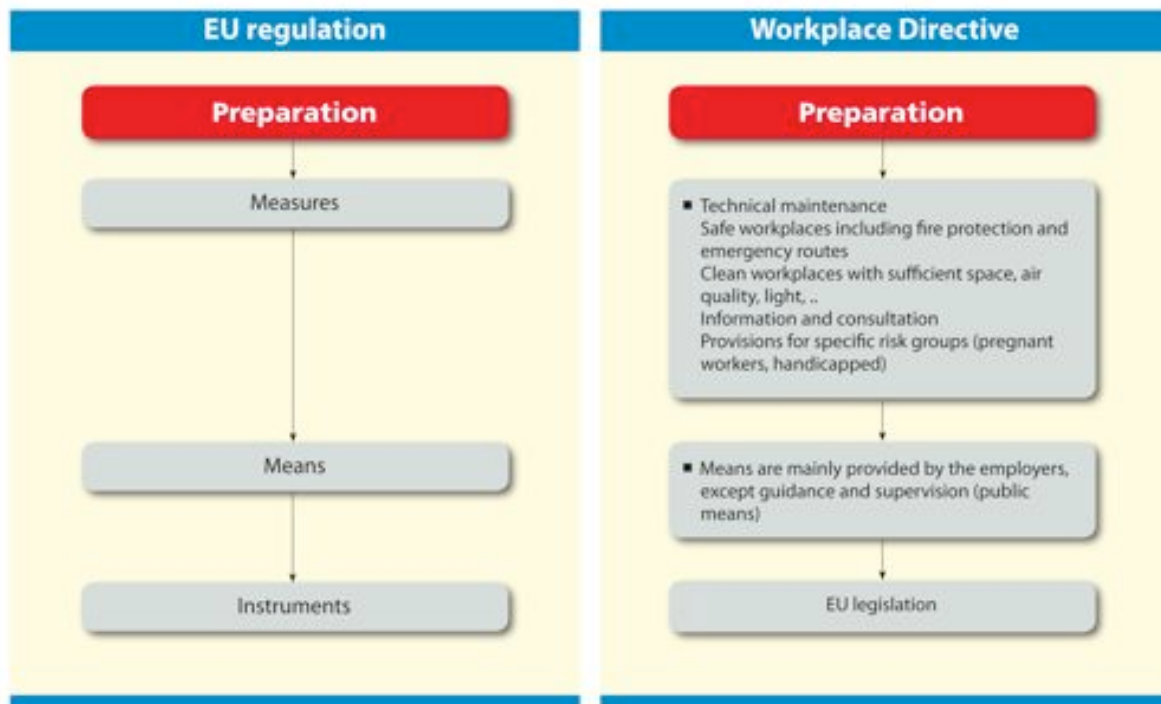
Means:

- Has the availability of the organisational capacity, human and material resources been estimated (internal availability within organisations, external availability on the market)?

Instruments:

- Is the Directive still the best possible option to reach the objectives?
- Would alternatives for regulation have provided the same level of prevention and protection?

Figure 4: The WPD case - Second step of the evaluation process



### III. Implementation of the legislation

Once the legislation has been qualitatively prepared and adopted, the main responsibility shifts towards the national level. The implementation of the chosen EU instruments, in this case Directives,

and the corresponding application of the measures (imposed by the provisions of the Directive) take place in two stages, both at the national level:

The first stage is the **legal implementation**, i.e. the transposition of the EU regulations into national regulations. This is the responsibility of national administrations.

The second stage is the **operational implementation** of the national regulations (= transposed EU regulations). This concerns the application of the national provisions on the work floor, to which all the people involved should contribute, under the final responsibility of the employers and the supervision of the public OSH-institutions.

Monitoring the quality of the implementation requires monitoring both stages, which brings us to the following next steps:

### ***Step 3.1. Monitoring the quality of the legal implementation at the national level***

This relates to the transposition of the EU Directive into national regulations. The following question is relevant:

***Question 6: Has the EU Directive been transposed into national regulations in a qualitative way (process quality)?***

The first level of implementation of a EU Directive is its transposition in national regulations. The Member States having the choice of means to transpose, as this can be done in different ways: through a mix of regulatory and other instruments.

To fully assess the extent of the transposition, all transposing measures should be brought into the picture. This includes the pure transposition of the provisions of the EU legislation into national legislation and all accompanying instruments (if the case), considered necessary to guarantee the implementation of the transposed EU legislation.

The quality of this legal implementation is reflected in:

- the degree of transposition of the EU OSH legislation,
- the problems encountered at national level to transpose the EU OSH legislation.

Possible subquestions relate to the extent of transposition, the way in which the EU legislation has been transposed in national regulations, the national add-on's, the problems encountered during the transposition process, the institutions responsible for implementation.

### ***Step 3.2. Monitoring the quality of the operational implementation at the national level***

This concerns the application of the national provisions transposing the measures of the EU Directive. The following questions are relevant:

***Question 7: Have the national provisions transposing the EU legislation been applied in a qualitative way (process quality)?***

How successful the implementation of the national provisions is, is reflected by several parameters:

- Firstly, the extent to which the national provisions are actually/really applied;
- A second parameter is the existence of practical problems encountered when implementing the national provisions. As mentioned before, related to the means, the problems encountered could

be for organisational reasons, because of the lack of means related to human resources, or for technical/material reasons;

- When assessing the success of implementing the national provisions it is important to verify whether global results need to be differentiated according to sector, activity, etc.

Two other parameters: the knowledge on the existence of the national provisions and the existence of enforcement measures are treated as separate questions.

Possible subquestions relate to the application of the specific provisions of the national regulations under evaluation, the difficulties of the practical implementation, the successes of implementation, in relation to specific sectors, size of companies, types of workers, the feedback from companies and experts, the proposed legal changes, the impact on practical health and safety measures at enterprise level and in practical supervision of the government.

***Question 8: To what extent are the national provisions transposing the EU OSH Directive known by the stakeholders?***

The knowledge and awareness of the existence of the national (regulatory and other) provisions transposing EU legislation is the first condition for practical implementation.

Possible subquestions relate to the knowledge and awareness of the different types of stakeholders (such as the national administrations and inspectorates, the OSH experts, the employers and the employers' organisations, the workers and the workers' organisations).

***Question 9: How coherent is the perception of the fulfilment of the national provisions transposing the EU OSH Directive (legal and operational)?***

Data on implementation, knowledge and the perception of correct implementation and the actual application at the workplace jointly give a more accurate impression of the degree of fulfilment of the national provisions transposing EU OSH legislation.

Two important parameters reflect the real success of implementation:

- the perception of specific stakeholders,
- the degree of coherence of the perception of the different groups of stakeholders.

Possible subquestions relate to the (coherence of) perception of the fulfilment of the national provisions by the different types of stakeholders (such as the national administrations and inspectorates, the OSH experts, the employers and the employers' organisations, the workers and the workers' organisations).

A specific point of attention when monitoring the operational implementation at the national level of a specific Directive is the relationship between the specific measures and the general obligations of the Framework Directive, since specific Directives are intended to complement the general provisions of the Framework Directive. Both types of provisions (specific and general) thus form an integral part, and should be covered by the evaluation of a specific Directive.

The example of the WPD evaluation

The figure below shows the third step of the evaluation process in the case of the Workplace Directive.

The indicators (cf chapter II.3) need to be examined in order to collect information for the evaluation of this third step of the evaluation process. The existing literature needs to be explored to identify the corresponding legal texts in the EU Member States, the date of transposition, the legal references.



Stakeholders need to be identified and questioned, as well as employers (representatives) and workers (representatives).

Possible subquestions will relate to:

Legal implementation:

- Can you explain to what extent the national legislation had to be changed? (Degree of transposition)
- Did the transposition of the WPD into national law result in relevant legislation changes in my country? (Degree of transposition)
- Did the transposition of the WPD into national law lead to national legislation that is almost the same, stricter, less strict? (Degree of transposition)
- Did the transposition of the WPD into national law lead to national legislation that is almost the same, better defined, less defined? (Degree of transposition)
- To what extent does the national law transposing the WPD differ from the original directive? (Degree of transposition)
- Were any additional measures implemented to promote compliance with the national law transposing the WPD (such as for example sector-specific measures, measures for SME's, measures for specific categories of workers, measures for specific activities)? (Accompanying measures)
- Were there any aspects of the WPD discussed controversially when it was transposed into national law? (Problems encountered)

Operational implementation:

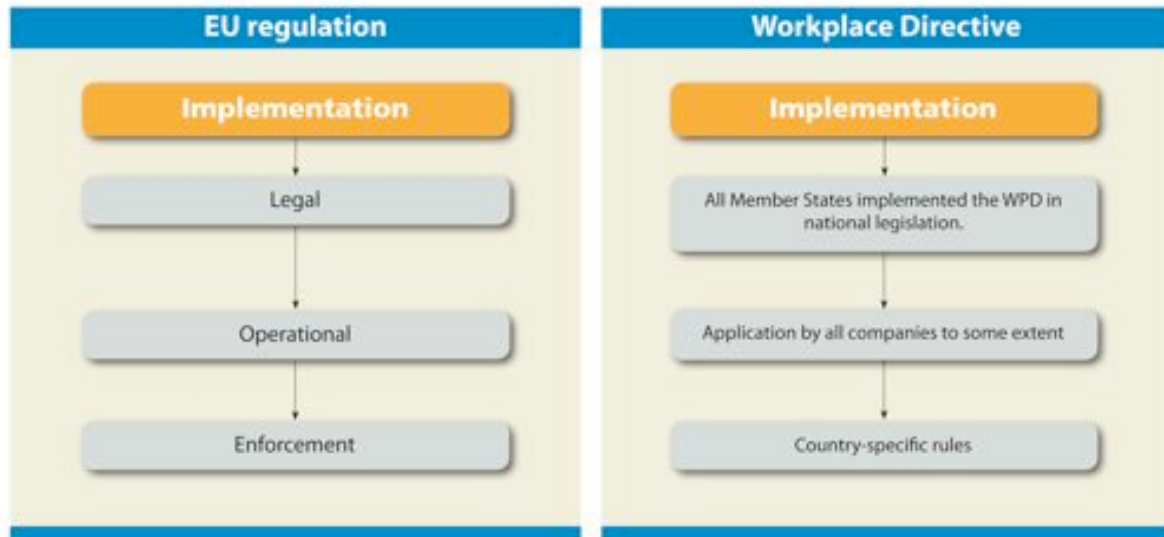
- Are employers generally aware of the national transposition of the WPD? (Knowledge)
- Do companies usually comply with the national transposition of the WPD? (Application)
- Does consultation of workers' representatives usually include questions related to the requirements of the WPD? (Application)
- When doing risk assessments, do companies usually take the WPD requirements into account? (Application)
- Which aspects cause the majority of problems when trying to comply with the national law/transposition of the WPD? (Application)
- Are there any sectors being especially affected by the national law/transposition of the WPD, either positive or negative? (Application)
- Are there any groups of workers (e.g. disabled, sex, age, gender) being especially affected by the national law/transposition of the WPD, either positive or negative? (Application)
- Are there any types of companies (micro/small-sized enterprises, medium-sized enterprises, large-sized enterprises) being especially affected by the national law/transposition of the WPD, either positive or negative? (Application)

Enforcement:

- In cases of infringement, what is the reason why companies do not comply with the national law/transposition of the WPD: (The infringement is not controlled on a regular basis, The infringement is not sanctioned...)?

Figure 5: The WPD case - Third step of the evaluation process





#### IV. National impact of existing legislation

Qualitative EU legislation, through successful transposition and practical implementation, should have a national impact. The logical next step is:

##### *Step 4: Evaluating the national impact of the EU OSH Directive*

The evaluation of the impact in the Member States includes:

- evaluation of quantitative evidence, such as development of work accidents, sick leave, diseases and other specific indicators directly linked to the scope of the legislation;
- evaluation of perceptions at the national level: has there been any change in perceived safety/lack of safety?
- evaluation of different sectors, categories of workers, etc.;
- evaluation of side effects (not directly linked to the scope of the Directive).

The following questions reflect the different dimensions of national results to take into account when assessing (in a later stage) the quality of the underlying legislation:

##### **Question 10: What are the objective and subjective results at the national level of the EU OSH Directive?**

Evaluating the quality of EU legislation is executed in practice through the monitoring and evaluation of the achieved results.

In the motivation of Question 1, related to the need of using the results of risk analyses as the basic input for considering EU legislation, the importance to take both the objective (mathematical) risks and the subjective, perceived risks need to be considered, was stressed. The same reasoning applies for the monitoring of the concrete achievements of legislation: both the objective, and subjective results reflect the success/quality of the legislation.

Successfully assessing the results or outcome of the EU legislation, based on the concrete achievements also demonstrates how important it is that the objectives and expected/desired results are made explicit and unambiguous from the start.

The quantitative impact evaluation is difficult to measure, but on a qualitative level, there are sufficient sources to measure the impact. Especially stakeholder surveys, but also employer and worker surveys can provide information on the contribution of the EU Directives to the worker protection. It is important to bear in mind that the EU Directives do not impose quantitative targets, but rather a series of social objectives.

Possible subquestions relate to the statistical evidence of the OSH impact of the EU Directive, the overall assessment of the effects on society, the perception of the improvement of the OSH conditions.

***Question 11: Are there sector specific national results or diversified results for specific categories of workers?***

The answers to the questions 9 and 10 provide global information. For some Directives, it can be useful to differentiate among sectors, or to highlight differences for specific categories of workers in order to allow a more in depth evaluation.

Possible subquestions relate to the differentiation of the statistical evidence by sector, categories of workers, the differentiation of the perception of the stakeholders by sector, categories of workers.

***Question 12: What are observable side effects at the national level related to the scope of the EU OSH Directive?***

In order to get a more complete overview of the impact of the EU OSH legislation, it is necessary to bring not only directly related results in the picture, but also to have information on other OSH aspects (side effects) that might influence OSH conditions. Including side effects in the evaluation of effectiveness not only gives a more complete picture of the whole impact of the legislation, it also puts the direct effect (desired results) of the legislation in a broader perspective:

If considerable negative side effects are observed, the evaluation of effectiveness cannot be globally positive, even with positive direct effects; negative side effects will strengthen the negative evaluation, in the case of negative direct effects.

The same reasoning holds true if considerable positive side effects are observed => it either increases or decreases the merits of the legislation, based on the evaluation of the direct effects.

Possible subquestions relate to the type of side effects, the context factors and the observable new, emerging trends.

***Question 13: Is there an observable level playing field between the Member States, after x years of implementation?***

An extra dimension for EU legislation – compared to national legislation - is the challenge of creating a level playing field in the economic and social EU area. A level playing field for OSH means creating the conditions for comparable standards for workers in the EU.

Two important parameters allow to assess whether or not an observable level playing field has been achieved since the adoption of the EU OSH legislation:

- The quality of the transposition and application of the national provision on workplace safety (Questions 6, 7 and 8);

- The level of enforcement of this legislation, i.e. how compelled are the regulated to apply the provision?

The possible subquestions are related to the level of compliance and the level of enforcement.

#### The example of the WPD evaluation

The figure below shows the fourth step of the evaluation process in the case of the Workplace Directive.

The indicators (cf chapter II.3) need to be examined in order to collect information for the evaluation of this fourth step of the evaluation process. Desk research needs to be done in order to collect quantitative data.

Stakeholders need to be identified and questioned, as well as employers (representatives) and workers (representatives) to evaluate their perceptions of the impact of the Directive.

Possible subquestions will relate to:

OSH results at company level:

- Has the WPD had a positive impact on one or more of the following issues: (the number of occupational accidents, work related health problems, the absenteeism figures, the well-being of the workers, the working conditions, the satisfaction of the workers, the improvement of risk awareness, the improvement of productivity, the prevention of major disaster, ...)?
- Did the transposition of the WPD into national law lead to better occupational health and safety in my country?
- Has the WPD substantially contributed to the improvement of occupational health and safety in Europe?

Side effects:

- Did the provisions of the WPD cause side effects (not directly linked to occupational safety and health issues, for example on employment, productivity, competitiveness)?
- Has the WPD had a positive impact on one or more of the following issues: (the improvement of productivity, ...)?

Level playing field

- Has the WPD reduced the differences between Member States regarding health and safety at work?
- To what extent does the national law transposing the WPD differ from the original Directive?
- Did the transposition of the WPD into national legislation take into account preexisting national law?
- Has the WPD improved or positively influenced the national legislation?

Figure 6: The WPD case - Fourth step of the evaluation process



## V Evaluation of effectiveness and relevance

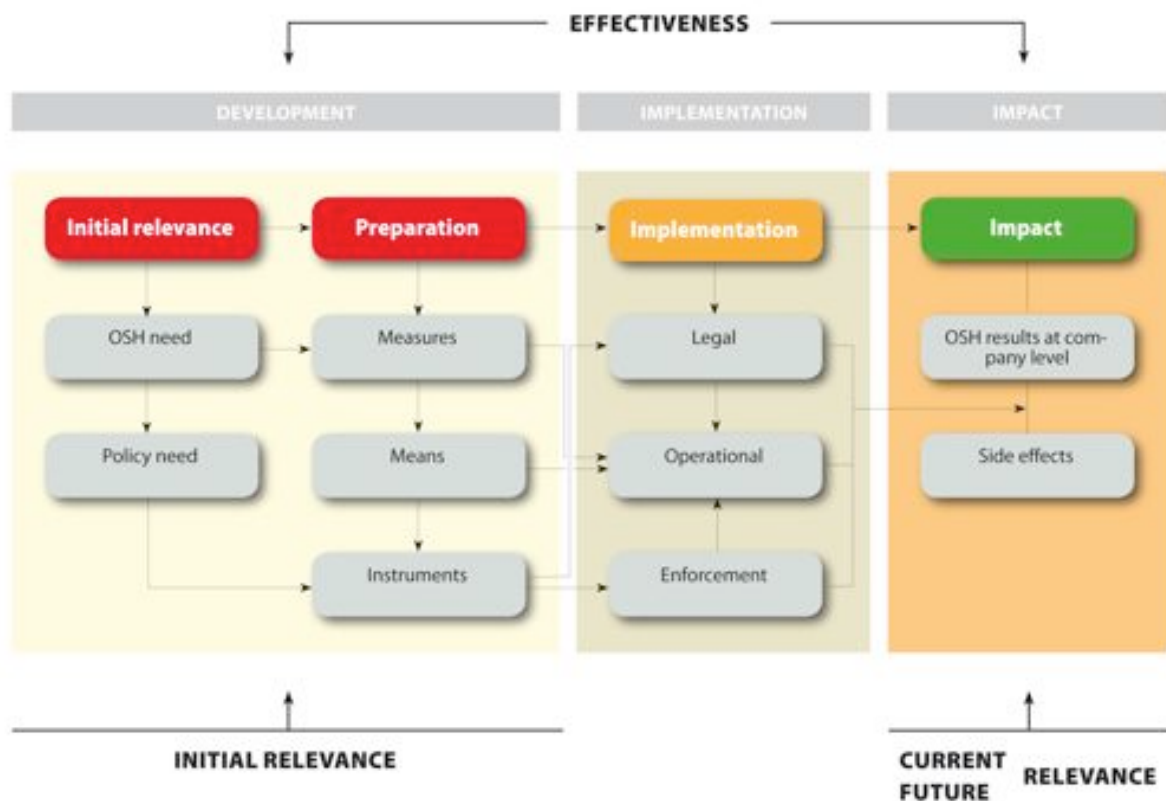
The objective of an ex-post evaluation of existing legislation is to evaluate:

- the effectiveness: have the objectives been achieved?<sup>16</sup>
- the current relevance: do the objectives still correspond to the needs and problems?

To evaluate the overall quality of EU OSH legislation (effectiveness and relevance) we use the information from the evaluations of the initial relevance, the preparation, the implementation and the results (Figure 7).

Figure 7: Evaluating the effectiveness and the relevance of a EU OSH Directive

<sup>16</sup> The Impact Assessment website of the Commission contains a definition of 'evaluation' and the related terms 'relevance', 'effectiveness' and 'efficiency/cost-effectiveness' (EU Commission, 2010).



**Step 5.1: Evaluating the effectiveness of the EU OSH Directive under evaluation.**

As effectiveness refers to whether or not the desired results have been achieved, this part of the evaluation:

- considers all the outcomes (the impact) of the Directive: direct OSH results, OSH side effects;
- relates them to the contextual factors and new or emerging trends;
- and compares them with information on the initial risk that triggered the legislation, initial contextual factors, etc.

The relevant question is here:

**Question 14: Have the objectives and expected impact been achieved x years after the adoption of the EU OSH legislation?**

In order to be able to answer this question, all consecutive steps in the legislative process need to be evaluated.

The starting-point is the **initial relevance** of the EU OSH legislation, i.e. whether it responds to a need in society;



This in turn is basically determined by the **quality of the preparatory work** that lays the foundations for the qualitative elaboration of the EU OSH legislation: defining clear objectives, choosing suitable measures, estimating the required means, and selecting the appropriate instruments or an appropriate mix of instruments;



Effectiveness is also determined by the **quality of the implementation** of the EU OSH Directive, taking place on two levels: the quality of the legal transposition of the EU OSH legislation into national regulations and the quality of the implementation of the national provisions transposing the EU OSH legislation;



The quality of the EU OSH legislation is ultimately reflected in the **national results**, which should be observable after x years of implementation.

Possible subquestions of Q14 therefore relate to the strengths and shortcomings of the EU OSH Directive itself (initial relevance and quality of the preparation of the legislation), the quality of the implementation and the national results. Also the subquestion whether the same objectives could have been reached without the EU Directive is relevant.

Most of the information on the **successes and shortcomings** of each of the contributing factors can be found in the answers to the preceding questions (Q1 to Q13). Possible reasons for successes and shortcomings for each of the contributing factors are mentioned below.

Sources for the successes and shortcomings of the Directive (initial relevance and quality of preparation):

- (No) support for the Directive because (no) consensus on the OSH need;
- (No) support for the Directive because (no) consensus on the need for legislation;
- The legislative measures were (not) felt adequate;
- The need for a Directive was (not) supported;
- The required measures were (not) estimated cost-effectively;
- The required means were (not) available.

Sources for the successes and shortcomings of the national transposition:

- (No) national support for new legal measures, which can be reflected in late/problematic transposition, substantial national debate, ... ;
- The objectives were (not) clear, (not) understood, which is reflected in poor transposition;
- The measures were (not) felt adequate (and have been dealt with by other national, non-legislative measures);
- Context factors, such as self-regulatory measures taken at the national level, or the pre-existence of national legislation, etc..

Sources for the successes or shortcomings of the national implementation:

- (No) support for the measures, because (not) considered adequate;
- (No) support for the measures, because (not) considered necessary (no OSH need);
- Implementation cost of the measures too expensive/reasonable;
- Implementation difficult/rather easy;
- (No) enforcement policy, (no) pressure to comply;
- (No) knowledge of the legislative framework;
- (No) accompanying measures explaining the legislation and the intrinsic motivation (OSH need).

Sources for the evaluation if the same objectives could have been reached without the EU Directive could be found in a comparison of the results of countries compliant with the EU Directive and countries with incomplete, no or other legislative framework.

From the comparison of initial and current information, one of three conclusions can be drawn: that the effectiveness has been high, that it has been low (mainly with regard to the side effects), or that it is questionable.

#### ***Step 5.2: Evaluating the current and future relevance of the EU OSH Directive under evaluation.***

The final question of an ex-post evaluation is whether the existing legislation is still relevant:

#### ***Question 15: What is the (actual and future) relevance of the EU OSH Directive?***

This covers two aspects:

- *OSH relevance*: is there still a need, meaning is there still an OSH problem that requires intervention?
- *Legislative relevance*: is there still a need to deal with the OSH problem by legislation?

The question regarding the *OSH relevance* can be answered from the conclusions about the effectiveness and the current state of the OSH issue: is there still a problem/risk, has it disappeared, has it evolved in such a way that (public) intervention is no longer required?

The question of the *legislative relevance* can be answered from the conclusions on the evaluation of the chosen measures, instruments and means: has the legislation shown any weaknesses whose rectification might improve future results?

The conclusion on the current and future relevance of a Directive could be that:

- 1) The Directive has lost its relevance because there is no longer an operational/OSH need;
- 2) The Directive has lost its relevance because legislative intervention has proven not to be the best choice;
- 3) The Directive is still OSH relevant and has legislative relevance, under the condition that some points are improved upon.
- 4) The Directive is still relevant without any need for improvements.

## **VI. Evaluation of costs and benefits**

As part of the evaluation of a EU OSH Directive, an insight into the costs and the benefits of the regulation is required. The following questions are relevant:

#### ***Step 6: Evaluating the costs and benefits of the EU OSH Directive under evaluation.***

#### ***Question 16: What means have been deployed and what are the corresponding costs induced by the EU OSH Directive?***

Possible subquestions could refer to the organisational, human resources and material means which were necessary to implement the Directive, and the costs of these investments.

#### ***Question 17: What is the cost-benefit of the chosen EU measures (provisions) and the EU Directive as instrument?***

Possible subquestions could refer to the implementation costs versus the benefits.

As part of the evaluation project, we developed a cost-benefit model, which is explained in chapter II.4.

## II.3 Indicators for evaluating the EU OSH Directives

The 17 questions and the corresponding subquestions constitute the framework of the evaluation methodology. These 17 questions cover the main aspects mentioned in chapter II.2. Each question corresponds to a specific aspect that the evaluation will examine, a so-called 'indicator'. A number of subquestions have been developed to enable an evaluation of each step of the legislative process.

Indicators are needed to describe how well legislation has contributed to progress towards the objectives. They aim to evaluate specific parts of the legislative process and they provide the link between the evaluation questions and the available data.

The following overview shows the different indicators that should be taken into account for the evaluation of the consecutive steps, their corresponding parameters, the sources and the availability of data.

### Types of indicators

Three types of indicators have been used: input indicators, output indicators and outcome indicators. Each type of indicator is used for evaluating a different step in the evaluation process (Figure 8).

**Input indicators** - They measure the initial relevance of existing legislation, and the qualitative elaboration of the EU legislation.

**Output indicators** – They refer to the implementation of the legislation in practice, i.e. the legal implementation, the operational implementation, the knowledge of the national provisions transposing the EU OSH Directive and the perception of the stakeholders with regard to the fulfilment of the national provisions.

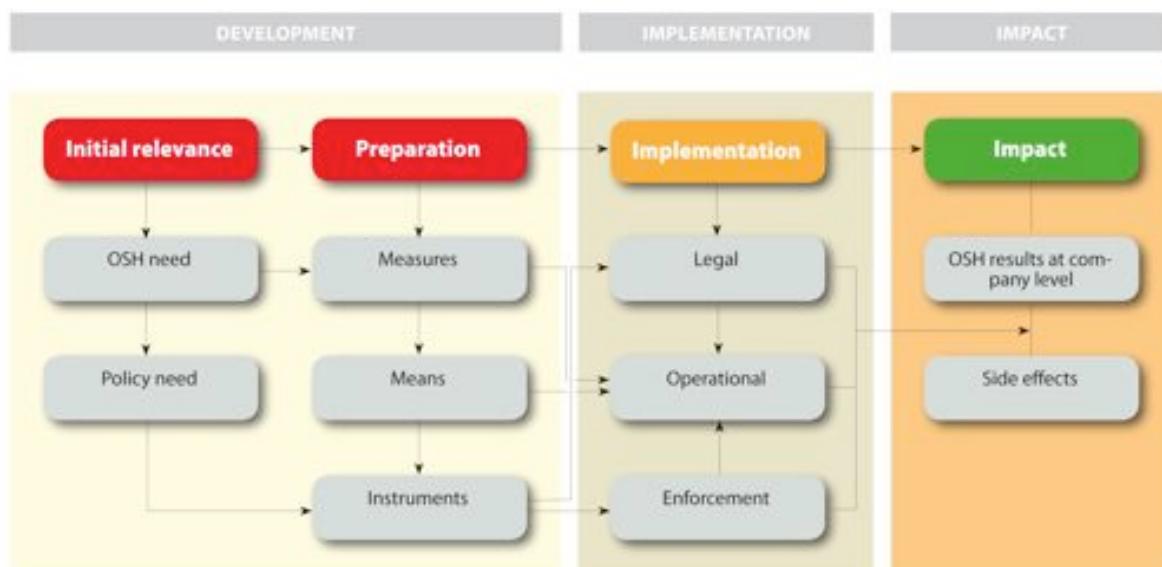
When one is performing an evaluation, output indicators are only of importance for legislation that has been implemented already; accordingly they are used for ex-post evaluations only. While the first two chronological steps can be used for ex-ante and ex-post evaluations, the third and fourth steps are the basis for ex-post evaluation of EU OSH legislation. They serve to identify indicators and sources.

**Outcome indicators** – They refer to the objective and subjective results of the EU OSH Directives at the national level, the differences between different sectors or worker categories, the side effects and the level playing field between the Member States.

The list of indicators is not exhaustive. It needs to be completed with regard to the specificities of the Directive under evaluation. The individual OSH Directive-related provisions are mentioned in Annex I.

Figure 8: Indicators for evaluating the EU OSH Directives





### A framework of the evaluation methodology

The table below summarizes the evaluation framework. The sources are mentioned, that will allow us to retrieve the data in the data collection part. A description of the sources is made in the source book, Annex IV of the Generic methodology report.

For the availability of data, several categories can be differentiated. 'Limited availability' means that the data should be available in theory but in practice availability depends on the country and national practices. 'Ad hoc' refers to data that are not systematically collected. Availability depends on specific stakeholders, such as the labour inspectorate as a governmental authority that decides if certain surveys are performed and if data are published. Data that are classified 'ad hoc' might also be available for some years but not for an ongoing period. When taking the decision to include this kind of information, the availability has to be checked individually.

### I. Initial relevance of existing legislation

#### Step 1: Identifying the OSH problem and the need for policy intervention

Question 1: Does/did the EU Directive respond to an OSH need?

Indicator	Subquestions	Sources*	Availability of data
The identification of the OSH problem	<ul style="list-style-type: none"> <li>- What triggered the preparation/consideration of EU OSH legislation (the existence of national legislation, ...)?</li> <li>- Which OSH-need was the reason and background for the start/preparation of activities?</li> <li>- Are the objectives of the EU Directive based on the objective (data) and subjective results (perception) of risk analysis ?</li> <li>- Was there a need for a EU harmonization?</li> </ul>	Risk analysis reports, reports of national authorities or other stakeholders investigating the need for a legislative action, the opinion documents of the social partners	Limited
		Stakeholder	Ad hoc

	<ul style="list-style-type: none"> <li>- What are/were the context factors such as economic circumstances, legal tradition, and safety culture at the time of considering the adoption of EU OSH legislation?</li> <li>- Which common/controversial opinions and statements <b>about the OSH needs</b> and the necessary activities were emphasised during the discussions at European level?</li> <li>- Which <b>major arguments</b> (indicators, data) were used to justify the actions/ activities? Which data from which countries were used in this phase (Monitoring instruments like statistics, registers, surveys and or studies)?</li> </ul>	<p>surveys</p> <p>EU and national surveys on OSH situation in companies</p>	Available
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\* For a full description of the sources, see Annex IV

## II. Preparation of the legislation

### Step 2: Elaborating a qualitative OSH (legislative) policy

Question 2: Are/were the objectives of the EU OSH Directive clearly formulated/do they correspond to the defined OSH needs?

Indicator	Subquestions	Sources	Availability of data
A clear formulation of the objectives	<ul style="list-style-type: none"> <li>- Were the objectives of the EU legislation in line with the overall EU Strategy?</li> <li>- Were the objectives SMART-ly formulated?</li> <li>- Were the expected (short term, medium, long term) results of the objectives made explicit from the start?</li> <li>- Were the objectives of the OSH Directive sufficiently clear for those who are responsible for the transposition into national regulations?</li> <li>- Do the objectives correspond to the defined OSH needs?</li> </ul>	<p>EU preparatory document (referring to EU OSH strategy; describing objectives)</p> <p>Correspondence between Commission and Member States</p>	<p>Available</p> <p>Limited</p>

Question 3: Have the measures required to achieve the desired objectives been chosen adequately?

The choice of measures	<ul style="list-style-type: none"> <li>- Was knowledge available; to what extent exists uncertainty about the OSH issue?</li> <li>- Was the operational OSH management process taken into account when considering measures to impose?</li> <li>- Was interaction with other risks or current or emerging evolutions taken into account?</li> <li>- Were lessons learnt from national experiences, legislative or other measures?</li> <li>- Were there diverging or common</li> </ul>	<p>EU preparatory documents</p> <ul style="list-style-type: none"> <li>- Reflecting knowledge about the issue</li> <li>- Reflecting the consultation of stakeholders</li> <li>- Reflecting the background to the choice</li> <li>- Integrating the lessons learned</li> </ul>	Available
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	opinions and statements about the measures to be applied (concerning aspects like approach, adequateness, coverage, expected effects, etc.)?		
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Question 4: Have the necessary means to apply the chosen measures been estimated?

The choice of means	<ul style="list-style-type: none"> <li>- Have organisational changes been estimated: information/communication, participation, rules &amp; procedures?</li> <li>- Have the required human resources been estimated: knowledge, competences, skills, new functions, training needs?</li> <li>- Have the required material needs been estimated: technical, material adaptations?</li> <li>- Has the availability of the organisational capacity, human and material resources been estimated (internal availability within organisations, external availability on the market)?</li> <li>- Were there diverging or common opinions and statements about the means to be applied (concerning aspects like approach, adequateness, coverage, expected effects etc.)?</li> </ul>	Research simulations on estimated means	Ad hoc
		Case studies	
		Stakeholder interviews/ Employer and worker surveys	Ad hoc
			Ad hoc

Question 5: Have the instruments required to achieve the desired objectives/results been chosen adequately?

The choice of instruments	<ul style="list-style-type: none"> <li>- Have several optional types of intervention been discussed (legislation in form of a directive, a regulation etc., change of existing legislation, no legislative action but campaigns, guidance, etc.), taking into account the available knowledge/degree of uncertainty, the selected measures and the social perception/social acceptance of the OSH issue to be regulated?</li> <li>- Have the merits, weaknesses and possible side effects of each option been evaluated?</li> <li>- Have lessons been drawn from national instruments, regulatory or other, to impose the necessary measures?</li> <li>- Has a mix of instruments (Directive in combination with research, awareness campaign, etc.) been considered?</li> <li>- Were there diverging or common opinions and statements about the instruments to be applied (concerning aspects like approach, adequateness, coverage, expected effects etc.)?</li> </ul>	EU preparatory documents Reflecting knowledge Reflecting the background to the choice Reflecting the national experiences	Available
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### III. Implementation of EU legislation

#### Step 3.1. Monitoring the quality of the legal implementation at the national level

Question 6: Has the EU Directive been transposed into national regulations in a qualitative way (process quality)?

Indicator	Subquestions	Sources	Availability of data
Legal implementation of EU OSH Directive at the national level	- To what extent has the EU OSH Directive been transposed in national regulations?	EU transposition tables - Reports of authorities responsible for transposing the Directive - National implementation reports to the Commission - Text of the national transposition of the Directive - Stakeholder interviews	Available
	- What problems did the transposition of the EU OSH Directive encounter?		Limited
	- How has the EU OSH legislation been transposed into national regulations (legislation or other instruments)?		Limited
	- Are there national add-on's: did the EU Directive trigger the inclusion of new or additional aspects of OSH in the national legislation? Did the EU Directive trigger more detailed and/or more user friendly regulations at national level?		Available
	- Which common / controversial opinions and statements about the OSH needs and the necessary activities were emphasised during the discussions at the national level?		Ad hoc
	- Which institutions were made responsible to implement the Directive (e.g., was an adaptation of the institutional powers necessary, was education of supervisory personnel necessary or were all competences for an adequate implementation available, was the responsibility given to the employers and were they allowed to contract private prevention services etc.)?		

#### Step 3.2. Monitoring the operational implementation at the national level

Question 7: Have the national provisions transposing the EU legislation been applied in a qualitative way (process quality)?

Indicator	Subquestions	Sources	Availability of data
Operational implementation of EU OSH Directive at national level	- To what extent are the national provisions correctly applied (those of the specific Directive* in combination with the general obligations of the Framework Directive)?	- National reports from labour inspectorates, accident insurance companies, OSH institutes etc. - National implementation	Limited
	- How widely have the basic OSH-requirements of the Framework Directive 89/391/EEC been implemented (e.g. risk		Limited

	<p>assessment, information of workers)?</p> <ul style="list-style-type: none"> <li>- To what extent does the practical implementation of national provisions encounter difficulties/problems?</li> <li>- To what extent are (sector, size, activity, category of worker, ...) specific successes or problems observed?</li> <li>- Did the enterprises (their associations), the workers (the trade union or workers' representatives), governmental institutions or scientists report on the implementation (e.g. reasons for changes, practical or organisational problems, costs of administration or costs of technical adaptations)?</li> <li>- Were proposals for legal changes made by any of the stakeholders? Which proposals?</li> <li>- What was the impact on practical health and safety measures at enterprise level and on practical supervision of the government?</li> </ul>	<p>reports to the Commission</p> <ul style="list-style-type: none"> <li>- National/EU studies</li> <li>- EU reports on OSH aspects (occupational diseases, accidents at work, etc.)</li> <li>- Stakeholder interviews/ Employer/ worker surveys</li> <li>- Data from labour inspectorates, accident insurance companies etc.</li> </ul>	<p>Ad hoc</p> <p>Ad hoc</p>
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\*This parameter is specific to each (category of) directive(s). The individual OSH Directive-related provisions are mentioned in Annex I

Question 8: To what extent are the national provisions transposing the EU OSH Directive known by the stakeholders?

Knowledge of the national provisions transposing the EU OSH Directive	<p>What is the knowledge of</p> <ul style="list-style-type: none"> <li>- National civil servants (administrations and inspectorates)?</li> <li>- OSH experts?</li> <li>- Employers?</li> <li>- Employers' organisations?</li> <li>- Workers?</li> <li>- Workers' organisations?</li> </ul>	<p>Stakeholder interviews and surveys</p> <p>Employer/worker surveys</p>	Ad hoc
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Question 9: How coherent is the perception of the fulfilment of the national provisions transposing the EU OSH Directive?

Perception of fulfilment of national provisions transposing the EU OSH Directive	<p>What is the perception of</p> <ul style="list-style-type: none"> <li>- National civil servants (administrations and inspectorates)?</li> <li>- Internal OSH experts?</li> <li>- External OSH experts?</li> <li>- Employers?</li> <li>- Employers' organisations?</li> <li>- Workers?</li> <li>- Workers' organisations?</li> </ul> <p>How coherent are these perceptions?</p>	<p>Stakeholder interviews and surveys</p> <p>Employer/worker surveys</p>	Ad hoc
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## IV. Impact of existing legislation

### Step 4: Evaluating the impact of the EU OSH Directive

Question 10: What are the objective and subjective results at the national level of the EU OSH Directive?

Indicator	Subquestions	Sources	Availability of data
Factual results of the implementation of the national legislation	<p>Is there any statistic evidence of the OSH impact of the directive, e.g. less accidents or diseases etc.?</p> <p>What are the factual (objective) results?</p> <ul style="list-style-type: none"> <li>- Statistical data on OSH conditions related to the targets of the EU OSH Directive (match with the desired results)*:</li> <li>- Accidents at work (/1000 workers): evaluation over time</li> <li>- Occupational diseases (/1000 workers): evaluation over time</li> <li>- Sickness absence (% of employed people absent from work due to illness, injury or temporary disability): evaluation over time</li> <li>- Disability (% of workers stating that they have a longstanding health problem or a disability): evaluation over time</li> </ul> <p>Has an overall assessment of the effects on society been performed (macroeconomic e.g. productivity or employment, social, ecologic)? Are data aggregated on a national level?</p>	<p>ESAW</p> <p>EODS</p> <p>Labour Force Survey</p> <p>Labour Force Survey ad hoc module 2002</p>	<p>Available</p> <p>Available</p> <p>Available</p> <p>Available</p>
Perception of the results of the implementation of the national legislation	<p>What is the perception of the improvement of the OSH conditions (subjective results)?</p> <ul style="list-style-type: none"> <li>- Work related health risks (% of workers thinking that their health or safety is at risk because of work)</li> <li>- Job quality (indices on several aspects of working conditions –physical working conditions, psychological working conditions, work, autonomy, work intensity)</li> <li>- Sustainability of jobs (ageing workforce, worker participation)</li> <li>- Creating an equal OSH level playing field</li> <li>- Job satisfaction, job happiness, motivation</li> <li>- Workplace health promotion</li> </ul>	<p>EWCS National Surveys (stakeholders/ employers and workers)</p> <p>Eurobarometer</p>	<p>Available</p> <p>Available in some* of the EU countries</p> <p>Available</p>

\* See survey sources

Question 11: Are there sector specific national results or diversified results for specific categories of workers?

Objective results of the implementation of the national legislation – per sector/worker categories	- Are the objective results (statistics) in the scope of the EU OSH legislation differentiated by sector, by category of workers?*	ESAW EODS Labour Force Survey Labour Force Survey ad hoc module 2002 Case studies Survey data	Available Available Available Available Ad hoc Ad hoc
Perception of the results of the implementation of the national legislation – per sector/worker category	- Are the subjective results (perception) in the scope of the EU OSH legislation differentiated by sector, by category of workers?	EWCS National Surveys (stakeholders/ employers and workers)  Eurobarometer Case studies Survey data	Available Available in some** of the countries  Available Ad hoc Ad hoc

\*WPD and other directives: check against objectives of the directives as indicated in Annex I

\*\* See survey sources

Question 12: What are observable side effects at the national level related to the scope of the EU OSH Directive?

Side effects New, emerging (OSH) trends	- What are positive/negative observable OSH side effects (attributable to the EU OSH Directive)? - Modernisation of legislation - Simplification of regulations - Productivity improvement - Innovation of working and productivity methods and techniques - What are the context factors at the time of the ex-post evaluation? - What are observable new, emerging (OSH) trends related to the scope of the EU OSH Directive?	- National (statistical) reports - Reports and studies of national administrations, inspectorates - National Surveys (stakeholders/ employers and workers)	Limited  Limited  Ad hoc
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Question 13: Is there an observable level playing field between the Member States, after x years of implementation?

Observable level playing field between Member States	What is the level of enforcement of the EU OSH Directive in the Member States?: - Existence of national enforcement policies and measures - Existence and application of sanctions for workplace safety infractions	Data from Labour Inspectorate	Limited
	What is the level of compliance of the Member States with the EU OSH Directive?	Conclusions drawn from the	

		comparison of the level of transposition, application and enforcement of the EU provisions in the EU Member States	
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## V. Evaluation of effectiveness and relevance

### Step 5.1. Evaluating the effectiveness of the EU OSH Directive under evaluation

Question 14: Have the objectives and expected results been achieved x years after the adoption of the EU OSH legislation?

Indicator	Subquestions	Sources	Availability of data
<b>Degree of effectiveness of the EU OSH Directive</b>	<ul style="list-style-type: none"> <li>- How have the direct objective and subjective OSH results evolved since the adoption of the Directive?</li> <li>- How have context factors evolved since the adoption of the Directive?</li> <li>- How do side effects and macro effects influence the direct OSH results?</li> <li>- What are the strengths and/or shortcomings of the Directive itself (initial relevance, quality of implementation)?</li> <li>- What are the strengths and/or shortcomings of the national transposition?</li> <li>- What are the strengths and/or shortcomings of the national implementation?</li> <li>- Could the same objectives have been reached without the EU Directive?</li> </ul>	ESAW EODS Labour Force Survey Labour Force Survey ad hoc module 2002 EWCS National Surveys (stakeholders/ employers and workers) Eurobarometer Case studies Survey data	

### Step 5.2. Evaluating the current and future relevance of the EU OSH Directive under evaluation

Question 15: What is the (actual and future) relevance of the EU OSH Directive?

Indicator	Subquestions	Sources	Availability of data
<b>Relevance</b>	<ul style="list-style-type: none"> <li>- Is the EU OSH Directive still OSH relevant?</li> <li>- What changes are necessary regarding the OSH requirements?</li> <li>- Has the EU OSH Directive still legislative relevance?</li> <li>- What changes are necessary regarding the regulatory initiatives?</li> </ul>	<ul style="list-style-type: none"> <li>- Risk analysis reports, reports of national authorities or other stakeholders investigating the need for a</li> </ul>	



		legislative action, the opinion documents of the social partners - EU and national surveys on OSH situation in companies - National reports from labour inspectorates, accident insurance companies, OSH institutes etc. - National implementation reports to the Commission - National/EU studies - EU reports on OSH aspects (occupational diseases, accidents at work, etc.) - Stakeholder interviews/ Employer/ worker surveys - Data from labour inspectorates, accident insurance companies etc.	
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## VI. Evaluation of the costs and benefits

### Step 6. Evaluating the costs and benefits of the EU OSH Directive under evaluation

Question 16: What means have been deployed and what are the corresponding costs induced by the EU OSH Directive (employers, public sector, others)?

Indicator	Subquestions	Sources	Availability of data
<b>Estimation of the compliance costs</b>	<ul style="list-style-type: none"> <li>- What organisational, human and material/technical means were required to implement the directive?</li> <li>- What is the cost of these investments (employers, public sector, others)?</li> </ul>	See cost-benefit model	

Question 17: What is the cost-benefit of the chosen EU measures (provisions) and the EU Directive as instrument?

Indicator	Subquestions	Sources	Availability of data
<b>Cost-benefit analysis</b>	<ul style="list-style-type: none"> <li>- What are the real/estimated implementation costs (organisation, human resources, material)?</li> <li>- Do the benefits outweigh the costs?</li> <li>- What is the balance between estimated and real costs (what items differ)?</li> </ul>	See cost-benefit model	

## II.4. Costs/benefits analysis

A common model for economic appraisal of the Occupational Safety and Health Directives has been developed as a project within the overall evaluation methodology project. The model is a response to the European Commission's request to include a specific methodology on economic aspects within a much broader methodology seeking systematic evaluation of the EU OSH legislation. This global assessment methodology should make it possible to assess both the quality of the European OSH Directives and their actual practical implementation at the workplace, including favourable and inhibiting factors alike.

The model is annexed as a separate document entitled '*Assessing the compliance costs and benefits of European OSH Directives*'.

## II.5. Contextual factors

The preparation of a directive and its implementation is influenced by contextual factors, mostly outside the frame of the specific legislation in question and the overall political arena of OSH. These developments occur in technology, in economy and also in other areas of legislation; and they are in general beyond the influence of OSH policy and OSH policy actors.

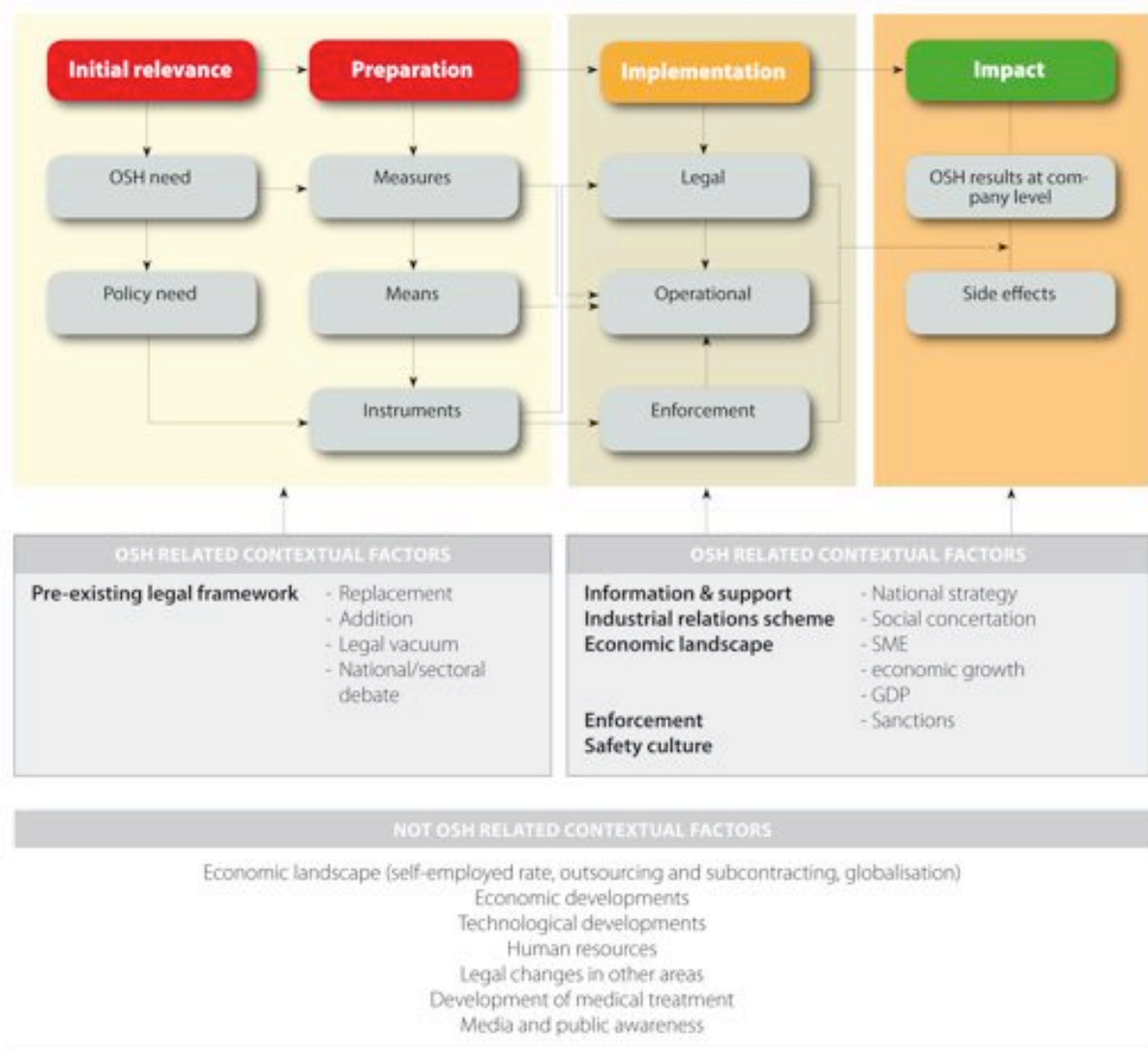
For ex-post evaluations, it is particularly difficult to distinguish the impacts of different policy measures and changes from other relevant influences, in order to assess how much of the observed impacts can be attributed to the policy measure in question.

Literature research and stakeholder surveys can however be used to map a number of contextual factors, which could have influenced the degree of implementation and impact of the Directive.

### **Influence of contextual factors**

The influence of contextual factors on the effectiveness and efficiency of EU OSH Directives can be situated at all levels of the legislative process: the **legal context** (input), the **implementation** (output) and the **impact** (outcome). Figure 9 contains an indicative list of possible contextual factors.

Figure 9: Influence of contextual factors in the EU OSH Directive evaluation process



## A. Legal context

### - SMART formulation of objectives

On the EU level, the extent to which the objectives of the EU OSH directives are clearly defined, taking into account the principles of SMART (cf input indicators), has an indirect influence on the level of improvement of the OSH legislation at the national level.

If the objectives of the EU OSH Directive are clearly defined and the desired results in the short, medium and long term are clearly indicated, it can be expected that the transposition process into national legislation will give rise to fewer interpretation problems and other difficulties.

Generic indicators:

- Degree to which the objectives are SMART-ly formulated
- Degree to which the expected (short, medium and long term) results of the objectives have been made explicit from the start
- Degree to which the objectives of the OSH Directive are sufficiently clear to those who are responsible for the transposition into national regulations

Indicators in the stakeholder survey of the WPD:

- The obligations laid down in the WPD are clearly formulated (Agree ... Disagree)

### - *Pre-existing legal framework*

The existing legal framework in a country before transposition of the EU OSH Directive is an important contextual factor with regard to coverage and type of regulatory approach.

#### *Coverage*

If the regulatory provisions of the EU OSH Directive are already to a large extent covered by the existing national legislation, then the transposition process will cause fewer problems. The EU OSH Directive can add regulatory provisions to the existing legislation, it can replace existing articles and it can fill a legal vacuum, for example with regard to the scope of legislation, or to specific types of workplaces or workers.

#### *Legislative model*

Closely related to the coverage is the question of the underlying legislative model<sup>17</sup> in a country. One can distinguish *objective-based regulation* from *prescriptive regulation*.

Objective-based regulation does not specify the means of achieving compliance but sets goals that allow alternative ways of achieving compliance. Objective-based regulation has the advantage that it allows for flexible solutions. However, it can sometimes be difficult to determine how to meet an objective requirement and inconsistency in implementation can result.

In prescriptive regulation, the specific means of achieving compliance is mandated. The advantage of prescriptive regulation is that it specifies what needs to be done, but this approach also makes the implementation of innovative solutions difficult. Prescriptive regulations encode the best engineering practice at the time they were written and rapidly become deficient where best practice is changing, e.g. with evolving technologies. They eventually could prevent industry from adopting current best practice.

In the EU OSH Directives, a combination of both approaches is used. While for example the VDU Directive stipulates that 'Employers shall (...) perform an analysis of workstations in order to evaluate the safety and health conditions' and '(...) take appropriate measures to remedy the risks', the annexes to the Directives give detailed specifications on the equipment, the environment and the operator/computer interface.

A country with a legal tradition of objective-based regulation will have difficulties with the prescriptive provisions of the EU OSH Directive, while a country with a strong legal tradition of prescriptive regulation will find it difficult to organise its enforcement policy, for example.

The more legal adaptations are necessary for a country, the more difficult it will be to transpose the EU OSH Directive in a qualitative way in the national legislation.

#### Generic indicators:

- Degree of completeness of transposition
- Degree of legislative changes
- List of (legal) transposition difficulties (context-related, specific articles)

#### Indicators in the stakeholder survey of the WPD:

- To what extent does the national law transposing the WPD differ from the original directive?

<sup>17</sup> Penny, J., Eaton, A., Bishop, P., Bloomfield, R., "The Practicalities of Goal-Based Safety Regulation", Proc. Ninth Safety-critical Systems Symposium (SSS 01), Bristol, UK, 6-8 Feb, pp. 35-48, New York: Springer, ISBN: 1-85233-411-8, 2001

- Did the transposition of the WPD into national legislation take into account pre-existing national law?
- Can you explain how far the national legislation had to be changed?
- The transposition of the WPD into national law resulted in relevant legislation changes in my country
- The transposition of the WPD into national law led to national legislation that is ... Stricter than before/Almost the same/Less strict than before
- The transposition of the WPD into national law led to national legislation that is ... Better defined than before/Almost the same/Less defined than before
- Do you want to comment on specific aspects/articles of the WPD and its national transposition?

### *Transposition debate*

The national and sectoral debates at the time of the transposition of the EU OSH Directive will influence the final transposition text. The discussions give an indication of the 'perceived legitimacy' of the new legislative text. A consensus gives a favourable context for the implementation process at company level. Heated debates are a rather unfavourable base for the implementation process.

Generic indicators:

- List of (legal) transposition difficulties (context-related, specific articles)

Indicators in the stakeholder survey of the WPD:

- Were there any aspects of the WPD that attracted controversy when it was transposed into national law?
- Do you want to comment on specific aspects/articles of the WPD and its national transposition?

## **B. Implementation**

At company level, there are a number of indicators, which create favourable conditions for the smooth implementation of the legislative provisions.

### *- Information and support*

The need for information and support for a company to comply with the OSH regulations is linked to the legislative model of a country. In case of objective-based regulation, the need for support will become more significant.

SMEs often lack the management structures needed to drive through compliant behaviours, and may also have poorer documentation and policies<sup>18</sup>.

### *Training*

Evidence-based findings on regulation culture and behaviours suggest that training alone does not necessarily result in compliance. To be most effective, training must be perceived as important to management, be adopted on an ongoing basis, and be supported by multiple channels of communication, including performance management<sup>19</sup>.

A study on the enhancing factors for corporate compliance with worksite safety and health legislation concludes that training and the provision of information to managers are associated with higher levels of corporate regulatory compliance<sup>20</sup>.

<sup>18</sup> Wilson S, Tyers C, Wadsworth E., Evidence Review on Regulation Culture and Behaviours, Unit Report 12, Food Standards Agency, 2010.

<sup>19</sup> *ibid.*

<sup>20</sup> Daniel Stokols et al., Enhancing corporate compliance with worksite safety and health legislation, in/ Journal of safety research, Vol. 32, issue 4, 2001, pp. 441-463

This statement has been supported by a recent French study on the practices of prevention of occupational risks. Legal compliance and risk prevention goes hand in hand with an active training policy<sup>21</sup>.

OSH training seems to be a favourable factor for OSH legal compliance. This is confirmed by a study of British small companies, which identified management training and experience as being particularly associated with a propensity to make compliance-related improvements<sup>22</sup>.

Generic indicators:

- Amount of OSH training

Indicators in the employer/employee survey of the WPD:

- Employer survey:
  - o In which ways do you usually provide workers with information on occupational safety and health issues? By means of... (Training courses, Any other form of information or training)
  - o Are workers consulted about their wishes and needs with respect to the provision of information and training on health and safety issues?
- Employee survey:
  - o In which of the following ways is information on health and safety issues usually provided in your establishment? By means of... (Training courses, Any other form of information or training)

### *Support structures*

The use of external assistance with respect to health and safety issues seems to be a determining factor for SMEs for the adoption of compliance-related improvement measures with regard to health and safety at work<sup>23</sup>.

Companies and SMEs in particular request validated and authoritative information sources. Companies attach a lot of importance to authoritative information that brings neutrality and objectivity with it. This is quality information that is validated by the competent authority or other recognised sources, and provides a handle for implementing safety policy in the company<sup>24</sup>.

Generic indicators:

- National OSH programmes
- Human resources of the occupational health and safety system
- Financial resources of the OSH system

Indicators in the stakeholder survey of the WPD:

- Did other factors contribute to the impact of the national transposition of the WPD (such as awareness campaigns, extra research, financial incentives for the industry concerned, etc.)?

### *- Industrial relations scheme*

<sup>21</sup> Thomas Amossé, Pratiques de prévention des risques professionnels : facteurs associés aux pratiques et politiques d'entreprise : rapport de recherche, Centre d'études de l'emploi, 2011

<sup>22</sup> Baldock R, James P, Smallbone D, Vickers I, Influences on small-firm compliance-related behaviour: the case of workplace health and safety, in: Environment and Planning C: Government and Policy 24(6) 827 – 846, 1996

<sup>23</sup> Baldock R, James P, Smallbone D, Vickers I, Influences on small-firm compliance-related behaviour: the case of workplace health and safety, in: Environment and Planning C: Government and Policy 24(6) 827 – 846, 1996

<sup>24</sup> De Broeck V, Meeus C, Onderzoek arbo-informatiestructuur in Westerse landen, Ministerie van Sociale Zaken en Werkgelegenheid, 2006

Supporting the domestic architecture of industrial relations seems to be an important contextual factor for the effective implementation of OSH legislation<sup>25</sup>.

At enterprise level, active participation in a professional or regional employers' association and the presence of social relations structures (such as trade unions, OSH committees and safety representatives), seem to be the determinants of enterprise-level compliance with safety and health regulations<sup>26</sup>.

Evidence-based findings on regulation culture and behaviours suggest that if workers agree with regulations, can see their fairness and legitimacy, and are involved in decisions about control measures, they are more likely to co-operate. Worker involvement can promote shared responsibility and is important in creating an effective health and safety culture, which results in compliance and effective assessment of risks<sup>27</sup>. Membership of trade or business associations is identified by a study of British SMEs as a contributory factor for compliance-related OSH measures<sup>28</sup>.

Generic indicators:

- Threshold for OSH representatives (OSH Committees)
- Threshold for OSH manager

## - *Economic landscape*

### *Size of enterprises*

A review on regulation culture and behaviours in the UK<sup>29</sup> indicates the size of the business as a key determinant in compliant behaviour.

- The costs of compliance are proportionately higher among small or medium-size enterprises (SMEs) than in larger businesses. Resource constraints can limit the extent to which staff are trained and monitored and time pressures negatively impact on the take-up of training. This can lead to workers taking 'short-cuts', which compromise levels of risk control.
- Larger businesses tend to have access to better information (e.g. through business networks or closer relationships with regulators), specialist internal resources and/or external support, and have more effective management structures. This means that they are more likely to be able to understand, and be aware of, compliance issues when compared with smaller businesses.
- SMEs may lack technical expertise in product and service provision and their health and safety implications, resulting in poor understanding of (...) safety requirements.

<sup>25</sup> Charles Woolfson, Regulation of the Working Environment in the New Accession States of the Enlarged European Union. A Report to the European Trade Union Confederation/Trade Union Technical Bureau for Health and Safety, TUTB Working Paper, Brussels, 2004.

<sup>26</sup> <sup>26</sup> Thomas Amossé, Pratiques de prévention des risques professionnels : facteurs associés aux pratiques et politiques d'entreprise : rapport de recherche, Centre d'études de l'emploi, 2011.

<sup>27</sup> Wilson S, Tyers C, Wadsworth E., Evidence Review on Regulation Culture and Behaviours, Unit Report 12, Food Standards Agency, 2010.

<sup>28</sup> Baldock R, James P, Smallbone D, Vickers I, Influences on small-firm compliance-related behaviour: the case of workplace health and safety, in: Environment and Planning C: Government and Policy 24(6) 827 – 846, 1996

<sup>29</sup> Wilson S, Tyers C, Wadsworth E., Evidence Review on Regulation Culture and Behaviours, Unit Report 12, Food Standards Agency, 2010.

A French study<sup>30</sup> on the practices of prevention of occupational risks indicates that the small size of a company is an unfavourable factor in compliance. Especially micro enterprises with fewer than 10 workers encounter difficulties in implementing the legal provisions.

Generic indicators:

- % of SMEs in the economic landscape

Indicators in the stakeholder survey of the WPD:

- Are there any types of companies (micro/small-sized enterprises) being especially affected by the national law/transposition of the WPD, either positively or negatively?
- Were any additional measures implemented to promote compliance with the national law transposing the WPD (such as sector-specific measures, measures for SMEs, measures for specific categories of workers, measures for specific activities)?

### *Economic growth*

Enterprise size and growth performance are factors, which have been identified as being particularly associated with a propensity to make compliance-related improvements in SMEs<sup>31</sup>.

The growth performance at company level is confirmed as a compliance-enhancing factor for OSH regulations<sup>32</sup> in a study on the effectiveness of a managerial training programme in enhancing corporate compliance.

### *GDP*

Gross Domestic Product gives an indication of the economic situation in a country. Factors such as recession and the financial and economic crisis have a negative impact on the collective means of a country to develop OSH related infrastructures, such as research, advisory services and other support structures.

Generic indicators:

- Economic growth
- GDP
- Financial resources of the OSH system (budget in € available for OSH (out of total government budget) for inspection, campaigns, information, research).

### *- Enforcement*

Evidence-based findings on regulation culture and behaviours suggest that duty holders are more likely to comply when they perceive the regulatory regime as fair, trusted and co-operative, but fear of prosecution is a key driver of behaviour, with sanctions needed to back up more co-operative approaches<sup>33</sup>.

<sup>30</sup> Thomas Amossé, Pratiques de prévention des risques professionnels : facteurs associés aux pratiques et politiques d'entreprise : rapport de recherche, Centre d'études de l'emploi, 2011.

<sup>31</sup> Baldock R, James P, Smallbone D, Vickers I, Influences on small-firm compliance-related behaviour: the case of workplace health and safety, in: Environment and Planning C: Government and Policy 24(6) 827 – 846, 1996

<sup>32</sup> Daniel Stokols et al., Enhancing corporate compliance with worksite safety and health legislation, in/ Journal of safety research, Vol. 32, issue 4, 2001, pp. 441-463

<sup>33</sup> Wilson S, Tyers C, Wadsworth E., Evidence Review on Regulation Culture and Behaviours, Unit Report 12, Food Standards Agency, 2010.



According to a study of British small companies on the adoption of compliance-related improvement measures with regard to health and safety at work, inspections on the part of regulatory officials are the most important influencing factor<sup>34</sup>.

Sanctions, irrespective of the size of the penalty, can impact on duty holder behaviour, as can 'naming and shaming' non-compliant duty holders, particularly among those for whom reputation is important<sup>35</sup>. Enforcement is recognised as a factor in compliant behaviours.

Generic indicators:

- Level of enforcement of the EU OSH Directive in the Member States:
  - o Number of labour safety inspectors
  - o Number of sanctions for workplace safety infractions

Indicators in the stakeholder survey of the WPD:

- In cases of infringement, what is the reason why companies do not comply with the national law/transposition of the WPD?
  - o The infringement is not regularly checked
  - o The infringement is not sanctioned
- Did other factors contribute to the impact of the national transposition of the WPD (such as for example criminal penalties, administrative fines)?

#### - *Safety culture*

An empirical study of industrial and agricultural businesses' responses to regulation of health and safety in the workplace in England shows that companies which do not have a natural interest in safety require considerable advice, encouragement and coercion<sup>36</sup>. In some situations deterrent penalties may be required in order to achieve a sustained improvement in standards.

Research in Canada on safety training programmes found that those companies that provided tailor-made training already offered better working conditions, greater management involvement in safety work, and more safety activities than those that used outside training sources<sup>37</sup>. This suggests that safety regulations benefit good companies more than those in greater need of improvement.

An evidence review on regulation culture and behaviours in businesses and enforcement bodies across a range of regulatory areas, notably health and safety, found that organisations which demonstrate features of an effective culture are likely to be more compliant<sup>38</sup>. These features include manager commitment, peer group support, good staff communication and consultation, recognition of the fact that everyone has a role to play, and high quality training. The evidence shows:

- Management approach is a key driver of compliant behaviour. Effective performance management has a positive impact on compliance and it is important for managers to lead by example.
- Safety culture is important in the establishment of, and adherence to, effective safety management systems, and in the reduction of accidents.

<sup>34</sup> Baldock R, James P, Smallbone D, Vickers I, Influences on small-firm compliance-related behaviour: the case of workplace health and safety, in: Environment and Planning C: Government and Policy 24(6) 827–846, 1996

<sup>35</sup> Wilson S, Tyers C, Wadsworth E., Evidence Review on Regulation Culture and Behaviours, Unit Report 12, Food Standards Agency, 2010.

<sup>36</sup> Hazel Genn, Business Responses to the Regulation of Health and Safety in England, in: Law and Policy, vol.15, Issue 3, p.219-233, 1993

<sup>37</sup> Saari j., et al. How companies respond to new safety regulation: a Canadian investigation. in: International labour review, vol. 132, 1993, n°1.

<sup>38</sup> Wilson S, Tyers C, Wadsworth E., Evidence Review on Regulation Culture and Behaviours, Unit Report 12, Food Standards Agency, 2010.

- Attitudes towards, and perceptions of, regulatory bodies and the regulations they enforce are also an important aspect of safety culture.
- Risk perceptions are important, and often driven by knowledge of specific risks.

The underlying motivations for businesses to comply are complex. In broad terms these are driven by how the organisation is viewed (i.e. civic duty, industry and customer expectations), and how regulations are enforced (i.e. fear of negative consequences of non-compliance including reputational damage) but are tempered by the desire to minimise the burdens of compliance. The motivations driving SME behaviour are also likely to be different to those affecting larger businesses. Specific, targeted, information, which sets out explicitly and concisely how to comply, is welcomed, particularly among SMEs.

The existing safety culture in a company is clearly a determining factor of the company's response to new safety regulation.

Generic indicators:

- OSH resources in companies
  - o Number of OSH experts
  - o Number of OSH training sessions
  - o Annual reports on OSH

### **C. Safety and Health Improvements**

The results of the evaluation exercise will be achieved through data collection mainly consisting of a mixture of objective monitoring and subjective perception.

#### **- Objective monitoring**

Objective data are mainly collected from statistical sources, such as ESAW and EODS at a European level and similar data collected by statistical sources at country level.

#### **- Subjective perception**

Subjective data are mainly collected through surveys. The results represent the subjective opinions of the respondents. Examples are the EWCS and the Company Survey from Eurofound at a European level and similar surveys and Delphi studies at country level.

### **Contextual factors – Not OSH related**

The practical implementation and effectiveness of an OSH Directive depends on many basic prerequisites and their development in previous years. These form external contextual factors, mostly outside the framework of the specific legislation in question and the overall political arena of OSH. These developments occur in technology, in the economy and also in other areas of legislation; and they are in general beyond the influence of OSH policy and OSH policy actors. Practical implementation is closely connected to many of these developments. (Figure 10).

A high quality description of the external factors is a complex issue as for many contextual factors it is not possible to clearly separate ex-post from impacts of a legislation. It often also includes areas beyond the competence of the OSH evaluation team. However, the quality of the evaluation closely depends on the correct interpretation of these factors.

Figure 10: Contextual factors not OSH related



### The case of the WPD

As stated previously in the chapter on effectiveness and relevance, an evaluation of the overall quality of a EU OSH Directive is based on an evaluation of all steps in the legislative process. Each step influences the following step(s). The final or global quality of the EU OSH legislation is thus the result of a combination of factors, which interact, but clearly follow a chronological sequence, as illustrated in the examples below. However, at each of the stages, a number of contextual aspects can intervene and influence the causal relation between the sequences. This is shown in some of the examples below.

- If the topic to be regulated is not clearly defined from the start, it is difficult to define clear objectives; if objectives are vague, there will be a lack of concern, a lack of focus, and a risk of negligent implementation of the measures, because neither the objectives nor the results induce responsibility or accountability;

In case of the WPD, the defined objectives have been clear to all stakeholders. Findings from literature research and stakeholder surveys show that there is wide agreement on the unambiguous objectives of the Directive to contribute to the gradual improvement of workplaces in terms of the safety and health of workers; as well as to achieve harmonization, within the framework of achievement of the internal market, of the minimum health and safety conditions

required for all workplaces. It has also been agreed by all stakeholders that EU legislation has been the best choice for reaching the objectives.

- If the legislation is not well prepared, this will cause 'transposition problems' that will create implementation problems. If the means and measures of a EU Directive are not well defined or if they are not corresponding to the original objectives of the regulation, than this will reflect in the legal transposition text of the national corresponding regulation. Poorly implemented measures will produce few (of the expected) results.

In case of the WPD, in general the measures and means have been made clear, with exception of some of the provisions in the Annex that lack clarity and detail according to some of the stakeholders. This is the case for example with expressions such as "sufficient" natural light, "adequate" artificial lighting, "sufficient" surface area, height and air space, "appropriate" solidity. In most of the Member States these expressions have been taken over in the national transposition text. The stakeholders and employers report that this ambiguity has been causing implementation problems on the shop floor.

However, and here intervene the contextual factors, Member States could have decided to introduce a higher level of detail. Latvia introduced more detailed requirements, for air temperatures, indoor and outdoor lightning, rest periods, including minimum values and thresholds and avoided interpretation problems.

Contextual factors at the level of legal transposition can thus contribute to an "improvement" with regard to the original legal text.

- If the operational implementation of the EU regulation at the national level is insufficient than the provisions of the regulation will hardly be applied on the shop floor. Similarly a lack of enforcement will endanger the application of the regulation in the companies.

In the WPD case, a number of countries report a certain degree of non-compliance as a result of a lack of knowledge about the legal provisions and also a lack of inspection activities.

Lack of knowledge of the legal provisions endangers the operational implementation in the companies. Knowledge can be stimulated by national initiatives to promote compliance with the national law transposing the WPD. Again this is a contextual factor, linked to the OSH infrastructure in a country.

In the employer and worker surveys it could be clearly shown that inspection activities of the Labour Inspectorate can significantly enhance the fulfilment of the general WPD obligations (information, risk assessments, consultation) on part of the employer, in particular in small companies. Again this is a contextual factor, depending on the national policies and available resources whether more control should be applied to further enhance compliance with the legislation.

Also a lack of financial, technical and human resources means (in times of economic and financial crisis for example) can influence largely the application of the regulations in the companies.

As far as the requirements of the WPD have been transposed in the relevant legislation of the Member States, the differences between the Member States regarding health and safety at work have been reduced. There is no huge difference in legislation between countries, but there are differences at the practical implementation level. It is largely depending on contextual factors, how each Member State develops the legal framework and how it is implemented at workplaces. Knowledge, experience, support, control, financial, technical and human resources means are all contextual factors which influence largely the legal compliance on shop floor level.

## II.6. Counterfactual

There are three subquestions that can be differentiated.

1. Firstly, the “**counterfactual**” dimension refers to what would have happened if there had been no directive at all. If one wants to conduct a scientific experiment, the question of counterfactual factors could theoretically only be answered based on a control group design. That would mean that half of a country would implement the respective directive and half of the country would not. After several years the difference in health and safety at workplaces with the directive in place would be compared to the health and safety at workplaces still following the former legislation. Such an experiment is obviously not feasible.

In an ideal environment, one would compare the situation in a country, which had implemented the specific legislation, and one which had not implemented it. In the case with the WPD, all countries have implemented the Directive.

The comparability would be more feasible if we were confronted with a short delay between the implementation of the provisions or program and the impact assessment of it. In case of a EU Directive, the time frame between the implementation and the impact is much longer, which also enables other contextual factors to play a more important role.

Also, an impact measurement is easier when the legislation provisions put an interdiction or a ban on the use of certain types of products for example. Then one could measure the situation before the implementation and after.

One of the possible approaches for defining the counterfactual is identified in the literature as “a before-after study”. In a standard before-after study, outcomes will be measured on the population eligible for a programme both **before** the programme is implemented and **after**. The difference between the before and after measurements is taken to be the impact of the policy. (In this instance, the ‘before’ – or ‘baseline’ – measurements act as the control measurements.)

Typically outcomes are measured at just one point in time before programme implementation and at one point in time after implementation. But this basic design is considerably strengthened if the number of measurement occasions is increased both before and after (Purdon et al., 2001).

### WPD test case

In the WPD test case, we approached the above issues in several ways:

1. In the stakeholder interviews a question is proposed: “Could you describe the situation in your country, if the WPD wouldn’t have been transposed into national law?”
2. In the quantitative surveys we have included two questions in the employer questionnaire:
  - a) E505 – “If there was no legislation regulating the issue: Would your establishment pay the same, somewhat less or considerably less attention to the following areas”. The question tries to compare the attitude of an employer with or without a legal framework with regard to issues like e.g. escape routes, ventilation, etc. The results of the answers formulated by the employers will give an indication of how employers react to a new legislative framework and will permit to roughly estimate which share of the employers would have had the same attitude with or without a directive.
  - b) E704 – “If you compare the number of accidents in your establishment in the last year to the situation three years ago [Bulgaria: to the situation between 2000 and 2007]: Has it since then

increased, stayed about the same or decreased?” For Bulgaria this question tries to compare the situation regarding the number of work accidents before and after becoming a member of the European Union. This approach enables us to estimate the effect of the WPD for Bulgaria on the number of work accidents by using the time period before 2007 as an approximation to measure the counterfactual situation. If the situation after 2007 improved (i.e. the number of accidents decreased) we, additionally, ask whether the improvements are due to changes in the nature of work, modification of the work building, modification of the work organisation or the intensification of preventive safety and health work (E705).

2. The second aspect refers to the influence of the “**pre-existing conditions**” which are particular for each country, and to what extent they play a role when evaluating the effect of a directive. It is correct to assume that a directive should have a different impact depending on the initial legal framework and the initial OSH situation. The impact will differ if the original situation is at a lower, higher or same level than the objectives formulated in the directive. The more changes the directive induces in the national legal framework, the more likely its final impact is supposed to be considerable. The analysis of the impact of the directive cannot be isolated from this context.

#### WPD test case

That is why, in the initial phase, information is gathered by means of a literature study, which maps the initial situation of each country. The literature sources are described in detail in the data collection part and the sourcebook.

The pre-existing legislation in a Member State has been analyzed by national experts or policy makers, responsible for the transposition of the EU Directive into national legislation. European Member States keep records of the transposition process of the EU Directives into national legislation. The records indicate clearly how the main elements and provisions of the Directive have been integrated in the national legislation. The so-called Transposition Notes are kept by the national authorities and are sometimes publicly available, as is the case with the UK.

Information has also been collected via the stakeholder survey, where specific questions helped in assessing the initial and actual situation. All this information allows mapping a national context, which has to be borne in mind when using results indicators such as the evolution of the number of occupational accidents, the evolution of the type of accidents, ...

3. The third issue that is addressed in the question is “**how the effects attributable to a EU OSH Directive can be isolated in the analysis**”. This item does not only take into account the “pre-existing conditions” but also all possible underlying factors. The possibility of isolating the effect of a measure is rather rare. If the effects are immediately measurable after a new regulation, meaning that no other factors had time to play a role, we could assume that the effects are attributable to the measure. This could be the case for some specific provisions but it will certainly not be the case in general. However, the main factor of the quality of a regulation is not so much related to the precision of the calculations but rather to the effort of analysis: i.e. correct questioning, understanding of the concrete effects, examination of hypotheses, ...

Studies on Regulation impact cannot apply pure scientific methods, e.g. the division of a control group and a study group. The application of these standards can easily lead to failures. With a more practical approach, the evaluation methodology needs to allow us to collect useful information that enables the evaluator to put the quantitative and qualitative information in perspective with factors that are hypothetically “favourable” or “unfavourable”.

#### WPD test case

It is difficult to isolate the effects of a EU OSH Directive since OSH needs an integrated approach. We created however a framework for analysis of the contributing factors to the effects of the legislation.



Contributing factors could for example be a strong legislative basis, a strong enforcement policy. The approach is strongly related to the issue of contextual factors as described above and needs to be addressed in the analysis phase. However the analysis is country-specific and needs to be performed on a country level. A number of country-specific examples have been given in the WPD analysis report, in order to show which factors have to be taken into account when analysing the results of the evaluation.

## II.7. Collection of data

Data collection is an essential and in many cases the most time consuming part of an evaluation.

The efforts for data collection depend of course on many factors, e.g. the desired coverage of countries, sectors, types of respondents, languages and time periods to be included. The level of detail and coverage is closely connected to the available budget.

The following **main data collection methods** will be described in detail:

### **Desk Research – Document Analysis**

This covers the analysis of studies, research reports, available statistics and official reports. The number of languages and years to cover will influence the research budget.

### **Field Studies**

These include personal visits of enterprises and institutions (e.g. SLIC Methodology), group meetings of workers and employers. The number of visits and meetings will influence the research budget.

### **Representative Surveys**

These include national and European surveys such as the ESENER and the EWCS surveys. The representativeness and the number of languages will have an influence on the research budget.

### **Stakeholder and Expert Surveys**

The research budget will be influenced by the number of experts, which will be involved in the surveys as stakeholders and experts.

The next chapters present an overview on how to address these issues depending on the features of the directives and the objectives of the evaluation.

### II.7.1. Desk research

The starting point of the process is a desk research, i.e. collection and analysis of already available information. Desk research is a very broad term, which needs some clarification. Desk research not only permits to collect data but can also be a means to identify key persons who potentially may be interviewed afterwards. The desk research also has to undergo a quality check concerning its methodology and reliability. Common scientific standards can be applied in this case.

The selection of literature has to take on two main dimensions, coverage and relevance:

- Coverage of languages and countries and periods;
- Relevance for the topic.

Such selection criteria have to be applied, because they predetermine the efforts needed for desk research and the quality and precision of the outcome that can be expected. After defining the period,

e.g. all relevant publications from the issuing of the preparation phase of the legislation on, we propose to select one of three types **Basic**, **Specific Level I** or **Specific Level II** (Figure 11):

Figure 11 : Level of coverage of desk research

DESK	TYPE OF RESEARCH	EFFORTS AND COSTS
Basic	Analysis of academic and governmental publications and statistics in English	By far the lowest efforts and costs. In many cases weak relation to EU-Directives and their implementation
Specific LEVEL I	Analysis of academic and governmental publications and statistics in English <b>plus</b> all – or selected - EU languages	Efforts and costs greater by at least factor 5, compared to basic research
Specific LEVEL II	Analysis of academic and governmental publications and statistics in English <b>plus</b> all – or selected - EU-Languages <b>plus</b> analysis of relevant national publications (studies, statements, monographs, journals, annual reports)	Efforts and costs greater by at least factor 10, compared to basic research

The **basic desk research** generally uses literature and references on an aggregated and often – not always – abstract level. Compared to the other two levels these sources do not incorporate in the same way the practical implementation level at workplaces. The basic desk research will certainly not cover all issues. For some countries the lack of literature published in English may also be a serious handicap. Both **specific levels** provide a much deeper insight into the practical implementation on the national level.

The choice can be based on variables, such as the duration of the project and the available budget. However for some issues, the basic level may produce poor results. More advanced research levels would require a larger cross-national collaboration and, potentially, the designation of a “national” correspondent in some or all countries covered by the study. The “national” correspondent will have an appropriate experience in OSH-research. To guarantee the coherence of the desk research step, the guidelines about the selection of literature and data reporting must be clearly defined for all players. The coordination and final validation will be the responsibility of the leader of the project.

The use of a template can facilitate and standardize the collected information (Cf model proposed in Annex III).

The **relevance of the literature source** is evaluated with regard to the type of source, type of document and to which question(s) of the evaluation methodology it answers. The sources may be:

- A public authority: Government, ministries, social security administrations, labour inspectorates, fire brigades etc.;
- A university or an OSH specialized research centre (private or public);



- An expert organization (groups of interests of a particular OSH profession, such as medical doctors, safety coordinators, safety engineers or sectorial expert organizations);
- An employers' organization (national, regional, sectorial);
- A workers' organization (national, regional, sectorial).

The type of document may be (according to the level of research):

- An administrative document such as an annual report, an internal work document, an official statement or declaration;
- A survey report/results (if possible with some indications about the methodology used by the authors);
- A study report or a published paper;
- Databases;
- Statistics.

The type of information may be related at least to one of the fields/questions of the evaluation methodology and clearly reported as such, so that the literature study report follows the same general framework.

Annex IV contains a **source book (national and European)** including a short description about the content and the availability of each source.

### II.7.2. Field studies

Field studies are in most cases **directed to the enterprise and workplace level**, but include also interviews with staff from local associations, authorities, prevention services or similar regional or local actors.

The aim of the field studies is to have a very direct and personal impression of the OSH situation in a **certain sector or a certain region** of a country. There are three major formats for such field studies:

- Enterprise visits;
- Face to face interviews with one or more representatives from the party of workers or employers and professionals;
- Participation in meetings of workers, employers, associations.

#### Enterprise visits

Enterprise visits generally provide a very impressive picture of the situation at workplaces. The understanding of employers or workers and the practical transposition of a regulation into the enterprise, and production or service process are of high interest for the evaluation.

However, the number of enterprises to be visited is in most cases very limited due to time and budget restrictions. The enterprise might not at all be representative for the mass of enterprises, the processes might be very particular or the enterprise has an outstanding OSH performance.

It is not possible to build an evaluation assessment opinion mainly on such enterprise visits. Such visits can corroborate or debilitate the opinions and hypotheses which are already pre-formulated. I.e., if there is a hypothesis that certain paragraphs are difficult to understand, this can be justified by the enterprise or not.

#### Face to face interviews in enterprises or at local/regional level

These interviews in field studies should be performed **in enterprises or at sectorial level or local/regional level**. The purpose is to identify the specific understanding of the legislation. The responses will highlight the specific view of an enterprise, a sector or a region. There might be also data available that is not known on the national or international level (e.g. local studies, enterprise data, etc.)

### Participation in group meetings

Another way to collect these statements and opinions is by participating in group meetings (involving chambers, business associations, unions, works councils, professional working committees of OSH professionals). In a group meeting it can be easier to get an overview about the variety of opinions on a certain topic.

An important practical question, which influences the data evaluation, is the agreement / disagreement of the interviewees to record the interview. The reporting will become more precise and much more lively, if quoting from an interview can be included.

### II.7.3. Stakeholder and specialist interviews

**Stakeholders** in this sense are representatives of groups, who are involved into labour and workplace policies. These are typically government and political parties, representatives of business associations and employers, union representatives or representatives from professional associations etc. An overall assessment of the situation in a certain sector or at national level needs to collect opinions and statements from such people.

**Specialists** based on their professional background, gained expertise to assess risks and exposures and to propose adequate measures. Typically these people have a technical or OSH education; they work in enterprises, at suppliers or external prevention services. The assessment, and often even already the identification, of risks and exposures might require specialist knowledge.

Of course, **specialists can also be stakeholders** and vice versa.

A stakeholder and specialist survey is designed to get responses from many actors. We distinguish again between the level of **OSH Infrastructure** and the **enterprise / workplace level**. As for certain issues, we regard workers and employers as specialists and stakeholders, e.g. if the evaluation aims to identify the practice of OSH or the psycho-social workload.

The interviews are typically based on a questionnaire or an interview guide and conducted by phone or face to face. In most cases such a set of interviews will not be statistically representative.

This evaluation starts with the **right choice of respondents**. The following figure illustrates in the form of a rough overview, which group of respondents might possess the most valuable knowledge on certain evaluation topics (Figure 12).

Figure 12: Stakeholder and expert interviews: who knows what about OSH?

	INFRASTRUCTURE	EMPLOYERS	WORKERS
Awareness, knowledge motivation	Social partners, business associations	Employers	Workers, workers with OSH functions, works councils
Legislation	Labour inspection / administration, prevention services	OSH specialists in enterprises, business associations	Workers with OSH functions, OSH-committees, unions
Technical specialist knowledge	Prevention services, professional associations	Technical or OSH specialists in enterprises, suppliers	Workers with OSH functions
OSH-Organisation	Prevention services, labour inspection	Employers and OSH responsible	Workers with OSH functions, OSH-committees
Enterprise actions and measures	Prevention services, prof. associations, labour inspection	Employers and OSH specialists in enterprises	Workers, workers with OSH functions, works councils
Costs and benefits	Prevention services, professional associations	Employers and OSH specialists in enterprises, business ass.	Workers with OSH functions, unions
Indicators and data	Academics, OSH research institutes	Business associations	Unions

This choice depends on many practical factors, e.g. access to some respondents for certain types of surveys or other approaches for information. Some generic questions may be addressed at both the OSH infrastructure level and the company level. However, it is obvious that it will be necessary to adapt the workers and employers questionnaires to the certain specificities of a level.

Some examples: Without external advice from specialists, **workers and employers cannot assess** the safety of a building, an elevator, a complicated machine or equipment; they can only guess or make assumptions concerning the long term risk of a chemical and refer to documents and certificates. In these cases, special technical knowledge and expert judgement is needed.

Contrarily, there are work environment issues, such as the psycho-social work environment or the practical organization of the availability of PPE in a daily working situation, where the **most relevant information source are the workers and OSH people at workplace level**. For such questions specialists can only guess how the situation might be under certain circumstances. This can be illustrated by comparing three OSH Directives (Figure 13).

Figure 13: Stakeholder and expert interviews: who knows what about a particular directive?

TYPE OF KNOWLEDGE	VDU 90/270	CHEM 98/24	WPD 89/654
Necessary knowledge to identify and assess the major work place risks	Common knowledge – no special OSH expertise	Varies between very low and very specialized	Varies between low (e.g. daylight) and specialist level (e.g. electrical safety)
Knowledge of long term health risks	High – at every level from both workers and employers	Highly specialized academic knowledge	[Depending on the issue]
Knowledge on practical risk reduction / technical measures	Most solutions available on the market	Process related, supplier dependent	Partly available on the market / partly enterprise specific

The assessment of the basic features of the VDU can be done in most cases by using common knowledge. This is by far less the case for chemicals and only partly the case for the WPD.

### Coverage and Member State specific approach

The full range of interviews with stakeholders and specialists on the impact of EU Directives needs to be planned according to the objectives and the resources available. It is possible to conduct such a survey by using one questionnaire or interview guide in one language, commonly English. Such a basic survey approach - type BASIC ENGLISH - does allow only for a few group specific questions in the frame of one questionnaire or interview guide, it clearly restricts the type of respondents to those with good knowledge in English.

In a more advanced survey design it is an option to develop group specific questionnaires, e.g. for enterprises and governments. Further distinction can be made within enterprises (workers and employers) or within governments (national legislators and local inspectors). We propose to call this - type BASIC ENGLISH GROUP.

The next step would be to translate the questionnaires or interview guides in a number or all national languages - type SPECIFIC LANGUAGE without distinguishing between groups. If such a distinction is also aimed for, the group specific questionnaires need to be translated. This implies that the interviewers speak the national languages - type SPECIFIC GROUP LANGUAGE. The best level would be if these interviewers would dispose of specialist knowledge - type SPECIFIC GROUP LANGUAGE KNOWLEDGE. In a table format this looks as follows (Figure 14):

Figure 14: Coverage of a stakeholder and specialist survey

TYPE	COVERAGE AND MEMBER STATE APPROACH	EFFORTS AND COSTS
TYPE BASIC ENGLISH	A single standardized questionnaire or interview guide in English	By far the lowest efforts and costs
TYPE BASIC ENGLISH GROUP SPECIFIC	Group specific questionnaires or interview guides in English	Efforts greater depending on the number of groups and the variations
TYPE LANGUAGE SPECIFIC	A single standardized questionnaire or interview guide in English plus translations into selected / all EU languages	Efforts greater depending on the number of languages
TYPE GROUP SPECIFIC LANGUAGE SPECIFIC	Group specific survey questionnaires or interview guides in English plus translations into selected / all EU languages	Efforts multiplying
TYPE GROUP SPECIFIC LANGUAGE SPECIFIC KNOWLEDGE SPECIFIC	Group specific survey questionnaires or interview guides in English plus translations into selected / all EU languages plus interviews with stakeholders and specialists	Efforts multiplying again

#### II.7.4. Representative surveys

Representative surveys among enterprises and workers can contribute valuable information to the evaluation of OSH Directives, in particular about the degree of implementation, the effectiveness of the legislation and the identification of deficits.

In order to guarantee common methodological standards (common sampling and weighting principles, a harmonized translation procedure etc.), it is preferable to have a central coordination unit responsible for the set-up, management and control of the interviews to be conducted in the countries. In order to be able to analyze results by different types of establishments/enterprises (according to size, sector, private/public sector etc.) and for different subgroups of workers (e.g. by age, sex, educational level, type of work contract), it is essential to have a sufficiently large sample size. For surveys including all sectors and size-classes, net samples of 500 interviews per country and target group (employers respectively workers) are considered as an absolute minimum. Sample sizes of 1,000 to 1,500 would suit the purpose much better.



In terms of data collection methodology, an interviewer-based method is considered preferable for employer surveys because it helps to reduce non-response bias. In principle, both telephone (CATI) and face-to-face interviews (CAPI or paper and pencil) are suitable methods of data collection, the latter being considerably more costly. Sampling should be done on the base of representative address registers and follow a random selection procedure that ensures sufficient coverage of organizations of all sizes (stratified sampling).

A major difficulty in the conceptualization of surveys among enterprises is the choice of the right respondent(s). In principle, there are three options:

- The highest ranking person in the management who is responsible for the coordination/management of OSH at the site (owner, managing director, branch manager etc.);
- A dedicated OSH specialist/practitioner;
- An elected employee representative with responsibility for OSH issues.

When starting the survey, the most appropriate respondent should be defined. There is no general recommendation for one or the other target group, but the choice depends on the Directive under investigation. For Directives requiring a lot of specific knowledge within the enterprise, the dedicated OSH specialist/practitioner will normally be the better choice. For rather general Directives (such as the WPD or the VDU Directive) the manager responsible for OSH coordination tends to be the better choice because this person will usually be in a better position to answer questions on cost-benefit issues or on the general OSH policies of the organization.

A difficulty in cross-national surveys is that the responsibilities for OSH issues at the company level (for both their coordination and their practical implementation) can differ largely not only between companies of different sizes, but also between countries. There is no homeogenous company level OSH infrastructure. In some countries, OSH issues are mainly in the hands of the institutionalised employee representation. In others, OSH duties are to a large degree outsourced to external providers, with only very limited knowledge about these issues at the company level. And the size threshold from which onwards OSH specialists have to be in place vary considerably between countries. These differences are likely to influence the answers on some types of questions in an employer survey, particularly on those questions that are asking for opinions and assessments rather than facts or for questions asking for the awareness of legal regulations. This problem cannot totally be overcome. But for future surveys, it might be worthwhile to check for these effects by inserting one or several questions asking for the function of the respondents in the firm.

For an employer survey destined at evaluating an OSH Directive, at least 15 to 20 minutes of interviewing time should be foreseen in order to be able to cover the relevant areas in sufficient depth.

In addition to the interviews with managers or OSH specialists, interviews with elected employee representatives in charge of OSH are worthwhile considering if the evaluation budget allows for this. The contact with these people could best be made within the interview with the management, respectively the OSH specialist. Apart from enhanced costs, it has to be considered that additional interviews with employee representatives will be achievable for part of the interviewed organizations only, namely for those that have such a representative (size thresholds!) and are willing to provide an additional interview.

For workers, it has to be considered that specific address registers for this group do normally not exist. Therefore, general population registers need to be used and screened for dependent workers. Another option is to use multi-client surveys (omnibus surveys). In the context of these, workers can be pre-selected. For interviews with workers, the usage of online panels could also be an option.

Workers surveys can be carried out either in those workplaces where the enterprise surveys are carried out or in an independent sample of workers. Both variants have advantages and disadvantages:

- Due to the lack of appropriate address registers, workers cannot be directly contacted at their workplace. Instead, the contact has to be made with the knowledge and support of the (previously interviewed) employer. This endangers the representativeness of the workers sample because employers might tend to name well-informed and uncritical workers
- The use of independent worker surveys is limited to the evaluation of Directives that are applicable to workers in (almost) all sectors of activity and types of workplaces. For the evaluation of specific legislation (e.g. on chemicals) the identification of relevant workers in a representative sample would be far too expensive in view of the lack of address registers listing workers according to the sector of activity they are working at.

An issue to be considered in the preparation of evaluation surveys among workers is also the difficulty to get access to particularly vulnerable groups such as shift or migrant workers, many of whom work in high-risk areas. Due to their underrepresentation in address registers and their often insufficient knowledge of the local language, these groups are neglected by regular surveys. By using multilingual questionnaire versions, this problem can at least partly be overcome, albeit at considerably enhanced fieldwork costs.

A workers survey aiming at collecting information in the context of the evaluation of an OSH Directive as a minimum will take 10 to 15 minutes interviewing time. If indicators on the type of activity performed by the worker and on the risk exposure profile related to the activity are to be collected, rather 15 to 20 minutes will be needed as a minimum.

### **Aspects that can be covered by representative surveys**

#### **Workers Survey**

- Information and indicators on the **implementation** of the Directive under investigation, in particular referring to aspects that are easily visible to workers, such as:
  - Performance of risk assessments at their workstation, in particular checks of aspects relevant to the Directive under investigation;
  - Provision of information and training, again with a focus on the topics treated by the Directive under investigation;
  - Provision of protective gear (where applicable), quality/adequateness and state of maintenance of protective gear;
  - Quality/shape of work equipment provided by employer (e.g. flicker-free VDU screens, machinery with safety systems etc.);
  - Consultation of workers in OSH matters;
  - Existence of OSH expertise in the establishment (OSH specialists);
  - Offer of medical examinations;
  - Eventually: Awareness/knowledge of certain laws/rights (But: With most Directives, workers will not be directly familiar).
- Information and indicators on the **relevance** of the Directive
  - Usage/application of the Directive in practice;
  - Types of occasions at which the Directive was used by workers;
  - Usefulness of the Directive in these occasions.
- Information and indicators on the **effectiveness** of a regulation; in principle the implementation and outcome indicators can be used. In addition, information and indicators on the satisfaction with the OSH situation can be obtained, e.g.:
  - Satisfaction with the OSH information and training received from employer;
  - Satisfaction with the overall OSH provision;
  - Responsiveness of employers to OSH requests.

- Information and indicators on the **clarity of the regulation**
  - Usefulness/understandability of the regulation in occasions when practically used;
  - Lack of clarity of the regulation as possible reason for not using the regulation in occasions like OSH requests to employers or the clarification of entitlements of the employee with regard to OSH.
- Information regarding the success of the measures required by the Directive:
  - Work related health problems (especially if clearly attributable to the Directive, e.g. skin problems when working with chemicals);
  - Absence days due to work-related health problems in the reference period;
  - Work accidents;
  - The collection of this type of indicators requires large sample sizes (not less than 3.000 interviews per country), for smaller samples statistical insecurities are too big.
- For a future evaluation survey it would be important to give questions on accident rates or other outcome indicators (such as absenteeism rates or the occupational diseases) either sufficient room by asking all relevant side information or to totally exclude these questions. A question on the occurrence of a work accident in a survey among individual workers would for example need to be accompanied by a whole set of further indicators. Excluding these due to interview time constraints is problematic because it will seriously hamper the possibilities of interpreting the data, particularly in the cross-country perspective.

For a proper use of the workers' accident rates as outcome indicators, for example, the following additional information would be very useful:

- Sector of activity;
  - Data that allow for a clear demarcation of the reference period (if asking for work accidents that happened since the person is working for the same employer, it would be important to ask about the year in which the worker joined the firm);
  - Clarification of the type of work accidents;
  - Explicit exclusion of commuting accidents that occurred on the daily way to work or back from work. Accidents occurring on the way are commonly counted as work accidents in some countries, in others not (depending amongst others on insurance practices). This would have to be harmonised in the data collection;
  - Collection of information on the number of accidents in the reference period;
  - Collection of data on the type of activity performed by the worker and a classification of the degree of danger of accidents the activity implies; the sector of activity as such is not enough for a proper interpretation of the accidents since it may be misleading (e.g. in the construction sector there are jobs at dangerous construction sites as well as mere office jobs).
- Important **background variables**:
    - Sector of activity;
    - Size of the workplace;
    - Age of the worker;
    - Gender;
    - Public/private employer;
    - Contract type (indefinite contract vs. temporary agency worker vs. temporary contract);
    - Full-time/part-time employment;
    - If sample is large enough: migration background/knowledge of local language;
    - If the Directive has limited applicability: Type of workplace (e.g. indoor, outdoor, inside means of transport).

The insertion of these background variables facilitates an analysis of the impact of the Directive under evaluation on different types of workers respectively workplaces. Of



particular importance for some Directives might be variables that allow for the identification of particularly vulnerable groups, such as disabled persons, pregnant women, migrant workers (with limited knowledge of the language spoken at the workplace), workers with temporary contracts, temporary agency workers, older workers etc. In order to allow for statements about these statistically mostly rather small groups, large sample sizes or the oversampling of people from these groups will however be indispensable.

### **Employers Survey**

- Information and indicators on the **implementation** of the Directive under investigation at the workplace:
  - Performance of risk assessments, in particular checks of aspects relevant to the Directive under investigation;
  - Provision of information and training;
  - Provision of protective gear (where applicable);
  - Quality/shape of equipment provided by employer (e.g. flicker-free VDU screens, equipment of machinery with safety systems etc.);
  - Consultation of workers in OSH matters;
  - Existence of OSH expertise in the establishment (OSH specialists);
  - Offer of medical examinations;
  - Eventually: Awareness/knowledge of certain laws/rights (But: Comparability can be limited if respondents have a different scope of OSH responsibilities).
  
- Information and indicators on the **relevance** of the Directive
  - Usage/application of the Directive in practice;
  - Type of occasions at which the Directive was used;
  - Usefulness of the Directive in these occasions;
  - Recent needs of adaptations in the organization in order to comply with the regulation.
  
- As indicators on the **effectiveness** of a regulation; in principle the implementation and outcome indicators can be used. In addition, general indicators on the overall OSH situation in the establishment can be asked:
  - Place value of OSH in the establishment;
  - Direct questions on the effectiveness of certain measures (cost/benefit of measures).
  
- Indicators on the **clarity of the regulation**
  - General clarity/understandability of the regulation (adequate level of detail etc.);
  - Usefulness of the regulation in occasions when practically used;
  - If not useful: Reasons for limited usefulness, with lack of clarity of the regulation as possible reason for not using the regulation.
  
- **Outcome indicators** for a measurement of the success of the measures required by the Directive:
  - Absence days due to occupational diseases in reference period (if clearly attributable to the regulation)
  - Number of work accidents (to be related to the absolute number of workers)  
Such outcome indicators can be used for the analysis of the success of the measures. This requires large sample sizes (not less than 3.000 interviews per country), for smaller samples statistical insecurities are too big.  
For the collection of this type of indicators it is again – as for the workers survey – important to collect all relevant side information that is required to clearly interpret the outcome indicators. The work accidents for example should be classified (if this information can be obtained) and indicators for the exposure of the workforce to certain

OSH risks should be collected. The experiences with the WPD have however shown that it is obviously extremely difficult to collect data on accident rates and other outcome indicators in a really cross-nationally comparable manner. Reporting duties and standards of reporting accidents, occupational diseases, absence days etc. may vary considerably from country to country and it might not be possible to collect really comparable data.

- The possibilities to ask for costs and the **cost-efficiency** of a regulation are often limited because many organizations will not record expenses for OSH measures or have them recorded in different ways. For some types of expenditures (e.g. costs of protective gear), comparable data might however be largely available. Possibilities to investigate cost efficiency in an employer survey are:
  - Questions on expenditures where these are mostly recorded (especially: expenditures for external services or material)
  - Subjective assessment of the cost-benefit ratio of measures foreseen in the regulation (Difficulty: Assessment might substantially differ by function of respondent, e.g. owner/managing director vs. OSH specialist of the company). In view of the importance of the cost-benefit issue for the Commission and the Advisory Group, any future evaluation surveys should contain some more indicators on the cost-benefit issue. For the evaluation of the WPD, the collection of cost-benefit information from employers was particularly difficult, amongst other reasons because many provisions are related to the aspects of the work building which are not necessarily the responsibility of the employer. For an investigation on other directives, it might in some cases be possible to directly ask employers for implementation costs for certain provisions (e.g. costs for the provision of workers with protective gear or costs for the installation of protective gear). In those cases where this is not possible (e.g. in the WPD evaluation), at least a question on the subjective assessment of the cost-benefit of the implementation of various measures could be asked. This does however make sense for part of the provisions only – questions on the cost-benefit of installing emergency exits or of having the restrooms properly cleaned would for example sound very strange.
- By insertion of questions related to activities of the Labour Inspectorate and other enforcement bodies, indications on the place value of law enforcement can be collected. Questions could e.g. ask about visits of the Labour Inspectorate and the reason for the visits.
- Important **background variables**:
  - Sector of activity;
  - Size of the workplace;
  - Public/private organization;
  - If the Directive has limited applicability: Existence of relevant types of workstations.The insertion of these background variables facilitates an analysis of the implementation and impact of the legal regulation in different types of workplaces.

### **Survey among workers representatives**

Additional surveys among general employee representatives (works council or trade union) in charge of OSH or among specific health and safety representatives for the employee side can shed light on a Directive from a further perspective. This survey instrument is able to mirror many of the employer survey indicators on the implementation, relevance and clarity of a Directive (respectively its national transposition) and thus to directly verify the answers of the employers from the same workplace. In addition, the instrument can contribute to some further aspects:

- Existence of disputes between the employee representation and the management about OSH issues related to the Directive as hints on the relevance of the legislation
- Overall assessment of the OSH efforts of the organization in general and/or in the particular field regulated by the Directive.

For this type of interview it is always important to keep in mind that it will be available for part of the organizations only (those where an employee representation exists and where both employer and employee representatives are willing to take part in the interview).

### **Data collection at EU level**

The national level can be supplemented by information from the EU level. On the one hand, there are some EU-wide comparative statistics and studies available, on the other hand, there are some specialists at EU level who have a deeper insight into developments of more than one Member State. Furthermore, it would be of additional value for the understanding of the possible impact of a directive to collect some information about the development phase of a directive.

At EU level, it might be useful to approach the following groups of respondents:

- European Commission staff from concerned General Directorates, i.e. DG Employment, DG Enterprise, DG Sanco etc.
- The members of the Advisory Committee on Safety and Health at Work and its sub-committees
- SLIC-representatives
- European level of expert associations: OSH safety engineers, OSH physicians, OSH prevention institutes and enterprises, European social security organizations active in the OSH domain,
- European level of social partners' organizations
- European level of business' organisations
- Academics who performed international comparisons

In some cases members of Committees of the European Parliament or of other Committees (e.g. Committee of Regions) might be valuable sources of information. There is, of course, a need to assess precisely the most appropriate respondents. This will vary from directive to directive.

### **Evaluation requirements according to standards**

Many national and international professional evaluation associations have developed standards for evaluation. We quote some demands from one of these standard documents here to demonstrate current requirements for an independent, reliable and valuable evaluation<sup>39</sup>

#### Description of the Evaluation

The evaluation should be described and documented clearly and accurately, so that it can be unequivocally identified.

#### Context Analysis

The context of the evaluation should be examined and analyzed in sufficient detail.

#### Described Purposes and Procedures

Object, purposes, questions, and procedures of an evaluation, including the applied methods, should be accurately documented and described, so that they can be identified and assessed.

#### Disclosure of Information Sources

The information sources used in the course of the evaluation should be documented in appropriate detail, so that the reliability and adequacy of the information can be assessed.

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<sup>39</sup> DeGEval (German Evaluation society): Evaluation standards, <http://www.alt.degeval.de/calimero/tools/proxy.php?id=19084>)

### Valid and Reliable Information

The data collection procedures should be chosen or developed and then applied in a way that ensures the reliability and validity of the data with regard to answering the evaluation questions.

### Systematic Data Review

The data collected, analyzed, and presented in the course of the evaluation should be systematically examined for possible errors.

### Analysis of Qualitative and Quantitative Information

Qualitative and quantitative information should be analyzed in an appropriate, systematic way, so that the evaluation questions can be answered effectively.

### Justified Conclusions

The conclusions reached in the evaluation should be explicitly justified, so that the audiences can assess them.

### Meta-Evaluation

The evaluation should be documented and archived appropriately, so that a Meta-Evaluation can be undertaken.

## **Desk research - analysis**

Desk research provides - like all research work at the start a large number of probably informative data and studies. In a scoping exercise the most relevant data for the purpose of the evaluation have to be identified. These data and studies need to be interpreted in the light of the evaluation goals.

The further analysis follows scientific standards. The information sources used in the course of the evaluation should be documented, the data sources analysed in appropriate detail, data collection procedures should already strongly refer to evaluation questions. The data should be checked for possible errors and the qualitative and quantitative information should be analyzed in a way, that the evaluation questions can be answered effectively.

## **Analysis of the responses from stakeholders, specialists, employers and workers**

The reported answers are in general a mixture of all kinds of information, from technical explanations to personal impressions. The result will often not only indicate one unquestionable result but oppositional information and opinions. How to deal with this problem?

The answers have their foundation in the different perception and knowledge of the individuals or groups. The types of answers vary between:

- **Overall assessment**, e.g. of awareness and prevention culture, (enterprise level, sector level, national level) based on data or studies or long standing experience;
- **Assumptions, impressions and feelings** about workplace practices, exposures and workload (from room temperature to psychosocial work environment). Such responses are mostly based on personal experience;
- **Statements** on strengths and weaknesses of legislation and enforcement and on strengths and weaknesses of OSH-structures and organization.
- **Specialist and detailed knowledge based answers**, concerning details of the Directive.

Knowledge based answers are in many cases unanimous. On the contrary there is a type of answers where conflictive assessments (e.g. 'Role of OSH in the enterprise') ('The instruction of workers is effective', 'It has no impact') and impressions and feelings ('There is often a bad atmosphere amongst colleagues', 'It is often too cold in our offices' ) are more the rule than the exception.

For every evaluation it is important to draw justified conclusions from these findings. They must be coherent and summarize the responses but also show the variety of opinions and assessments.

It is necessary to keep in mind however that in reality the difference between facts and opinions is not always clear. And this, for mainly two reasons, because the fact considered is very strongly – or on the contrary not really legitimate to be – publicly declared, because the respondents are much less conscious of their practices than is generally supposed.

## II.8. Analysis of findings

The evaluation methodology for EU directives mainly involves defining a set of mandatory research questions and identifying information (or sources of information) useful for formulating responses to them. The techniques used for data collection (also described in the methodology) bring together a set of data (mainly qualitative but also quantitative) which is supposed to provide information related to each research question.

In order to answer each question, it is necessary to select information from various sources (literature, surveys by interview or by questionnaire) and to combine them.

The nature of the information can vary even if the collected data are mainly qualitative. The data are usually descriptions of situations or observed facts, but could also be a set of quotations from people belonging to expertise or interest groups about their experiences and opinions.

The purpose of the analysis is to identify trends in the collected data. It may be necessary to take account of contextual factors related to safety and health at work and other external factors that may have had an impact.

In the end, the objective of the analysis is to confirm or refute a "hypothesis" (a research question expressed as indicator) and, for certain research questions, to estimate a "degree of confirmation" or at least to establish a hierarchy of answers.

Since a large part of the information is qualitative, the method of data analysis is mainly based on a set of operations starting with the selection of data from those collected (depending on the particular validity of or degree of confidence in the source) and then involving data classification, so that connections or comparisons can be identified.

These operations can lead to an analysis on two levels: description and explanation.

*Descriptive analysis* provides a snapshot of the situation as it appears after the selection and classification of qualitative or quantitative data collected for each of the research questions. Grouping similar data makes it possible to reduce the amount of information and to summarise the findings.

*Explanatory analysis* can lead to the confirmation or refutation of the research hypothesis; the reasons for doing so must then be explained. The explanatory analysis approach often requires the establishment of causality (identified by associations between facts) or the definition of a threshold at which the hypothesis is rejected (for example when a majority of the opinions expressed in a survey contradict a particular position).

The analysis of the findings simply reports on the results of data collection for research purposes. It differs from the interpretation of the findings, which leads to the provision of recommendations on what further actions should be taken.

### II.8.1 Selection of data

The data that will be the most suitable for the adequate "measurement" of each indicator (tender question) must be identified across the various sources of information (literature, questions of the various surveys). The box below shows an example of the WPD evaluation.

This operation can generate a large range of data, which is why it is necessary to reduce the quantity by the next step: classification.

Example of data selection in the evaluation of the WPD – Selection of data

In the evaluation exercise of the WPD, the following data were selected to answer the question: "Have the requirements of the Directive been chosen adequately (Question 1)?"

The data were collected by means of the following sources and corresponding evaluation questions:

**Source: Desk research**

Relevant literature, if any

**Source: Replies to the stakeholder survey**

Question A01: Have the requirements of the WPD been chosen adequately?

Question A04: Are there any unnecessary aspects mentioned in the WPD?

Question A05: Are there any important aspects missing in the WPD?

Question A08: The targets mentioned in the WPD are important for efficiently improving health and safety at workplaces in Europe (statement).

Question D2.2: Do you believe that the provisions of the WPD should cover other new or emerging OSH issues that have not been mentioned so far?

**Source: Replies to the employer survey**

Question E503: How useful were the legal regulations all in all?

**Source: Replies to the worker survey**

Questions W516/W517: Are the legal regulations of help to the workers?

### II.8.2 Classification

The amount of information collected may be enormous. Before analyzing the data, it is necessary to "reduce" the information to a manageable amount. Classification aims to group information into categories that express a general idea or a single concept.

Example of data selection in the evaluation of the WPD - Classification

When the methodology was tested on the WPD, stakeholders described the facts and expressed opinions in response to open-ended questions such as:

- "Could you describe the situation in your country, if the WPD had not been transposed into national law?" (Question B14) or
- "Can you explain how far the national legislation had to be changed?" (Question B03).

After all the data and statements had been read, categories of answers could be established. This operation is necessary for conceptualising the respondents' statements.

The classification is important as it is a basis for internal comparisons of the data derived from survey answers, and for comparing or crosschecking the data with findings in the literature. This operation is always executed with the research question in mind.

### II.8.3 Descriptive analysis

The aim of the descriptive analysis is to structure the data so that they make sense and to give them a readable form. It focuses on presenting results in terms of general ideas or trends. Closed questions in the survey questionnaires and the number of items recorded in each category are used to identify clusters of opinions and trends in ideas. Describing trends does not mean excluding information that contradicts those trends. Trends merely indicate characteristics that may be useful for deeper analysis.

Example of data selection in the evaluation of the WPD – Descriptive analysis

With regard to the question: "Have the requirements of the WPD been adequately chosen?", the descriptive analysis of data made it possible to present the results as follows:

*We identified very limited literature with clear statements actually related to this question. The findings are based on the opinions and statements of stakeholders and specialists.*

*HSE already reported in its 2003 Second Five Year Review that companies acknowledge the high level of relevance of the WPD: "All companies employing over 250 staff were aware of the Workplace Regulations, as were 98% of smaller companies. All these companies believed the regulations applied to their company to some extent".*

*This is in line with the majority of statements from stakeholders. Most stakeholders agreed (44%) or rather agreed (43%) that the requirements of the WPD have been chosen adequately. Only a minority of 4% disagreed or rather disagreed.*

*The rather small number of stakeholders disagreeing or rather disagreeing makes further quantitative analysis obsolete, e.g. looking for differences between particular groups of disagreeing stakeholders (countries, social partners etc.).*

*Positive comments came both from representatives of the EU 15 (PT, BE, FR) and from the EU 12 accession states (CZ, CY, SI). The positive comments emphasised that the principles of the WPD are of crucial importance to ensuring minimum standards at workplaces.*

### II.8.4 Explanatory analysis

If we take the example of the WPD evaluation, it can easily be concluded that the requirements are largely perceived as adequate. The hypothesis that the requirements have been adequately chosen could be regarded as confirmed, for example, if the proportion of interviewees that disagree does not exceed 5%. Although this criterion is arbitrary, if it is satisfied, it clearly indicates a high degree of consensus (consistency in answers or ideas) about a statement, if information from other sources, e.g. in the literature, does not contradict this finding.

When this high degree of consensus (or consistency) is not encountered, e.g. when opinions differ or the literature reveals controversy, it is useful to nuance the presentation of the findings by making connections between various types of data and looking at contextual factors that could have influenced the results (see paragraph below).

It is then important to look for consistency in the answers within categories such as type of respondent (employer, worker, government representative) or within individual countries (though not across them). This operation may reveal contextual factors that explain variations in the findings.

Example of data selection in the evaluation of the WPD – Explanatory analysis

If we examine the answers to statement B12 of the stakeholder survey: "The transposition of the WPD into national law led to better occupational health and safety in my country", we see that consensus about the positive effect of the national transposition of the directive into national law on safety and health at work is only found



among the trade union respondents. Policy-makers are either rather positive about its beneficial effects, or express difficulty in measuring those effects. Amongst the other categories opinions are very diverse. This means that despite the broad consensus among all categories about the adequacy of the WPD requirements, no consensus can be found regarding their impact at the company level. The impact depends on factors other than the form of the text itself or the logic of its content. The achievement of a goal is affected by other factors in the context of the legal and operational implementation.

### II.8.5 Contextual factors

When sufficient consistency cannot be found in the data, contextual factors need to be examined that might explain the variation in the findings, especially if any specific national characteristics can be found in the answers of stakeholders or in the literature.

It may be possible to identify such contextual factors by cross-country comparison and from stakeholders' statements. It is then useful to define a group of countries presenting similarities with respect to points such as date of transposition, type of impact on pre-existing legislation (see § II. 8.2 Classification), culture of labour inspection, and so on.

To integrate contextual factors, it is necessary to structure the analysis by country, grouping together those that present similarities.

For example, at the level of legal implementation, the type of impact of the directive on the national regulations depends on the pre-existing legislative framework and transposing practices of the different European countries.

From the data analysis, a classification can be established that can be used to define groups of Member States according to the impact of the Directive on the pre-existing legal framework.

Classification of Member States according to the impact of the Directive on the pre-existing legal framework

<i>I. Modernising (old-fashioned requirements were suppressed and replaced by requirements reflecting new technologies and other legal requirements)</i>	<i>III. Pre-existing text remains – some new aspects are added</i>
<i>II. Legal text is replaced but its scope does not change</i>	<i>IV. The scope of the legislation has changed</i>

Example of data selection in the evaluation of the WPD – Contextual factors

When examining the perceived relevance of the legal implementation for the WPD, it can be seen that views vary across countries.

For example, in the stakeholder survey, question B06 asked if the transposition of the WPD into national law had resulted in relevant legislation changes in the respondent's country. The answers can be examined to see if they reflect a single national view, and if so, whether that view is positive or negative:

- Consensus about the relevance of changes in national legislation
- Consensus about lack of relevance of changes in national legislation
- Difference of opinions about the relevance of the changes.

### II.8.6 Overall evaluation

The overall evaluation is performed on four levels: **initial relevance**, **preparation of legislation**, **implementation** and **impact**. To illustrate the general conclusion of the analysis, a **scoring system** is applied.



### Initial relevance

Where the data are strongly consistent (e.g. a general consensus among experts and countries, no contradictory findings in the literature) in favour of the ability of the regulations to solve problems, the relevance is rated as **"high"**. If there is a tendency towards consensus but differences appear in the literature, in certain countries or amongst certain categories of sources, the relevance is considered to be **"medium"** (moderate). If the analysed data do not show consistency, but opinions differ significantly or clearly show that OSH problems have been incorrectly defined or that the legal text is of poor quality (too complex, inappropriate, a source of controversy among the social partners), the relevance may be considered **"low"**.

### Preparation of legislation

Similar to the consistency level of the data on initial relevance, we can argue that consistency in the data with regard to the clear formulation of objectives, the correct choice of measures, means and instruments, is rated as **"high"**. Minor differences in data and opinions may be considered as **"medium"** while major differences in data and opinion about the SMART preparation of legislation may be rated as **"low"**.

### Implementation

Data collected on implementation may show that implementation efforts are at a **high, medium or low** level. The implementation may also be very uneven among different types of sectors or companies. The quality of implementation can broadly be linked to Member States' specific characteristics. A differentiated analysis of implementation is particularly useful when the initial relevance is recorded as "high", but impact appears to be "slightly positive" or "status quo".

### Impact

It can be assumed that the impact cannot be negative (i.e. cannot aggravate the initial problem), although negative side effects may be identified. The impact can be **"broadly positive"** (in the case of consistency of data showing a positive effect), **"slightly positive"** (in the case of consistency of data showing some effect but with pronounced disparities), or may be confined to preservation of the **"status quo"** (if no real effect can be shown).

## II.8.6.1 Overall conclusions

### II.8.6.1.1 Effectiveness

As effectiveness refers to whether or not the desired results have been achieved, this part of the evaluation:

- considers **the impact** of the Directive;
- and compares it with information on the **initial relevance**.

The figure below shows the possible results of the evaluation exercise (initial relevance vs. impact). From the comparison of initial and current information, one of three conclusions can be drawn: that the effectiveness has been high, that it has been low (mainly with regard to the side effects), or that it is questionable.

Figure 15: Evaluation of effectiveness by comparing initial relevance and impact

Initial relevance	Impact	Effectiveness
High	Broadly positive	<b>High</b>
	Slightly positive	<b>Low - Questionable</b>

	Status quo	<b>Questionable</b>
Medium	Broadly positive	<b>High</b>
	Slightly positive	<b>Low - Questionable</b>
	Status quo	<b>Questionable</b>
Low	Broadly positive	<b>High</b>
	Slightly positive	<b>Low - Questionable</b>
	Status quo	<b>Questionable</b>

The effectiveness can be positively or negatively influenced by other factors such as **the contextual factors**. They need to be examined when evaluating the effectiveness of a EU Directive.

Especially in situations where the impact has been slightly positive, and the overall effectiveness remains questionable, contextual factors will have a major contributing role. This can be due to the existing legal framework (in the case of Belgium, see below), the information and support structures, the enforcement, the economic landscape and the industrial relations scheme (in the case of Latvia, see below).

### **The case of the WPD**

We can illustrate the evaluation exercise on the basis of two country examples: Belgium and Latvia.

#### *Initial relevance - Belgium - low*

In general on a EU level, the initial relevance of the Directive can be considered as important because the annexes provide the principles for the conditions of a good workplace. It gives an overview of how a workplace should look ideally, how to build workplaces that are adequate for the work that needs to be done. However as regards Belgium, the WPD contained only a few new elements as compared to the existing Belgian requirements on prevention policy. The initial relevance of the WPD for Belgium can be considered as low, since the legal provisions had already been in place at the time of the transposition.

#### *Initial relevance - Latvia - medium*

At the time of the transposition of the Directive, the former requirements for workplaces resulting from Soviet Union regulations were canceled and replaced by basic OSH requirements laid down by the Law on Labour Protection (adopted in 1993). This law can be seen as a basic law on workplace safety and health, containing general workplace safety requirements. With the transposition of the WPD, new regulations have been put in place, containing all provisions of the WPD, further refined and detailed. All the provisions of the Directive have been considered as significant. The most significant are the provisions regarding electrical installations and emergency routes and exits, as previously not sufficient attention was paid to these issues at workplaces.

#### *Preparation of the legislation - Belgium - low*

Directive 89/654/EEC was transposed into Belgian law by the Royal Decree of 18 June 1993 supplementing the provisions of the General Regulations on Occupational Safety with regard to minimum requirements for safety and health for workplaces.

Some articles have been added to the existing national legislation, to better define and precise some of the articles. The Belgian legislation has more precise definitions for the provisions in the Directive.

The article on emergency routes and exits posed a lot of problems, since it has been stipulated in the Directive that sliding doors were not allowed at the time as emergency exits (Article 4.4). The interpretation of that article at the time of the preparation of the transposition into Belgian legislation was not clear to the Administration, in charge of the transposition; the retail and distribution sector still deals with ambiguities regarding the application.

The Administration confined itself to answering several questions, relating among other things to the precise scope of some of the requirements. However, there was one exception to this: the provisions requiring that upward-opening gates should be equipped with a safety system to prevent them from falling back again. Here, the Administration reacted to misleading information put out by a manufacturer of gates claiming that upward-opening gates had to be equipped with an anti-fallback safety system.

#### *Preparation of the legislation - Latvia - medium*

The WPD was initially transposed into the national Latvian legislation on 19 March 2002: Regulations No.125 „Requirements for Labour Protection at Workplaces”. These Regulations were replaced by the new Regulations No.359 „Requirements for Labour Protection at Workplaces”, adopted on 28 April 2009.

The legislation is stricter and better defined than before. More detailed prescriptions have been added, helping employers to better understand and implement the requirements and also to facilitate the task of the Labour Inspectorate. There was a strong consensus amongst the stakeholders responsible for the transposition of the Directive into national legislation, to refine the WPD provisions.

#### *Legal implementation - Belgium - low*

To a limited extent, the transposition work affected the requirements set out in the General Regulations on Occupational Safety. Since there were only minor adaptations necessary, some of the existing articles were adopted, others were integrated into the text. On the one hand, provisions were introduced whose object was more specific in nature than the general field of application envisaged by the existing prevention policy (e.g. transparent walls, upward-opening gates); on the other hand, existing articles were supplemented or replaced to make the rules match the wording of the Directive to a higher extent (e.g. emergency exit doors, room for manoeuvre in the workplace).

The text of the directive did not provoke any severe discussions in the High Council. The manner in which the text was transposed into national legislation however, has been discussed. The advice was not anonymous: the workers' organisations did agree with the text, the employers' organisations wanted a complete rewriting of the General Regulations.

No general actions have been undertaken by the government to provide particular information to employers and employees about the Royal Decree of 18 June 1993 because of the view that the provisions for the transposition of the Directive did not require any additional efforts worth speaking of on the part of employers who were already complying with the existing requirements of the Regulations, including those relating to the prevention policy.

The Decree received normal coverage through specialist publications for employers, employees and safety experts.

#### *Legal implementation - Latvia - medium*

The requirements of the WPD have been transposed in Regulation No. 359 with a more detailed approach on microclimate, indoor and outdoor lighting, temperature, ventilation of enclosed workspaces including monitoring.

The most important change in the text is the introduction of detailed requirements on air temperatures, indoor and outdoor lightning, rest periods, including minimum values and thresholds. Four annexes display tables with specified numbers:

Annex 1. Requirements for the microclimate of work premises depending on physical load

Annex 2. Levels of indoor lighting depending on the workplace and type of work

Annex 3. Levels of outdoor lighting depending on the workplace and type of work

Annex 4. Permissible period of time for work outdoors in the cold and the temperature adjustment table.

The Latvian State Labour Inspectorate issued guidelines and other information material for supporting companies in the implementation of the Regulations No. 125 and No. 359.

#### *OSH implementation - Belgium - low*

The employers are generally aware of the regulations related to buildings and workplaces but it is doubtful if they know that these are related to the workplace legislation. The transposition of the provisions of the Directive led to a number of subjects in the General Regulations on Occupational Safety (windows, transparent walls, upward-opening doors or gates, emergency exit doors) being made explicit. It may be assumed that this drew the attention of employers and safety experts to the need to perform a risk assessment for some of these points.

The compliance with the legal provisions in general poses no problems for medium to large sized companies. Smaller companies can have difficulties with some of the provisions that are not adapted to their size (fire safety, warnings, doors, emergency exits). The inspection reports in Belgium show that issues such as temperature and sanitary equipment still constitute a problem. These are issues that immediately affect the workers.

There are a few new prescriptions, such as a room for pregnant workers, adaptations for handicapped workers, transparent walls, doors of emergency exits, escalators and travelators, loading bays and ramps, which cause probably costs to companies. SMEs will have more important costs, and this for all directives.

In the education and the public sector, a number of investments in infrastructure were necessary. The remaining budget for other investments decreased, which caused some irritation. Also the companies, which were housed in buildings that were formerly not designed as workplaces, or old buildings, were faced with some additional costs.

#### *OSH implementation - Latvia - low*

Despite the fact that the relevant provisions have been improved and the necessary requirements have been clearly defined, the practical implementation of the provisions has not improved significantly. Lack of information about the requirements is, according to the stakeholders, the main reason for non compliance. Also the economic and financial crisis seem to be a major cause for not complying with the WPD provisions. In times of crisis, most of the micro and small enterprises are focusing on the survival of their business rather than on the health and safety of their workers.

The State Labour Inspection does not always have the necessary capacity to ensure sufficient monitoring and control of enterprises and disclosure of the infringements. The transposition of the WPD has not significantly changed the awareness of the employers and employees regarding labour safety at the workplaces.

Another difficulty in the transposition process is, according to the stakeholders, the lack of awareness and pressure from the workers. It is very rare that workers report violations of safety standards to the employers, the workers' representative organisations and the Labour Inspectorate. Employees are gradually becoming more aware of their rights and are starting to request certain safety and health standards; however this is still an ongoing process, that is retarded by the economic crisis.

The consultation of workers on OSH related topics is very weak in Latvia. The discussions are mainly focusing on social warranties and wages, due to the difficult economic situation, and less on occupational health and safety issues. In addition, most of the questions concern basic safety

requirements, requiring immediate intervention (e.g. blocking of emergency exits or access to fire-extinguishers).

*Impact - Belgium - Slightly positive*

No major impact was felt on the improvement of the number of accidents or diseases and no significant changes to the satisfaction of workers. It is most likely that the regulations have an impact on the working conditions but this is difficult to prove. There has been a positive impact on specific groups of workers, such as pregnant workers, nursing mothers and handicapped workers.

*Impact - Latvia - Slightly positive*

The number of accidents increased in the period after the workplace legislation came into force. Most likely this was due to contextual factors, i.e. the fast growing economy and more specific legal standards, allowing a more strict monitoring and control. In 2009 there was a considerable decrease in work accidents, which is most likely due to the economic crisis in the processing industry which represents a high number of accidents.

Stakeholders commented on an improvement of the OSH situation on a general level, introduced by the Framework Directive and the individual Directives. The change is mainly due to an empowerment of employers and workers who share responsibilities for improving the workplace health and safety in their country, unlike the former political situation. The awareness can still be improved through support structures for companies, information and training.

*Effectiveness - Belgium - Questionable*

The effectiveness of this particular legislation in Belgium is rather questionable and this is mainly due to the pre-existing legislation (contextual factors). The regulatory provisions of the Workplace Directive were to a large extent already covered by the existing national legislation. That is why no important changes have been performed. The Directive added some regulatory provisions to the existing legislation, with regard to specific types of workplaces and workers.

The existing legislative model at the time of the transposition had been a prescriptive regulation, in which the specific means of achieving compliance were mandated. That is why some of the objective-oriented provisions in the WPD have been made more explicit in the Belgian regulations.

At the same time, the Framework Directive and its first individual Directive, triggered an important refocusing of the Belgian regulations of a traditional prescriptive legislative approach to an objective-oriented approach.

From an historical viewpoint, at the time of the transposition, the Belgian regulations on workers' safety and health mainly consisted of a collection of requirements, which had been coordinated in 1946-1947 in a single set of General Regulations on Occupational Safety.

These Regulations had become fairly complex and chaotic in the course of their existence, so in 1993 the government decided to transform the Regulations into the Welfare at Work Code. In this Code, the various themes, which make up the protection of workers' safety and health are distinguished from one another and set out clearly. The Code's structure reflects the topics of the European directives on workers' safety and health.

*Effectiveness - Latvia - Questionable*

The effectiveness of the workplace regulations in Latvia is rather questionable and this is due to a number of contextual factors:

- Existing legal framework: The basic regulatory provisions for a safe workplace were already present before the transposition of the WPD, however not so detailed and clear as is the case now.
- The economic landscape: Latvia is a country with a high number of micro and small enterprises. It is known that these type of companies often lack the management structures needed to obtain

compliant behaviour, and may also have poorer documentation and policies. Smaller companies may lack technical expertise in product and service provision and in their health and safety implications, resulting in poor understanding of safety requirements. Therefore a strong OSH information and support structure is needed;

- Economic growth: The growth performance at company level is confirmed as a compliance-enhancing factor for OSH regulations. The economic and financial crisis and the lack of means of employers in Latvia are inhibiting factors for the productivity today;
- Industrial relations scheme: At enterprise level, active participation in a professional or regional employers' association and the presence of social relations structures, seem to be the determinants of enterprise-level compliance with safety and health regulations. Worker involvement can promote shared responsibility and is important in creating an effective health and safety culture, which results in compliance and effective assessment of risks. The situation in Latvia is improving, as is stated in the interviews;
- Information and support structures: The country needs a well-developed support structure. The use of external assistance with respect to health and safety issues seems to be a determining factor for small companies for the adoption of compliance-related improvement measures with regard to health and safety at work;
- Compliance: The application of the provisions can be improved on the state level by improving the capacity of the State Labour Inspection in raising awareness on the provisions of the WPD and the Regulations, and monitoring the fulfilment of the provisions.

#### **II.8.6.1.2 Relevance**

The final question of an ex-post evaluation is whether the existing legislation under evaluation is still relevant. The relevance covers two aspects:

- OSH relevance: is there still a need, meaning is there still an OSH problem that requires intervention?
- Legislative relevance: is there still a need to deal with the OSH problem by legislation?

The question on the OSH relevance can be answered by the conclusions on the effectiveness and the current state of the OSH issue: is there still a problem/risk, has this specific risk decreased, has it evolved in a way that (public) intervention is no longer required?

The question of the legislative relevance can be answered by information on questions as “have legislative best practices been identified that produce better results”, or “has the legislation shown some weaknesses, which improved might increase future results”.

All the weaknesses discovered in the evaluation can be considered as points of possible improvement.

The conclusion on the actual and future relevance of a given EU Directive could be that:

1. The Directive has lost its relevance because there is no longer an operational/OSH need;
2. The Directive has lost its relevance because legislative intervention has proven not to be the best choice;
3. The Directive is still OSH relevant and has legislative relevance, under the condition that some aspects are improved upon.
4. The Directive is still relevant without any need for improvements.

## **The case of the WPD**

### *OSH Relevance - Belgium*

From the literature and the comments from the stakeholders, it is clear that for Belgium it is important that the legislation exists and that it has to be implemented in the companies.

According to the literature and stakeholders surveys, it is the implementation that causes some problems, mainly for the small companies and some specific articles seem to be problematic for some sectors, such as the retail sector.

It is recommended that future actions do not need to focus on a change of legislation but rather on the implementation in practice, via enforcement and information.

### *OSH Relevance - Latvia*

According to the comments from the stakeholders, the Directive has been important at the very beginning when Latvia started to implement the new approach because it defines the basic health and safety requirements. The focus right now will be on those companies that do not comply yet (mainly micro and small companies, new companies), by supporting them in the practical implementation (help for clarification/explanation of unclear requirements). This is preferred to a change of requirements.

### *Legislative relevance - Belgium*

It is stated that if you need to impose the Member States to reach a certain level of OSH, a legislative instrument that is binding is needed. Instruments that are based on intrinsic motivation, such as campaigns, can maybe provide better results but this is more difficult to impose.

A representative of the employers' association argues that for items that mainly concern the comfort aspects such as climate conditions, sanitary and rest room provisions, internal company audits are recommended. Safety related aspects posing an immediate danger for the workers such as emergency routes and electricity are subject to external controls and labour inspection visits.

The legislative text however needs updating, with regard to the technological evolution. Also an integrated approach for the regulations on fire safety protection, intrusion protection, security and environment (energy efficiency measures), a link to the Directive on temporary and mobile construction sites, is recommended, as well as possibilities for a tailored approach.

### *Legislative relevance - Latvia*

Stakeholders commented that a EU OSH Directive is more powerful and has a better direct impact than other instruments for reaching the objectives. However, in order to increase the implementation in the companies, the Directive needs to be accompanied by practical tools such as guidelines, informative materials, good practices etc.

## **III. References**

### **Costs**

- Bartel Ann P. and Thomas Lacy Glenn, Direct and indirect effects of regulation: A new look at OSHA's impact, in: Journal of Law & Economics, vol. 28, April 1985, 25 p.
- Béjan Sophie, Trontin Christian, Conditions de travail et coût du stress : une évaluation économique, Université de Bourgogne, INRS, 12 p.



- BenOSH: Socio-economic costs of accidents at work and work-related ill health and the socio-economic costs of prevention measures, 2009 – 2010, Contractor: DG Employment, Tender N° VT/2008/066, Co-ordinator PREVENT, Kooperationsstelle Hamburg IFE, 2009-2010
- Best practice regulation handbook, Australian Government, Department of Finance and Deregulation, 2010
- Business Compliance Costs Statements. Guidelines for Departments. Ministry of Economic Development, 2001
- Drie jaar uitvoering REACH in Nederland (2007-2010). Evaluatierapport, Bureau KLB, 2011
- Driesen David M., Distributing the costs of environmental, health and safety protection: The feasibility principle, cost-benefit analysis and regulatory reform, in: Environmental Affairs, vol. 32, no. 1, 2005, 95 p.
- EU Commission, DG Enterprise and Industry, Smart regulation. Action programme for reducing administrative burdens in the EU, [http://ec.europa.eu/enterprise/policies/smart-regulation/administrative-burdens/action-programme/index\\_en.htm](http://ec.europa.eu/enterprise/policies/smart-regulation/administrative-burdens/action-programme/index_en.htm)
- Hakan Brodin, Hodge Stephen, A guide to quantitative methods in health impact assessment, Swedish National Institute of Public Health, 2008, 27 p.
- Handbook of cost-benefit analysis, Commonwealth of Australia, 2006
- Kip Viscusi W., The impact of occupational safety and health regulation, in: The Bell Journal of Economics, Vol. 10, no. 1, spring 1979, pp. 117-140.
- Krämer Walter, How to Overreach oneself – a critical view on the EU Commission's estimate of the health benefits of its new chemicals policy, 32 p.
- Lebeau Martin, Duguay Patrice, Les coûts des lésions professionnelles: une revue de la littérature, IRSST, Rapport R-676, 2011.
- Lunde Jensen Per, et. al., The economic appraisal of European Union health and safety at work legislation: Final report to the European Commission, December 1995.
- Measuring Compliance Costs. Evaluation of the Dutch Standard Cost Model and the Australian Cost Model (Incorporating a Trial Measurement of the Costs Arising from the Schedules to the Securities Regulations 1983), PriceWaterhouseCoopers for the Ministry of Economic Development, New Zealand, 2006
- OECD, International Standard Cost Model Manual. Measuring and reducing administrative burdens for businesses. <http://www.oecd.org/dataoecd/32/54/34227698.pdf>
- Pacolet Jozef, et al., Sociale kosten-batenanalyse van alcoholgebruik en –misbruik in België, Hiva, KULeuven, 2003
- Regulation of the European Parliament and of the Council concerning the registration, evaluation, authorisation and restrictions of chemicals: extended impact assessment, Commission Staff Working Paper, European Commission, October 2003, 33 p.
- Reihlen Antonia, Luskow Heike, Analysis of studies discussing benefits of reach, Okopol, February 2007, 58 p.
- Report on Economic Impact of the Safety, Health and Welfare at Work Legislation, prepared

for the Department of Enterprise, Trade and Employment, Indecon, 2006.

- Shapiro Sidney A., Occupational safety and health regulation, in: Encyclopedia of Law and Economics, pp. 596-622.
- Treich Nicolas, Lerna-Inra, University of Toulouse, L'analyse coût-bénéfice de la prévention des risques, 2005
- Weil David, Assessing OSHA performance: New evidence from the construction industry, in: Journal of Policy Analysis and Management, Vol. 20, issue 4, Fall 2001, 12 p.
- Work, health and safety. An inquiry into occupational health and safety. Volume 2: Appendices, Commonwealth of Australia, 1995

### **Evaluation of legislation or strategies:**

- ACSH Workshop on National Strategies: Panel Discussion 3 – Performance measurements, indicators and evaluation, Luxembourg, 9 October 2008
- Ahonen, G. (1998): 'The nation-wide programme for health and safety in SMEs in Finland: economic evaluation and incentives for the company management', From Protection to Promotion: Occupational Health and Safety in Small-Scale Enterprises, Proceedings of the International Symposium, 4-6 May 1998, Helsinki, Finland, FIOH, pp. 151-157.
- Alves Dias, L.M. (2004): Occupational Safety and Health Coordination in the Construction Industry in European Union Countries, ISSA Construction Section, February 2004.
- Amossé Thomas, Pratiques de prévention des risques professionnels : facteurs associés aux pratiques et politiques d'entreprise : rapport de recherche, Centre d'études de l'emploi, 2011.
- Antonsson, A-B. (2003): Safe work environments in small companies – needs and methods, in: Barents – Newsletter on Occupational Health and Safety, 2/2003.
- Arbetsmiljöverket (2006): Impact assessment for the Provisions on Occupational Exposure Limit Values and Measures against Air Contaminants, AFS 2005:17.  
[http://www.av.se/dokument/publikationer/rapporter/Rap2006\\_10.pdf](http://www.av.se/dokument/publikationer/rapporter/Rap2006_10.pdf)
- Arbobalans (2007/2008): Kwaliteit van de arbeid, effecten en maatregelen in Nederland (Quality of work, effects and regulations in the Netherlands), TNO Kwaliteit van Leven, [www.arboportaal.nl](http://www.arboportaal.nl)
- Baldock R, James P, Smallbone D, Vickers I, Influences on small-firm compliance-related behaviour: the case of workplace health and safety, in: Environment and Planning C: Government and Policy 24(6) 827 – 846, 1996
- BAuA (2007a): Conference on the implementation of Article 7 of the Framework Directive 89/391 EEC, Dortmund, 6 March 2007  
[http://www.bmas.de/portal/25102/property=pdf/c763\\_eu\\_tagungsbericht\\_engl.pdf](http://www.bmas.de/portal/25102/property=pdf/c763_eu_tagungsbericht_engl.pdf)
- BMAS (2006): Terms of reference of the evaluation of the VDU Directive (90/270 EEC).  
[http://osha.europa.eu/fop/germany/de/topics/evaluation/hintergrund/terms\\_of\\_reference.pdf](http://osha.europa.eu/fop/germany/de/topics/evaluation/hintergrund/terms_of_reference.pdf)
- BTS (1996): Dossier Observatoire du BTS: Equipements à écran de visualisation. La Directive 90/270/CEE relative au travail sur des équipements à écran de visualisation: un premier aperçu des transpositions nationales – Newsletter du BTS – No 4 – Novembre 1996.  
[http://www.labourline.org/GEIDFile/1996-04-p13-16.PDF?Archive=191896891907&File=1996%2D04%2Dp13%2D16\\_PDF](http://www.labourline.org/GEIDFile/1996-04-p13-16.PDF?Archive=191896891907&File=1996%2D04%2Dp13%2D16_PDF)

- CADimple: Analysis and evaluation of the impact of the practical implementation of the requirements of Directive 98/24/EC on the protection of the health and safety of workers from risks related to chemical agents at work, Contractor: DG Employment, VT/2007/063; by Kooperationsstelle Hamburg (coordinator), Cardiff University, CIOP-PIB, TNO, 2008-2010
- DeGEval (German Evaluation society): Evaluation standards, <http://www.alt.degeval.de/calimero/tools/proxy.php?id=19084>)
- Dotan, Hilla und Frans van Waarden, Occupational Health and Safety in the EU Member States. Implementation of the 89/391/EEC Framework Directive, University of Utrecht, 2002
- EU Commission (2004): Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of Regions on the practical implementation of the provisions of the Health and Safety at Work Directives [89/391](#) (Framework), [89/654](#) (Workplaces), [89/655](#) (Work Equipment), [89/656](#) (Personal Protective Equipment), [90/269](#) (Manual Handling of Loads) and [90/270](#) (Display Screen Equipment), COM(2004)62. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52004DC0062:EN:HTML>
- EU Commission, DG Enterprise (2005): Ex-Post Evaluation of EC Legislation and its Burden on Business. Final Report.
- EU Commission, Legislation summaries (2007): Communication on the practical implementation of directives on health and safety at work. [http://europa.eu/legislation\\_summaries/employment\\_and\\_social\\_policy/health\\_hygiene\\_safety\\_at\\_work/c11149\\_en.htm](http://europa.eu/legislation_summaries/employment_and_social_policy/health_hygiene_safety_at_work/c11149_en.htm)
- EU Commission, DG Employment (2006): Analysis and assessment of the effects of the practical application of national legislation in safety and health at work, derived from Directive 2000/54/EC (Biological agents) and Directive 2004/37/EC (Carcinogens)'.
- EU -Commission, DG Employment (2009a): Scoreboard 2009 - Community Strategy on Health and Safety at Work, Luxembourg.
- EU Commission, DG Employment (unpublished): Evaluation of the Implementation of Directive 98/24 EC in the EU Member States.
- EU Commission, DG MARKT (2008): Guide to evaluating legislation, Brussels, [http://ec.europa.eu/dgs/internal\\_market/docs/evaluation/evaluation\\_guide.pdf](http://ec.europa.eu/dgs/internal_market/docs/evaluation/evaluation_guide.pdf)
- EU Commission, Commission regulation of 11 December 1986 laying down detailed rules for the implementation of certain provisions of the financial regulation of 21 December 1977 (86/610/EEC, Euratom, ECSC), in *Official Journal of the European Communities (OJEC)*. 19.12.1986, No L 360, p. 1.
- EU Commission, Communication from the Commission on impact assessment, COM(2002) 276 final, Brussels, 5 June 2002, 19 p.,
- EU Commission, DG Budget (2004), Evaluating EU Activities – A Practical Guide for the Commission Services
- EU Commission, Impact Assessment, European Commission Better Regulation, [http://ec.europa.eu/governance/better\\_regulation/impact\\_en.htm](http://ec.europa.eu/governance/better_regulation/impact_en.htm)
- EU Commission, Impact Assessment Guidelines, SEC(2009) 92, [http://ec.europa.eu/governance/impact/commission\\_guidelines/docs/iag\\_2009\\_en.pdf](http://ec.europa.eu/governance/impact/commission_guidelines/docs/iag_2009_en.pdf) and [http://ec.europa.eu/governance/impact/commission\\_guidelines/docs/iag\\_2009\\_annex\\_en.pdf](http://ec.europa.eu/governance/impact/commission_guidelines/docs/iag_2009_annex_en.pdf)
- Fairman, R., Yapp, C. (2005): Making an impact on SME compliance behaviour: An evaluation of the effect of interventions upon compliance with health and safety legislation in small and medium sized enterprises, HSE Research Report 366, Sudbury: HSE Books.

- GDA: Evaluation of the National German OSH-Strategy from 2008 to 2012 ('GDA Dachevaluation', Four-years contract of the National Strategy Conference (NAK) with Kooperationsstelle Hamburg IFE, KOOP
- Genn Hazel, Business Responses to the Regulation of Health and Safety in England, in: Law and Policy, vol.15, Issue 3, p.219-233, 1993
- Glossary of Key Terms in Evaluation and Results Based Management, OECD, Paris, 2002 <http://www.oecd.org/dataoecd/29/21/2754804.pdf>
- Gruber, Harald (IVSS-Sektion Eisen- und Metallindustrie, 2010): IVSS-Projekt „EU-27“ zur Umsetzung der Rahmenrichtlinie EG 89/391/EWG in KMU. <http://www.issa.int/ger/Ueber-die-IVSS/Internationale-Sektionen-fuer-Praevention/Section-on-Prevention-in-the-Iron-and-Metal-Industry/About>
- Hamacher, W., Wienhold, L., Wittmann, S. (2005): Entwicklung von Indikatoren für die Wirksamkeitsbeurteilung und Zusammenstellung von Erhebungsmethoden als Grundlage für einen Leitfadens zur Evaluation von Arbeitsschutzrichtlinien der EU.
- Honey, S., J. Hillage, D. Frost, I. La Valle (1997): Evaluation of the Display Screen Equipment Regulations 1992, HSE, London (UK), 1997 - CRR 130/1997.
- ISSA / International Section for the prevention of occupational risks in the construction industry (2001): Coordination of Safety and Health at temporary or mobile construction sites: current status. [http://www.cramif.fr/pdf/th4/Paris/paris\\_2001.pdf](http://www.cramif.fr/pdf/th4/Paris/paris_2001.pdf).
- ISSA (2009): Colloquium of the ISSA International Section for Research on Prevention Research on the effectiveness of prevention measures at the workplace, 15 and 16 October 2009, Institute Work and Health (BGAG), Dresden, Germany
- Jongen M., Nossent S., Visser R., Walters D. et al. (2005): National Report for the Netherlands for CEFIC study 'Strategies for success? Chemical risk management in small enterprises in Europe, Cefic Brussels.
- Jongen, M., Marquart, R., Nossent, S., Visser, R., (2003): Prioritering van branches en ketens voor de versterking van arbobeleid rond chemische stoffen - Eindrapport (Prioritisation of branches and chains for strengthening OSH policies for the handling of hazardous substances - Final report), TNO.
- Kreis, J., Bödeker, W. (2004): Indicators for work-related health monitoring in Europe, ed. BKK Bundesverband (Federal Association of Company Health Insurance Funds), Essen
- Lißner, L., Reihlen, A, Stautz, A, Zayzon, R., National OSH Strategies – Approaches and Experiences from selected Countries. Report on the Research Project F 2234 of the German Federal Institute for Occupational Safety and Health, Full Report, BAuA (ed), 2011
- Mahlstedt, Hans and Rainer Schach (2005): Ex-post-Evaluation von europäischen Arbeitsschutzvorschriften. Ergebnisse des Forschungsvorhabens zur Evaluation der Baustellenverordnung, Vortrag Hans Mahlstedt und Rainer Schach auf der Fachveranstaltung am 14. Dezember 2005 im BMWA in Berlin.
- Ministry of Social Affairs and Employment (2007): Dutch evaluation of the VDU Directive (Directive 270/90/EEC). [http://docs.szw.nl/pdf/129/2007/129\\_2007\\_3\\_10398.pdf](http://docs.szw.nl/pdf/129/2007/129_2007_3_10398.pdf)
- Ministry of Social Affairs and Employment (2007): Report on the implementation of EC/98/24, The Hague
- MSAH (2009): Riskinarviointia koskevien työturvallisuus- ja työterveysäännösten vaikuttavuus – The impact of OSH legislation on risk assessment. STMn julkaisuja 2009: 22.

- NERCLIS: Assessing the potential impact of emerging trends and risks on labour inspection methodologies in the domain of occupational health and safety. Coordinator: Cardiff University, Mälardalen Univ. Kooperationsstelle Hamburg IFE and CIOP-PB, 2009-2011
- Niskanen, T., Kallio, H., & Zitting, A. (undated), Riskinarviointia koskevien työturvallisuus- ja työterveys säännösten vaikuttavuus, (The impact of OSH legislation on risk assessment), Sosiaali- ja terveysministeriön työsuojelujulkaisuja, (unpublished paper)
- OECD (2002) Glossary of Key Terms in Evaluation and Results Based Management
- Penny, J., Eaton, A., Bishop, P., Bloomfield, R., "The Practicalities of Goal-Based Safety Regulation", Proc. Ninth Safety-critical Systems Symposium (SSS 01), Bristol, UK, 6-8 Feb, pp. 35-48, New York: Springer, ISBN: 1-85233-411-8, 2001
- Purdon, S., Lessof, C., Woodfield, K. And Bryson, C. (2001). Research methods for policy evaluation. National Research Centre. Available at: <http://research.dwp.gov.uk/asd/asd5/WP2.pdf>
- PREVENT (2008): Onderzoek naar de omzetting van 4 arborichtlijnen in de regelgeving van 10 lidstaten (Study on the implementation of 4 OSH Directives in 10 Member States of the EU) Contractor Ministerie van Sociale Zaken en Werkgelegenheid, Den Haag.
- PREVENT (2006a): Karel van Damme in; Round Table on external OSH Services in 15 EU Member States, Colloquium 8 December 2006, <http://fr.prevent.be/net/net01.nsf/p/5D2260539E8D4D93C12572A5005D4B2F>
- Rauterberg, Matthias and Helmut Krueger: The EU Directive 90/270 on VDU-Work: a European State-of-the-Art Overview. Report over the situation in Germany / Sweden / UK / France and Belgium. Technical University Eindhoven, IPO report no. 1228, 1229, 1230, 1234, 1236 – 2000. <http://alexandria.tue.nl/repository/books/587217.pdf> ; <http://alexandria.tue.nl/repository/books/587207.pdf>; <http://alexandria.tue.nl/repository/books/587208.pdf>.
- Rauterberg, M, P.H. Vossen, D. Felix & H. Krueger (1996): The EU Directive 90/270 on VDU-Work - A State of the Art Seminar - The EU Directive on the Minimum Health and Safety Requirements for Work with Display Screen Equipment in Practice - a European Overview - Booklet of Abstracts. Workshop at the XI th Annual International Occupational Ergonomics and Safety Conference '96 - July 12th, 1996. <http://citeseer.ist.psu.edu/cache/papers/cs/15882/http:zSzzSzwww.ipo.tue.nlzSzhomepageszSzmaurterbzSzpublicationszSzEU96booklet.pdf/rauterberg96eu.pdf>
- RKW - Rationalisierungs- und Innovationszentrum der Deutschen Wirtschaft e.V. (2005): Untersuchung zur Umsetzung der Baustellenverordnung bei ausgewählten Bauvorhaben. Schlussbericht an das Bundesministerium für Wirtschaft und Arbeit – Kurzfassung.
- Saari j., et al. How companies respond to new safety regulation: A Canadian investigation., in: International Labour Review, vol. 132, 1993, n°1.
- Sadro, Amy (2005): Health and Safety Commission (HSC) Paper – HSC/05/75 – Clearance of Practical Implementation. Reports on Occupational Safety and Health Directives – A paper by Amy Sadro, B4, Cross Cutting Interventions Division – Annex F: Directive 90/270/EEC on work with display screen equipment. Report by the United Kingdom on the third four year period of practical implementation of the directive, Health and Safety Executive. <http://www.hse.gov.uk/aboutus/hsc/meetings/2005/060905/c75.pdf>
- SLIC, Evaluation Reference Manual Carrying out a SLIC evaluation, Luxembourg, 2008
- Stokols Daniel et al., Enhancing corporate compliance with worksite safety and health legislation, in/ Journal of Safety Research, Vol. 32, issue 4, 2001, pp. 441-463
- Sma, Milan (Presentation Kosice 2010): Umsetzung der Rahmenrichtlinie in KMU – Erfahrungen aus Slowenien, Chamber of Safety and Health at Work, Laibach, Slowenien

- Taylor A et al (2007): Differences in national legislation for the implementation of lead regulations included in the European directive for the protection of the health and safety of workers with occupational exposure to chemical agents (98/24/EC), in: Int Arch Occup Environ Health 80:254–264.
- TNS Infratest (2007): The development of a methodology to assess the quality of EU-Directives: a pilot study on basis of the Directive on Visual Display Units (Directive 90/270 EEC) Integrated cross-national report, Munich 2007
- TNS Infratest (2007): Evaluation der EU Bildschirmarbeitsrichtlinie 90/270 EWG: Nationaler Bericht Deutschland. Munich 2007.
- TUTB (1997): Working with VDUs. The implementation of Directive 90/270/EEC in Sweden and Germany, TUTB, Brussels, 1997, 41 p.
- Versluis, E. (2002): The Enforcement of European Occupational Safety and Health Directives in Four EU Member States, Netherlands School for Social and Economic Policy Research, 2002/03, Utrecht: AWSB. (254 p.) <http://eiop.or.at/eiop/texte/2004-019.htm>
- Vogel, L. (1998): Prevention at the Workplace: the impact of Community Directives on preventive systems in Sweden, Finland, Norway, Austria and Switzerland, European Trade Union Technical Bureau for Health and Safety, Brussels.
- Walters D.R. (ed) (2002): Regulating Health and Safety Management in the European Union: a Study of the Dynamics of Change, PIE Peter Lang, Brussels.
- Wilson S, Tyers C, Wadsworth E., Evidence Review on Regulation Culture and Behaviours, Unit Report 12, Food Standards Agency, 2010.
- Woolfson Charles, Regulation of the Working Environment in the New Accession States of the Enlarged European Union. A Report to the European Trade Union Confederation/Trade Union Technical Bureau for Health and Safety, TUTB Working Paper, Brussels, 2004.

#### **Surveys on enforcement strategies and OSH services:**

- CLEEN (Chemical Legislation European Enforcement Network) (2005): Case studies about enforcement, <http://www.cleen-eu.net/>.
- EU OSHA (2009): Labour inspectorates' strategic planning on safety and health at work Results of a questionnaire survey to EU-OSHA's focal points, Luxembourg.
- FIOH (2001): Survey of the quality and effectiveness of Occupational Health services in the European Union and Norway and Switzerland, Helsinki.
- ILO (2006) General Survey of the reports concerning the Labour Inspection Convention, 1947 (No. 81), and the Protocol of 1995 to the Labour Inspection Convention, 1947, and the Labour Inspection Recommendation, 1947 (No. 81), the Labour Inspection (Mining and Transport) Recommendation, 1947 (No. 82), the Labour Inspection (Agriculture) Convention, 1969 (No. 129), and the Labour Inspection (Agriculture) Recommendation, 1969 (No. 133), 95th Session, 2006. Report III (Part 1B)
- Prevent (2006): Organisatie van de externe diensten voor preventie en bescherming in 15 lidstaten van de Europese Unie. Studie met de steun en de samenwerking van Mensura Externe Dienst voor Preventie en Bescherming op het Werk.
- Prevent (2006): Onderzoek Arbo-informatiestructuur in Westerse landen, studie uitgevoerd door Prevent in opdracht van het Ministerie van Sociale Zaken en Werkgelegenheid. [http://docs.szw.nl/pdf/92/2007/92\\_2007\\_1\\_18361.pdf](http://docs.szw.nl/pdf/92/2007/92_2007_1_18361.pdf)
- Raulier, A., Walters, D.R. (1995): Trade Union Training in Health and Safety: A survey of European Practice in Training for Worker Representatives, Trade Union Technical Bureau, Brussels, ISBN 2-930003-16-2
- RLI (2006): A munkavédelmi felügyeleték együttes útmutatása a munkahelyi kockázatértékelés végrehajtásához. [Common guidance of the Regional Labour Inspections for the performance of risk assessment] In: Munkaügyi Közlöny 2002/1., amendment: 2006/4.



- Walters, D.R., Kirby, P. (2003): Training and action in health and safety, TUC, London, ISBN 1850066280.
- Westerholm, P., Walters, D. (eds) (2007): Supporting Health at Work: International Perspectives on Occupational Health Services. IOSH Services Ltd, London
- Versluis, E., The Enforcement of European Occupational Safety and Health Directives in Four EU Member States, Netherlands School for Social and Economic Policy Research, Utrecht: AWSB, 2002/03,

#### **Annual reports / country reports / European surveys on working conditions:**

- Arbeitsministerien der Bundesländer (diverse, 2009): Jahresberichte 2008 der Gewerbeaufsichtsämter. [http://lasi.osha.de/de/gfx/publications/jahresberichte\\_laender.php](http://lasi.osha.de/de/gfx/publications/jahresberichte_laender.php)
- Arbetsmiljöverket (2009): Årsredovisning 2008 (Annual Report 2008), Stockholm.
- Arbetsmiljöverket (2007): [Arbetsmiljön 2007](http://www.av.se/statistik/officialt/arbetsmiljon_2007.aspx) [Work environment survey]. [http://www.av.se/statistik/officialt/arbetsmiljon\\_2007.aspx](http://www.av.se/statistik/officialt/arbetsmiljon_2007.aspx).
- Arbetsmiljöverket (2008): Arbetsorsakade besvar 2008 [Survey on work related disorders]. SE/EN. [http://www.av.se/statistik/officialt/arbetsorsakade\\_besvar\\_2008.aspx](http://www.av.se/statistik/officialt/arbetsorsakade_besvar_2008.aspx)
- Arbetsmiljöverket (2009): Arbetsskador 2008 [Occupational accidents and work-related diseases]. [http://www.av.se/statistik/officialt/Arbetsskador\\_2008.aspx](http://www.av.se/statistik/officialt/Arbetsskador_2008.aspx)
- Arbejdstilsynet (2010): Årsrapport 2009. <http://www.arbejdstilsynet.no/rapport.html?tid=90119>
- Arbejdstilsynet (2010): Statistikk. (Statistikker er inndelt i fire kategorier, henholdsvis dødsulykker, skader, sykdom og statistikk fra tilsynsvirksomheten). <http://www.arbejdstilsynet.no/seksjon.html?tid=206843>
- Arbejdstilsynet (2007): VOV Virksomhedsovervågningen (Enterprise supervision) <http://www.at.dk/~media/320C89919C5A42B1808DCA517B62A41B.ashx>
- Badura, B., Schröder, H., Klose J., Macco K. / AOK Wido (2010): Fehlzeiten-Report 2009. Schwerpunktthema: Arbeit und Psyche: Belastungen reduzieren – Wohlbefinden fördern. Berlin.
- BIBB/BAuA-Erwerbstätigenbefragung (2006): Arbeit und Beruf im Wandel, Erwerb und Verwertung beruflicher Qualifikationen. Bonn / Dortmund.
- BMAS/BAUA (2010): Sicherheit und Gesundheit bei der Arbeit 2008 (Health and safety at work 2008), Berlin/Dortmund/Dresden; <http://www.baua.de>
- Bos M. et al (2006): Arbo in bedrijf 2006. (Work Environment 2006). SZW, Den Haag, 2007
- Burr, H., Villadsen, E., Flyvholm, M.A. (2005): Arbejdsmiljø i Danmark 2005 - Arbejdsmiljøinstituttet, Den Nationale Arbejdsmiljøkohorte – NAK, 2005, (Work Environment in Denmark –National Survey), available at: [http://www.arbejdsmiljoforskning.dk/upload/nak2005\\_kemisk.pdf](http://www.arbejdsmiljoforskning.dk/upload/nak2005_kemisk.pdf)
- DGB (2009). Index Gute Arbeit.Report 2009. [http://www.dgb-index-gute-arbeit.de/gute\\_arbeit](http://www.dgb-index-gute-arbeit.de/gute_arbeit)
- DGUV (2009): „Wirksamkeit und Tätigkeit von Fachkräften für Arbeitssicherheit“ (‘Effectiveness and Activity of Specialists in Health and Safety at Work’ - Longitudinal study ’), Berlin, [http://www.sifa-langzeitstudie.de/download\\_results.html](http://www.sifa-langzeitstudie.de/download_results.html)
- EU Commission, DG Employment (2009): Causes and circumstances of accidents at work in the EU. Luxembourg.



- Eurofound (2010). Fifth European Working Conditions Survey. <http://www.eurofound.europa.eu/surveys/ewcs/2010/index.htm>
- EU-OSHA (2010): European Survey of Enterprises on New and Emerging Risks (ESENER). Not yet published.
- EU-OSHA (2009): Labour inspectorates' strategic planning on safety and health at work Results of a questionnaire survey to EU-OSHA's focal points, Luxembourg.
- EU-OSHA: European Risk Observatory, <http://osha.europa.eu/en/riskobservatory>
- FIOH (2005): Finnish Institute for Occupational Health: Kemikaalit ja työ. Selvitys työympäristön kemikaaliriskeistä [Chemicals and Work. Explanation Report on Chemical Risks of the Working Environment], Helsinki.
- HSE, Trends and context to rates of workplace injury, Research Report 386, prepared by Warwick Institute for Employment Research for the Health and Safety Executive, 2005 <http://www.hse.gov.uk/research/rrhtm/rr386.htm>
- Frick, K. (1979): Workers' protection in small manufacturing companies, Arbetarskyddsnamnden, Stockholm (in Swedish).
- IAB (2009): IAB Betriebspanel 2008. <http://www.iab.de/de/erhebungen/iab-betriebspanel.aspx> bzw. <http://doku.iab.de/forschungsbericht/2009/fb0409.pdf>
- ILO (2000): *Safety and Health at the Workplace - Trade Union Experiences in Central and Eastern Europe, Reports for the Eastern European States Bulgaria, Czech Republic, Estonia, Hungary, Lithuania, Russia, Slovakia, Ukraine*, available via: [http://www.ilo.org/public/english/region/eurpro/budapest/social/safety\\_cd/index.htm](http://www.ilo.org/public/english/region/eurpro/budapest/social/safety_cd/index.htm)
- INQA (2006): Was ist gute Arbeit? Anforderungen aus der Sicht von Erwerbstätigen. <http://www.inqa.de/Inqa/Navigation/publikationen,did=131210.html>
- Kersley B. et al (2006) Inside the Workplace: Findings from the 2004 Workplace Employment Relations Survey, Routledge, London.
- Landesamt für Arbeitsschutz Brandenburg (2009): Gefährdungsbeurteilung und Umsetzung von Arbeitsschutzmaßnahmen in Kleinbetrieben. Abschlussbericht des gemeinsamen Landesprogramms. [http://bb.osha.de/docs/abschlussbericht\\_gefbeurteilg.pdf](http://bb.osha.de/docs/abschlussbericht_gefbeurteilg.pdf)
- MSL (2008): Szociális és Munkaügyi Miniszter: Tájékoztató jelentés a Kormány részére a nemzetgazdaság 2007. évi munkavédelmi helyzetéről (Minister for Social Affairs and Labour: Report to the Government on the state of labour protection in the Hungarian economy in 2007).
- Ministerul Muncii, Familiei și Egalității de Șanse: Raport de activitate a Inspecției Muncii 2007. Conform convențiilor nr. 81 și 129 ale Organizației Internaționale a Muncii. (Romanian Ministry for Labour, Family and Social Protection: Activity report of the Labour Inspection 2007, conform with the ILO conventions no. 81. and 129) <http://www.inspectmun.ro/RAPORT%20ANUAL/RAPORT%20IM%202007web.pdf>
- Nutzerpotentiale von Beschäftigtenbefragungen. Repräsentative Beschäftigtenbefragungen als wichtige Informationsquelle zur Ermittlung der Arbeitsqualität. Documentation of a workshop that took place 2008 in Dortmund. BAuA, 2009. Available at: [http://www.baua.de/de/Publikationen/Fachbeitraege/Gd39.pdf?\\_\\_blob=publicationFile&v=7](http://www.baua.de/de/Publikationen/Fachbeitraege/Gd39.pdf?__blob=publicationFile&v=7)
- Rantanen et al. 2002: Basic information on Finland and its health system, in: Rantanen, J., Kauppinen, T., Lehtinen, S., Mattila, M., Toikkanen, J. Kurppa, K., Leino, T., Work and health country profiles of twenty-two European Countries. People and Work Research Reports 52. FIOH, Helsinki 2002, pp. 121-138; <http://www.ttl.fi/NR/rdonlyres/D29BF6B0-E098-44F9-911B-4AF3AA762D9/0/finland.pdf>
- Raport Ministerstwa Pracy i Polityki Społecznej (2007): Ocena stanu bezpieczeństwa i higieny pracy w 2006 roku, (Annual Report of the Ministry of Labour and Social Affairs), Warszawa.
- Rice, A., Repo, P. (2000), Health and Safety at the Workplace - Trade Union Experiences in Central and Eastern Europe, A report of an ILO survey in Bulgaria, the Czech Republic,

Estonia, Hungary, Lithuania, the Russian Federation, Slovakia and Ukraine, 2000, see: [http://www.ilo.org/public/english/region/eurpro/budapest/social/safety\\_cd/index.htm](http://www.ilo.org/public/english/region/eurpro/budapest/social/safety_cd/index.htm)

- STAMI (2010): Arbejdsskader og arbejdsrelaterede helseplager. <http://www.stami.no/?nid=62807&lcid=1044&iid=79140&pid=STAMI-Article-ArtikkelBilder.Native-InnerFile-File&attach=1>
- STAMI (2007): Faktabok om arbeidsmiljø og helse 2007. <http://www.stami.no/?nid=23890&lcid=1044&iid=32774&pid=10096.-20201>
- Todea, A. & Ferencz, A., *Morbiditatea profesională în România în 2007*, (Occupational diseases in Romania in 2007), Institutul de Sănătate Publică, București, Secția Medicina Muncii, Registrul Operativ National al Bolilor Profesionale, 2008, available at: [http://osha.europa.eu/fop/romania/ro/index.shtml/pdfs/Lucrare\\_BP\\_2007.pdf](http://osha.europa.eu/fop/romania/ro/index.shtml/pdfs/Lucrare_BP_2007.pdf)
- Vickers, I. et al (2003): Cultural Influences on Health and Safety Attitudes and Behaviour in Small Firms, HSE Research Report 150, HSE Books, Sudbury.
- Wirtschafts- und Sozialwissenschaftliches Institut in der Hans-Böckler-Stiftung - WSI (2004): Erste Ergebnisse einer WSI-Betriebsrätebefragung zu Gesundheitsbelastungen und Prävention am Arbeitsplatz. [http://www.boeckler.de/pdf/wsi\\_betriebsraetebefragung\\_gesundheit\\_07\\_2004.pdf](http://www.boeckler.de/pdf/wsi_betriebsraetebefragung_gesundheit_07_2004.pdf)

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## V. Annexes

The annexes are included as a separate file, entitled “Generic methodology report – Annexes”. They contain the following data:

Annex I: OSH individual Directives-related provisions

Annex II: OSH individual Directives-related sources

Annex III: References template

Annex IV: Sourcebook

Annex V: Conditions of an optimal evaluation

Annex VI: Data collection checklist

# **Generic methodology report - Annexes**

## Methodology for Evaluation of EU OSH Directives – Progress Project 2010-2011

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April 2012

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## Annexes

### Annex I: OSH individual Directives-related provisions

#### Categories of legislation

<b>OSH Individual directives (Art. 16(1) of directive 89/391/EEC)</b>	
<b>Workplaces, equipment, signs, personal protective equipment</b>	
89/654/EEC Workplace requirements (1°)	The Directive lays down minimum requirements for safety and health at the workplace.
2009/104/EEC Work equipment (2°)	This Directive lays down minimum safety and health requirements for the use of work equipment by workers at work.
89/656/EEC Use of Personal Protective Equipment (3°)	This Directive lays down minimum requirements for personal protective equipment (PPE) used by workers at work.
92/58/EEC Safety and/or health signs (9°)	This directive lays down minimum requirements for the provision of safety and/or health sign at work.
99/92/EC Risks from explosive atmospheres (15°)	This Directive aims at establishing and harmonising minimum requirements for improving the safety and health of workers potentially at risk from explosive atmospheres.
<b>Chemical agents and chemical safety</b>	
98/24/EC Risks related to chemical agents at work (14°)	The directive lays down minimum requirements for the protection of workers from risks to their safety and health arising, or likely to arise, from the effects of chemical agents that are present at the workplace or as a result of any work activity involving chemical agents.
2004/37/EC Carcinogens or mutagens at work (6°)	The directive aims to protect workers against health and safety risks from exposure to carcinogens or mutagens at work. This directive does not apply to workers exposed to radiation covered by the Euratom Treaty.
<b>Physical hazards</b>	
2002/44/EC Vibration (16°)	The Directive aims at ensuring health and safety of each worker and at creating a minimum basis of protection for all Community workers by timely detection of adverse health effects arising or likely to arise from exposure to mechanical vibration, especially musculo-skeletal disorders.
2003/10/EC Noise (17°)	The objective of this directive is to lay down minimum requirements for the protection of workers from risks to their health and safety arising or likely to arise from exposure to noise and in particular the risk to hearing.
2004/40/EC Electromagnetic fields and waves (18°)	The objective of this directive is to lay down minimum requirements for the protection of workers from risks to their health and safety arising or likely to arise from exposure to electromagnetic fields during their work.

	It refers to the risks due to known short-term adverse effects in the human body caused by the circulation of induced currents and by energy absorption as well as by contact currents; it does not address suggested long-term effects.
2006/25/EC Artificial optical radiation (19°)	This directive aims to improve the health and safety of workers by laying down limit values for exposures of workers to artificial optical radiation to eyes and skin. Exposure to natural optical radiation (sunlight) and its possible health consequences are not covered by Directive 2006/25/EC.
96/29/Euratom Ionizing radiation	The aim of the Directive is to establish uniform basic safety standards to protect the health of workers and the general public against the dangers of ionising radiation. The Directive shall apply to all practices which involve a risk from ionising radiation emanating from an artificial source or from a natural radiation source in cases where natural radionuclides are processed in view of their radioactive, fissile or fertile properties.  It also applies to further work activities which involve the presence of natural radiation sources and lead to a significant increase in the exposure of workers or members of the public.
<b>Biological agents</b>	
2005/54/EC Biological agents at work (7°)	This directive lays down minimum requirements for the health and safety of workers exposed to biological agents at work.
<b>Workload, ergonomics and psychosocial risks</b>	
90/269/EEC Manual handling of loads (4°)	This Directive lays down minimum health and safety requirements for the manual handling of loads where there is a risk particularly of back injury to workers.
90/270/EEC Display screen equipment (5°)	This Directive lays down minimum safety and health requirements for work with display screen equipment.
<b>Sector specific and worker related provisions</b>	
92/57/EEC Temporary or mobile construction sites (8°)	This directive lays down minimum safety and health requirements for temporary or mobile construction sites i.e. any construction site at which building or civil engineering works are carried out and intends to prevent risks by establishing a chain of responsibility linking all the parties involved.  Moreover, the provisions of Directive 89/391/EEC - "the framework directive" - are fully applicable without prejudice to more restrictive and/or specific provisions contained in this directive.
92/85/EEC Pregnant workers (10°)	The objective of this Directive is to protect the health and safety of women in the workplace when pregnant or after they have recently given birth and women who are breastfeeding.
92/91/EEC Mineral-extracting industries – drilling (11°)	This directive lays down the minimum requirements for improving the safety and health protection of workers in the mineral-extracting industries through drilling i.e. extraction of minerals (onshore and offshore), preparation of extracted materials for sale, etc.
92/104/EEC Mineral-extracting industries (12°)	This directive lays down the minimum requirements for improving the safety and health protection of workers in surface and underground mineral-extracting industries (except for the mineral extracting industries



	through drilling which is governed by directive 92/91/EEC).
93/103/EC Work on board fishing vessels (13°)	This directive lays down minimum safety and health requirements applicable to work on board fishing vessels.

## OSH individual Directives-related provisions

OSH Individual directives (Art. 16(1) of directive 89/391/EEC)	Provisions	Type of action	Frequency
Workplaces, equipment, signs, personal protective equipment			
89/654/EEC Workplace requirements (1°)	<p><b>General obligations for the employer</b></p> <ul style="list-style-type: none"> <li>• traffic routes to emergency exits and the exits themselves are kept clear at all times;</li> <li>• technical maintenance of the workplace and of the equipment and devices is carried out as quickly as possible;</li> <li>• the workplace and the equipment and devices are regularly cleaned to an adequate level of hygiene;</li> <li>• safety equipment and devices intended to prevent or eliminate hazards are regularly maintained and checked.</li> </ul> <p>Information Consultation</p> <p>The <b>Annexes</b> specify the minimum health and safety requirements for workplaces: Annex I (for workplaces used for the first time) Annex II (for workplaces already in use) Topics covered in the Annexes:</p> <ul style="list-style-type: none"> <li>• <b>Stability and solidity</b></li> <li>• <b>Electrical installations</b></li> <li>• <b>Emergency routes and exits</b></li> <li>• <b>Fire detection and fire fighting</b></li> <li>• <b>Ventilation of enclosed workplaces</b></li> <li>• <b>Room temperature</b></li> <li>• <b>Natural and artificial room lighting</b></li> <li>• <b>Floors, walls, ceilings and roofs of rooms</b></li> <li>• <b>Windows and skylights</b></li> <li>• <b>Doors and gates</b></li> <li>• <b>Traffic routes - danger areas</b></li> <li>• <b>Specific measures for escalators and travelators</b></li> <li>• <b>Loading bays and ramps</b></li> <li>• <b>Room dimensions and air space in rooms - freedom of movement at the workstation</b></li> <li>• <b>Rest rooms</b></li> <li>• <b>Pregnant women and nursing mothers</b></li> <li>• <b>Sanitary equipment</b></li> <li>• <b>First aid rooms/equipment</b></li> <li>• <b>Handicapped workers</b></li> <li>• <b>Outdoor workplaces (special provisions)</b></li> <li>• <b>Movement of pedestrians and vehicles</b></li> </ul>	<p>Routes and exits kept clear</p> <p>Technical maintenance</p> <p>Clean workplaces and equipment Check safety equipment</p> <p>Information Consultation</p> <p>Safe design of electrical installations</p> <p>Signalling Fire-fighting equipment</p> <p>Control system for ventilation Windows avoiding excessive effects of sunlight Sufficient natural light and be equipped with artificial lighting Emergency lighting Non slippery floors</p>	<p>Recurrent</p> <p>Recurrent</p> <p>Recurrent</p> <p>Regularly</p>

		<p>Indication of glass partitions in transparent doors made of safety material</p> <p>Transparent doors must be appropriately marked</p> <p>Swing doors and gates must be transparent or have see-through panels</p> <p>Sliding doors must be fitted with a safety device</p> <p>Doors and gates opening upwards must be fitted with a mechanism to secure them against falling back</p> <p>Doors along escape routes must be appropriately marked</p> <p>Clearly marked doors for pedestrians</p> <p>Mechanical doors must be fitted with emergency shut-down devices</p> <p>Sufficient clearance in traffic routes</p> <p>Traffic routes must be clearly identified</p> <p>Danger areas must be clearly indicated</p> <p>Escalators and travelators must be equipped with safety devices.</p> <p>They must be fitted with emergency shut-down devices.</p> <p>Easily accessible rest room</p> <p>Protection of non-smokers</p> <p>Appropriate changing rooms provided with seating and facilities to enable each worker to lock away his clothes</p> <p>Separate changing rooms Adequate and suitable showers</p> <p>Separate shower rooms</p> <p>First aid rooms</p>	
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		Artificial lighting for workplaces outdoor	
2009/104/EEC  Work equipment (2°)	<p><i>Employers' obligations</i></p> <p>The employer shall take every measure to ensure the safety of the work equipment made available to workers. During the selection of the work equipment the employer shall pay attention to the specific working conditions, which exist at the workplace, especially in relation of safety and health of the workers. If risks cannot be fully eliminated during the operation of the work equipment, the employer shall take appropriate measures to minimise them. Furthermore the work equipment should comply with relevant Community directives and/or the minimum requirements laid down in Annex I.</p> <p>Throughout its working life, the employer shall keep the work equipment compliant by means of adequate maintenance. The employer shall ensure that the work equipment is installed correctly and is operating properly by <a href="#">inspection/testing of the work equipment (initial, after assembly, periodic and special) by competent persons</a>. The results of inspections shall be recorded and kept.</p> <p>If the use of work equipment is likely to involve a specific risk the employer shall ensure restricted access to its use, and allows of any modification by expert personnel only. Ergonomics and occupational health aspects shall be taken fully into account by the employer.</p> <p>The employer shall provide workers with adequate, comprehensible information (e.g. written instructions) on the work equipment, detailing: the conditions of use, foreseeable abnormal situations, any additional conclusion drawn from experience. Workers shall be made aware of dangers relevant to them. The employer shall ensure that workers receive adequate training, including risks and specific training on specific-risk equipments.</p> <p>Annexes</p> <p>Annex I - Minimum requirements</p> <p>1. General comment</p> <p>2. General minimum requirements applicable to work equipment</p> <p>2.1. Work equipment control devices which affect safety must be clearly visible and identifiable and appropriately marked where necessary.</p> <p>Except where necessary for certain control devices, control devices must be located outside danger zones and in such a way that their operation cannot pose any additional hazard. They must not give rise to any hazard as a result of any unintentional operation.</p> <p>If necessary, from the main control position, the operator must be able to ensure that no person is present in the danger zones. If this is impossible, a safe system such as an audible and/or visible warning signal must be given automatically whenever the machinery is about to start. An exposed worker must have the time and the means quickly to avoid hazards caused by the starting or stopping of the work equipment.</p> <p>Control systems must be safe and must be chosen making due allowance for the failures, faults and constraints to be expected in the</p>	<p>Maintenance of work equipment</p> <p><a href="#">Inspection/testing of work equipment by competent persons</a></p> <p><a href="#">Adequate, comprehensible information (e.g. written instructions) on the work equipment</a></p> <p>Training</p> <p>Work equipment control devices must be clearly visible, identifiable and marked, and located outside danger zones. If in danger zone, audible and/or visible warning signs must be given automatically before</p>	<p>Recurrent</p> <p>Initial, after assembly, periodic and special</p> <p>One-off, updates</p> <p>Recurrent</p>



	<p>If any machine has a maintenance log, it must be kept up to date.</p> <p>2.14. All work equipment must be fitted with clearly identifiable means to isolate it from all its energy sources.</p> <p>Reconnection must be presumed to pose no risk to the workers concerned.</p> <p>2.15. Work equipment must bear the warnings and markings essential to ensure the safety of workers.</p> <p>2.16. Workers must have safe means of access to, and be able to remain safely in, all the areas necessary for production, adjustment and maintenance operations.</p> <p>2.17. All work equipment must be appropriate for protecting workers against the risk of the work equipment catching fire or overheating, or of discharges of gas, dust, liquid, vapour or other substances produced, used or stored in the work equipment.</p> <p>2.18. All work equipment must be appropriate for preventing the risk of explosion of the work equipment or of substances produced, used or stored in the work equipment.</p> <p>2.19. All work equipment must be appropriate for protecting exposed workers against the risk of direct or indirect contact with electricity.</p> <p>3. Additional minimum requirements applicable to specific types of work equipment</p> <p>3.1.1. Work equipment with ride-on workers must be fitted out in such a way as to reduce the risks for workers during the journey. Those risks must include the risks of contact by workers with, or trapping by, wheels or tracks.</p> <p>3.1.2. Where an inadvertent seizure of the drive unit between a mobile item of work equipment and its accessories or anything towed might create a specific risk, such work equipment must be equipped or adapted to prevent blockages of the drive units. Where such a seizure cannot be avoided, every possible measure must be taken to avoid any adverse effects on workers.</p> <p>3.1.3. Where drive shafts for the transmission of energy between mobile items of work equipment can become soiled or damaged by trailing on the ground, facilities must be available for fixing them.</p> <p>3.1.4. Mobile work equipment with ride-on workers must be designed to restrict, under actual conditions of use, the risks arising from work equipment roll-over:</p> <ul style="list-style-type: none"> <li>- by a protection structure designed to ensure that the equipment does not tilt by more than a quarter turn, or</li> <li>- by a structure giving sufficient clearance around the ride-on workers if the tilting movement can continue beyond a quarter turn, or</li> <li>- by some other device of equivalent effect.</li> </ul> <p>These protection structures may be an integral part of the work equipment.</p> <p>These protection structures are not required when the work equipment is stabilised during operation or where the design makes roll-over impossible.</p> <p>Where there is a risk of a ride-on worker being crushed between parts of the work equipment and the ground, should the equipment roll over, a restraining system for the ride-on workers must be installed.</p> <p>3.1.5. Fork-lift trucks carrying one or more workers must be adapted or equipped to limit the risk of the fork-lift truck overturning, e.g.:</p> <ul style="list-style-type: none"> <li>- by the installation of an enclosure for the driver, or</li> <li>- by a structure preventing the fork-lift truck from overturning, or</li> </ul>	<p>Be stabilized.</p> <p>A control stop.</p> <p>Protection measures against rupture or disintegration.</p> <p>Guards or devices to prevent access.</p> <p>Protection against contact with hot/cold surface.</p> <p>Protective measures during maintenance work.</p> <p>Isolation protective measures.</p> <p>Warnings and markings.</p>	
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	<p>- by a structure ensuring that, if the fork-lift truck overturns, sufficient clearance remains between the ground and certain parts of the fork-lift truck for ride-on workers, or</p> <p>- by a structure restraining the workers on the driving seat so as to prevent them from being crushed by parts of the fork-lift truck which overturns.</p> <p>3.1.6. Self-propelled work equipment which may, when in motion, engender risks for persons must fulfil the following conditions:</p> <p>(a) the equipment must have facilities for preventing unauthorised start-up;</p> <p>(b) it must have appropriate facilities for minimising the consequences of a collision where there is more than one item of track-mounted work equipment in motion at the same time;</p> <p>(c) there must be a device for braking and stopping equipment. Where safety constraints so require, emergency facilities operated by readily accessible controls or automatic systems must be available for braking and stopping equipment in the event of failure of the main facility;</p> <p>(d) where the driver's direct field of vision is inadequate to ensure safety, adequate auxiliary devices must be installed to improve visibility;</p> <p>(e) work equipment designed for use at night or in dark places must be equipped with lighting appropriate to the work to be carried out and must ensure sufficient safety for workers;</p> <p>(f) work equipment which constitutes a fire hazard, either on its own or in respect of whatever it is towing or carrying, and which is liable to endanger workers must be equipped with appropriate fire-fighting appliances where such appliances are not available sufficiently nearby at the place of use;</p> <p>(g) remote-controlled work equipment must stop automatically once it leaves the control range;</p> <p>(h) remote-controlled work equipment which may in normal conditions engender a crushing or impact hazard must have facilities to guard against this risk, unless other appropriate devices are present to control the impact risk.</p> <p>3.2. Minimum requirements for work equipment for lifting loads</p> <p>3.2.1. When work equipment for lifting loads is installed permanently, its strength and stability during use must be ensured, having regard, in particular, to the loads to be lifted and the stress induced at the mounting or fixing point of the structures.</p> <p>3.2.2. Machinery for lifting loads must be clearly marked to indicate its nominal load, and must where appropriate be fitted with a load plate giving the nominal load for each configuration of the machinery.</p> <p>Accessories for lifting must be marked in such a way that it is possible to identify the characteristics essential for safe use.</p> <p>Work equipment which is not designed for lifting persons but which might be so used in error must be appropriately and clearly marked to this effect.</p> <p>3.2.3. Permanently installed work equipment must be installed in such a way as to reduce the risk of the load:</p> <p>(a) striking workers;</p> <p>(b) unintentionally drifting dangerously or falling freely;</p> <p>(c) being released unintentionally.</p> <p>3.2.4. Work equipment for lifting or moving workers must be such as to:</p> <p>(a) prevent the risk of the car falling, where one exists, by means of</p>	<p>Protective measures against work equipment catching fire or overheating, or of discharges of gas, dust, liquid, vapour or other substances.</p> <p>Appropriate for preventing the risk of explosion of the work equipment or of substances.</p> <p>Protective measures against contact with electricity.</p> <p>Safety devices for</p> <ul style="list-style-type: none"> <li>- Work equipment with ride-on workers</li> <li>- Work equipment for lifting loads or moving workers</li> </ul>	
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	<p>suitable devices;</p> <p>(b) prevent the risk of the user himself falling from the car, where one exists;</p> <p>(c) prevent the risk of the user being crushed, trapped or struck, in particular through inadvertent contact with objects;</p> <p>(d) ensure that persons trapped in the car in the event of an incident are not exposed to danger and can be freed.</p> <p>If, for reasons inherent in the site and in height differences, the risks referred to in point (a) cannot be avoided by any safety measures, an enhanced safety coefficient suspension rope must be installed and checked every working day.</p> <p>Annex II - Provisions concerning the use of work equipment</p> <ol style="list-style-type: none"> <li>1. General provisions for all work equipment</li> <li>2. Provisions concerning the use of mobile equipment, whether or not self-propelled</li> <li>3. Provisions concerning the use of work equipment for lifting loads</li> <li>4. Provisions concerning the use of work equipment provided for temporary work at a height</li> </ol> <p>Annex III Repealed Directive with its successive amendments</p> <p>List of time limits for transposition into national law</p> <p>Annex IV - Correlation table</p>		
<p>89/656/EEC</p> <p>Use of Personal Protective Equipment (3°)</p>	<p><b>Employers' obligations</b></p> <p>Personal protective equipment must comply with the relevant Community provisions on design and manufacture with respect to safety and health.</p> <p><b>All personal protective equipment must</b></p> <ul style="list-style-type: none"> <li>• <b>be appropriate for the risks involved, without itself leading to any increased risk;</b></li> <li>• <b>correspond to existing conditions at the workplace;</b></li> <li>• <b>take account of ergonomic requirements and the worker's state of health;</b></li> <li>• <b>fit the wearer correctly after any necessary adjustment.</b></li> </ul> <p>- The employer must <b>provide the appropriate equipment free of charge and he must ensure that it is in good working order and hygienic condition.</b></p> <p>- Where the presence of more than one risk makes it necessary for a worker to wear simultaneously more than one item of personal protective equipment, such equipment must be compatible.</p> <p>- Personal protective equipment is, in principle, intended for personal use. If the circumstances require personal protective equipment to be worn by more than one person, appropriate measures shall be taken to ensure that such use does not create any health or hygiene problem for the different users.</p> <p>- Before choosing personal protective equipment, <b>the employer is required to assess whether the personal protective equipment he intends to use satisfies the requirements of this directive.</b></p> <p>- Member States shall ensure that <b>general rules are established for the use of personal protective equipment and/or covering cases and situations where the employer must provide such equipment.</b> There must be prior consultation with employers' and workers' organisations.</p> <p>- Employer shall organize <b>training and demonstration on the use of PPE.</b> Workers shall be <b>informed</b> of all measures to be taken. <b>Consultation and participation</b> shall take place on the matters covered by this directive.</p> <p><b>Annexes</b></p>	<p>Provision of PPE</p> <p>Training Information Consultation and participation</p>	<p>Based on risk assessment</p>



	<p>Annex I: <b>Specimen risk survey table for the use of personal protective equipment</b></p> <p>Annex II: <b>Non-exhaustive guide list of items of personal protective equipment</b></p> <p>Annex III: <b>Non-exhaustive guide list of activities and sectors of activity which may require the provision of personal protective equipment</b></p>		<p>Recurrent</p> <p>Recurrent</p> <p>Recurrent</p>
<p>92/58/EEC</p> <p>Safety and/or health signs (9°)</p>	<p><b>Employers' obligations</b></p> <ul style="list-style-type: none"> <li>- Employers must provide or ensure that <b>safety and/or health signs are in place where hazards cannot be avoided or reduced. The annexes of this directive provide detailed information about the minimum requirements for all safety and health signs.</b></li> <li>- Workers and their representatives must be <b>informed</b> of all the measures taken concerning health and safety signs at work and must be given suitable <b>instruction</b> about these signs. This covers the meaning of signs and the general and specific behaviour required.</li> <li>- The annexes detailing technical specifications of health and safety signs are adapted in the light of subsequent related directives and technical progress in the field of health and safety signs at work.</li> <li>- Member States may specify - within certain limits - alternative measures to replace signs and signals which afford the same level of protection.</li> </ul> <p><b>Annexes</b></p> <p>Annex I: <b>General minimum requirements concerning safety and/or health signs at work</b></p> <p>Annex II: <b>Minimum general requirements concerning signboards</b></p> <p>Annex III: <b>Minimum requirements governing signs on containers and pipes</b></p> <p>Annex IV: <b>Minimum requirements for the identification and location of fire-fighting equipment</b></p> <p>Annex V: <b>Minimum requirements governing signs used for obstacles and dangerous locations, and for marking traffic routes</b></p> <p>Annex VI: <b>Minimum requirements for illuminated signs</b></p> <p>Annex VII: <b>Minimum requirements for acoustic signs</b></p> <p>Annex VIII: <b>Minimum requirements for verbal communication</b></p> <p>Annex IV: <b>Minimum requirements for hand signals</b></p>	<p>Put safety signs in place</p> <p>Information Instruction</p>	<p>One-off</p> <p>Recurrent</p> <p>Recurrent</p>
<p>99/92/EC</p> <p>Risks from explosive atmospheres (15°)</p>	<p><b>Obligations of employers</b></p> <ul style="list-style-type: none"> <li>- The employer shall take appropriate <b>technical and/or organisational measures for the prevention of the formation of explosive atmospheres</b>, or where the nature of the activity does not allow that, the avoidance of the ignition of explosive atmospheres and reduce the effects of an explosion in such a way that the health of workers is not at risk.</li> <li>- The employer is obliged to carry out a <b>risk assessment</b> according to the general provision set out in the framework directive 89/391/EEC taking into account the likelihood that explosive atmospheres will occur and their persistence; the likelihood that ignition sources (incl. electrostatic discharges) will be present and become active and effective; the installations, substances used, processes, and their possible interactions; and the scale of the anticipated effects.</li> <li>- <b>If places where explosive atmosphere may occur are identified they must be classified in accordance with Annex III of this Directive.</b></li> <li>- <b>The employer must ensure that an explosion protection document is drawn up and kept up to date. This document shall demonstrate that health and safety protection measures are in accordance with legal requirements as set out in this Directive and in the framework directive 89/391/EEC.</b></li> <li>- The employer must <b>inform</b> workers and/or their representatives of all the measures to be taken for their safety and health at work.</li> <li>- The employer must take the necessary steps to ensure that workers potentially at risk from explosive atmospheres receive appropriate <b>training</b>.</li> <li>- <b>Work equipment for use in places where explosive atmospheres may occur must comply with the minimum requirements laid down in the Annex to the Directive.</b></li> </ul>	<p>Risk assessment</p> <p>Explosion protection document</p> <p>Information</p> <p>Training</p>	<p>Recurrent</p> <p>One-off</p> <p>Recurrent</p> <p>Recurrent</p>

<p><b>Chemical agents and chemical safety</b></p>			
<p>98/24/EC</p> <p>Risks related to chemical agents at work (14°)</p>	<p><b>Contents</b></p> <ul style="list-style-type: none"> <li>- The directive provides for the drawing up of indicative and binding occupational exposure limit values as well as biological limit values at Community level.</li> <li>- For any chemical agent for which an indicative occupational exposure limit value is established at Community level, <b>Member States must establish a national occupational exposure limit value, taking into account the Community limit value. Along the same lines, binding occupational exposure limit values and binding biological limit values may be drawn up at Community level taking into account feasibility factors. For any chemical agent for which a binding occupational exposure or biological limit value is established at Community level, Member States must establish a corresponding national binding occupational exposure or biological limit value that does not exceed the Community limit value.</b></li> <li>- The employer must determine whether any hazardous chemical agents are present at the workplace and <b>assess any risk</b> to the safety and health arising from their presence. <b>The employer must be in possession of an assessment of the risk in accordance with Article 9 of Directive 89/391/EEC.</b> This assessment shall be kept up-to-date, particularly if there have been significant changes or if the results of health surveillance show it to be necessary.</li> <li>- In the case of activities involving exposure to several hazardous chemical agents, the risks must be assessed on the basis of the risk presented by all such chemical agents in combination.</li> <li>- The employer must take the necessary <b>preventive measures</b> set out in Article 6 of Directive 89/391/EEC and risks must be eliminated or reduced to a minimum following the hierarchy of prevention measures.</li> <li>- The specific protection, prevention and monitoring measures listed below must be applied if the assessment carried out by the employer reveals a risk to the safety and health of workers.</li> <li>- The employer must ensure that the risk is eliminated or reduced to a minimum, preferably by substitution (replacing a hazardous chemical agent with a chemical agent or process which is not hazardous or less hazardous).</li> <li>- The employer must regularly <b>measure chemical agents</b> which may present a risk to workers' health, in relation to the occupational exposure limit values and must immediately take steps to remedy the situation if exceeded.</li> <li>- The employer must take <b>appropriate technical and/or organisational measures of fire safety.</b></li> <li>- Work equipment and protective systems must comply with the relevant Community provisions, in particular with Directive 94/9/EC.</li> <li>- The employer must <b>establish procedures (action plans) which can be implemented in the event of an accident, incident or emergency related to the presence of hazardous chemical agents at the workplace</b></li> <li>- The employer must <b>inform workers:</b> <ul style="list-style-type: none"> <li>o on emergency arrangements;</li> <li>o on the results of the risk assessment;</li> <li>o on the hazardous chemical agents present at the workplace with access to safety data sheets;</li> <li>o by training on the appropriate precautions and on the personal and collective protection measures that are to be taken.</li> </ul> </li> <li>- <b>The employer must ensure that the contents of containers and pipes and any hazard that they represent are clearly identifiable.</b></li> <li>- Annex III to the Directive specifies limits above which certain chemical agents and activities involving chemical agents are prohibited. Member States may permit derogations from these prohibitions in special circumstances.</li> <li>- Member States must introduce arrangements for carrying out appropriate <b>health surveillance</b> of workers for whom the results of the assessment made by the employer reveal a risk to health. Health surveillance is <b>compulsory for work with a chemical agent for which a binding biological limit value has been set. Individual</b></li> </ul>	<p>Documented Risk Assessment</p> <p>Preventive measures</p> <p>Measure chemical agents</p> <p>Fire safety measures</p> <p>Establish procedures (action plans)</p> <p>Identification of contents of containers and pipes</p> <p>Health surveillance</p> <p>Individual health and exposure records</p> <p>Information</p>	<p>One-off, updates</p> <p>Recurrent</p> <p>Regularly</p> <p>Recurrent</p> <p>One-off, updates</p> <p>One-off</p> <p>Recurrent</p> <p>One-off, updates</p> <p>Recurrent</p>

	<p><b>health and exposure records must be made and kept up-to-date for each worker who undergoes health surveillance. The individual worker must have access to his personal records.</b></p> <ul style="list-style-type: none"> <li>- Where, as a result of health surveillance, a worker is found to have a disease or adverse health effect associated with exposure at work to a hazardous chemical agent or a binding biological limit value is found to have been exceeded, <b>the worker must be informed by the doctor</b>, who will provide him with information and advice regarding any health surveillance which he should undergo following the end of the exposure.</li> <li>- <b>The employer must review the risk assessment that he made and the measures provided to eliminate or reduce these risks.</b></li> </ul> <p><b>Annexes</b>  Annex I <b>List of binding occupational exposure limit values</b>  Annex II <b>Binding biological limit values and health surveillance measures</b>  Annex III <b>Prohibitions</b>  <b>(a) chemical agents</b>  <b>(b) work activities</b></p>	<p>Review risk assessment and preventive measures</p>	<p>Recurrent</p>
<p>2004/37/EC</p> <p>Carcinogens or mutagens at work (6°)</p>	<p><b>Contents</b></p> <ul style="list-style-type: none"> <li>- The employer shall <b>assess and manage the risk of exposure</b> to carcinogens or mutagens. This process shall be renewed regularly, <b>data shall be supplied to authorities at request</b>. Special attention is made to take account of all possible ways of exposure routes (including the skin), and to persons at particular risk.</li> <li>- <b>Workers' exposure must be prevented</b>. If replacement is not possible, the employer shall use closed technological system. The employer shall reduce the use of a carcinogen or mutagen by replacing it with substance not or less dangerous.</li> <li>- Where a closed system is not technically possible, the employer shall reduce exposure to minimum.</li> <li>- <b>Exposure shall not exceed the limit value of a carcinogen set out in Annex III.</b></li> <li>- Wherever a carcinogen or mutagen is used, the employer shall: <ul style="list-style-type: none"> <li>o limit the quantities of a carcinogen or mutagen at the place of work;</li> <li>o keep as low as possible the number of workers exposed;</li> <li>o design the work processes so as to minimise the substance release;</li> <li>o evacuate carcinogens or mutagens at source, but respect the environment;</li> <li>o use appropriate measurement procedures (especially for early detection of abnormal exposures from unforeseeable event or accident);</li> <li>o apply suitable working procedures and methods;</li> <li>o use individual protection measures if collective protection measures are not enough;</li> <li>o provide for hygiene measures (regular cleaning);</li> <li>o inform workers;</li> <li>o demarcate risk areas and use adequate warning and safety signs (including "no smoking");</li> <li>o <b>draw up emergency plans</b>;</li> <li>o use sealed and clearly and visibly labelled containers for storage, handling, transportation and waste disposal.</li> </ul> </li> <li>- <b>Employers shall make certain information available to the competent authority if requested (activities, quantities, exposures, number of exposed workers, preventive measures) and inform the workers if abnormal exposure happened.</b></li> <li>- In such cases only workers essential for repairs shall be permitted to work in the affected area, and only with appropriate protection. The exposure may not be permanent and shall be minimised.</li> <li>- <b>If a temporary, planned higher exposure is unavoidable (e.g. maintenance), the employer shall consult workers/representatives on the measures to minimise exposure, and provide appropriate prevention, together with access control.</b></li> <li>- <b>If there is a risk for workers areas shall be made accessible solely to workers who, by reason of their work or duties, are required to enter them.</b></li> <li>- The employer shall provide <b>appropriate hygienic circumstances</b> for workers free of charge:</li> </ul>	<p><b>Documented Risk Assessment</b></p> <p>Preventive measures</p> <p>Cleaning  Information  Demarcate risk areas and use warning and safety signs  <b>Draw up emergency plans</b></p> <p><b>Make certain information available to the competent authority if requested and inform the workers if abnormal exposure happened</b></p> <p>Consultation</p> <p>Restricting access</p> <p>Provide hygienic circumstances</p>	<p>One-off and updates</p> <p>Recurrent</p> <p>Recurrent  Recurrent  One-off and updates  One-off and updates</p> <p>On request</p> <p>Recurrent</p> <p>Recurrent</p> <p>Recurrent</p>

	<ul style="list-style-type: none"> <li>○ prohibition of eating/drinking/smoking in contamination risk areas</li> <li>○ appropriate protective clothing</li> <li>○ separate storage places for working/protective clothing and for street clothes</li> <li>○ appropriate and adequate washing and toilet facilities</li> <li>○ cleaned, checked and maintained protective equipments, stored in a well-defined place.</li> </ul> <p>- The employer shall also provide <b>appropriate training</b> on potential risks to health, precautions to prevent exposure, hygiene requirements, protective equipments, clothing and incidents.</p> <p>- Employers shall <b>inform workers</b> on objects containing carcinogens or mutagens, and label them clearly and legibly, together with warning and hazard signs. Employer shall inform workers and/or representatives on abnormal exposures as quickly as possible.</p> <p>- Workers and/or any workers' representatives shall control and be involved in the application of this Directive.</p> <p>- Employer keeps an <b>up-to-date list of workers exposed</b>, and gives specified access to data for authorized persons (doctor, authority, worker and representatives).</p> <p>- Consultation and participation of workers shall take place in accordance with Directive 89/391/EEC.</p> <p>- The Member States shall establish arrangements for <b>health surveillance</b> of workers if there is a risk for health and safety (prior to exposure, at regular intervals thereafter). If a worker is suspected to suffer ill-health due to exposure, health surveillance of other exposed workers may be required, and the risk shall be reassessed. <b>Individual medical records of health surveillance shall be kept.</b></p> <p>- <b>Information and advice must be given to workers regarding any health surveillance that they may undergo following the end of exposure.</b> Workers shall have access to the results of the health surveillance that concern them. Workers concerned or the employer may request a review of the results of the health surveillance. <b>All cases of occupational cancers shall be notified to the competent authority.</b> Records shall be kept for at least 40 years following the end of exposure, and transferred to the authority concerned if the firm ceased to exist.</p> <p><b>Annexes</b>  Annex I: <b>List of substances, preparations and processes</b></p> <ol style="list-style-type: none"> <li>1. <b>Manufacture of auramine.</b></li> <li>2. <b>Work involving exposure to polycyclic aromatic hydrocarbons present in coal soot, coal tar or coal pitch.</b></li> <li>3. <b>Work involving exposure to dusts, fumes and sprays produced during the roasting and electro-refining of cupro-nickel mattes.</b></li> <li>4. <b>Strong acid process in the manufacture of isopropyl alcohol.</b></li> <li>5. <b>Work involving exposure to hardwood dusts.</b></li> </ol> <p>Annex II: <b>Practical recommendations for the health surveillance of workers</b>  Annex III: <b>Limit values and other directly related provisions Benzene, Vinyl chloride monomer, Hardwood dusts</b>  Annex IV: <b>Repealed Directive and its successive amendments</b>  Annex V: <b>Correlation table</b></p>	<p>Training</p> <p>Information</p> <p>Keep up-to-date list of workers exposed</p> <p>Consultation and participation</p> <p>Individual medical records of health surveillance</p> <p>Information and advice regarding health surveillance</p> <p>All cases of occupational cancers shall be notified to the competent authority</p>	<p>Recurrent</p> <p>Recurrent</p> <p>One-off and regular updates</p> <p>Recurrent</p> <p>One-off and updates</p> <p>Recurrent</p> <p>If applicable</p>
<b>Physical hazards</b>			
2002/44/EC Vibration (16°)	<p><i>Obligations of the employer:</i></p> <ul style="list-style-type: none"> <li>- The employer shall <b>assess, and if necessary measure the levels of exposure to mechanical vibration</b> on basis of technical specifications given in the annex of the Directive.</li> <li>- It has furthermore to be done in accordance to the obligations laid down in the Framework Directive 89/391/EEC. <b>Results of risk assessment have to be recorded on a suitable medium and kept up to date on a regular basis. The risk assessment shall be furthermore updated on a regular basis, particularly if there have been significant changes which could render it out of date, or if the results of health surveillance show it to be necessary.</b></li> <li>- When assessing the exposure, the employer must take into account working practices and working equipment (information submitted by</li> </ul>	<p>Assess and measure the exposure levels</p> <p>Documented risk assessment</p>	<p>Recurrent</p> <p>One-off and regular updates</p>

	<p>manufacturer). When measuring, he shall <b>use adequate technical apparatus and appropriate methodology</b>.</p> <ul style="list-style-type: none"> <li>- The employer shall give attention to level, type and duration of exposure, limit and action values defined in the Directive, particular sensitivity of workers, interaction with vibrations caused by other equipment at work place, unusual working conditions (especially cold work) and the exposure to vibration beyond working hours under employer's responsibility.</li> <li>- Based on results of the risk assessment, the employer takes <b>measures that allow to reduce risks at source</b>.</li> <li>- If the action values are once exceeded, the employer must implement an <b>action plan to prevent exposure from exceeding the exposure limit values</b>. Action may include adequate technical and / or organisational measures to reduce exposure to mechanical vibration to a minimum.</li> <li>- <b>If exposure limit values are exceeded, the employer must take immediate action to reduce exposure below limit</b>.</li> <li>- The employer shall ensure that workers who are exposed to risks from vibration at work and/or their representatives receive any necessary <b>information and training</b> relating to the outcome of the risk assessment provided for in Article 4 of the Directive.</li> </ul> <p>Other provisions:</p> <ul style="list-style-type: none"> <li>- <b>Member States must adopt provisions to ensure the appropriate health surveillance of the workers. Surveillance is aimed at the quick diagnose of any health effect caused by mechanical vibration at work.</b></li> <li>- <b>Member States shall ensure that in cases of positive diagnose that the worker is informed immediately and receives any required information and advice and that the employer reviews the risk assessment.</b></li> <li>- <b>Member States must establish arrangements to ensure that health records are made on individual basis that can be consulted by the workers.</b></li> <li>- Member states had to transpose the Directive until 6 July 2005. They are entitled for a five years transitional period from 6 July 2005 to allow the use of working equipment which does not allow the exposure limit value to be respected if it was given to the worker before 6 July 2007. For working equipment used in forestry and agriculture the period can be prolonged up to a maximum of nine years.</li> <li>- Every five years, Member States must provide a report on practical implementation of this Directive to the Commission.</li> </ul>	<p>Preventive actions to reduce risks Action plan to prevent exposure from exceeding limit values</p> <p>Action to reduce exposure</p> <p>Information Training</p> <p>Health records</p>	<p>One-off, updates</p> <p>One-off, updates</p> <p>One-off, updates</p> <p>Recurrent Recurrent</p> <p>One-off, updates</p>
<p>2003/10/EC Noise (17°)</p>	<p><i>Obligations of employers:</i></p> <ul style="list-style-type: none"> <li>- The employer shall assess and, if necessary, <b>measure the levels of exposure to noise to which workers are exposed</b>. This has to be done in accordance to the obligations laid down in the framework directive 89/391/EEC.</li> <li>- <b>Results of the risk assessment have to be recorded on a suitable medium and kept up to date on a regular basis. The risk assessment shall be furthermore updated on a regular basis, particularly if there have been significant changes which could render it out of date, or if the results of health surveillance show it to be necessary.</b></li> <li>- Carrying out the risk assessment, the employer must give particular attention to level, type and duration of exposure, exposure limit / action values, health effects spreading from particular sensitivity of the worker, interractions with other risks (ototoxic substances, vibrations), the exposure to noise beyond normal working hours under his responsibility, and noise caused by warning signals at work.</li> <li>- <b>The risks arising from exposure to noise shall be eliminated or reduced to a minimum</b>. The reduction of risks arising from exposure to noise shall be based on the general principles of prevention set out in Directive 89/391/EEC, e.g. by working methods or equipment that require less exposure to noise, instructions on the correct use of equipment, technical measures (shield, noise absorbing coverings) or organisational measures in order to reduce duration and intensity of exposure.</li> <li>- If risk can not banned by other means, the employer has to <b>provide properly fitting personal protective equipment (hearing protectors)</b>, in accordance to Directive 89/656/EEC.</li> <li>- <b>The exposure limit values must not be exceeded. If they are exceeded, the employer has to take adequate measures immediately in order to reduce the exposure.</b></li> </ul>	<p>Assess and measure the exposure levels</p> <p>Documented risk assessment</p> <p>Preventive actions to reduce risks</p> <p>Action plan to prevent exposure from exceeding limit values Action to reduce exposure</p>	<p>Recurrent</p> <p>One-off, regular updates</p> <p>One-off, updates</p> <p>One-off, updates</p> <p>One-off, updates</p>



	<ul style="list-style-type: none"> <li>- The employer shall ensure that workers who are exposed to risks from noise at work and/or their representatives receive any necessary <b>information and training</b> relating to the outcome of the risk assessment provided for in Article 4 of the Directive.</li> <li>- Member States must adopt provisions to ensure the appropriate <b>health surveillance</b> of the workers (preservation of the hearing function).</li> </ul>	<p>Information Training</p> <p>Health records</p>	<p>Recurrent</p> <p>Recurrent</p> <p>One-off, updates</p>
<p>2004/40/EC</p> <p>Electromagnetic fields and waves (18°)</p>	<p><i>Obligations of employers:</i></p> <ul style="list-style-type: none"> <li>- The employer shall <b>assess, measure and calculate the levels of exposure to electromagnetic fields of workers</b>. This has to be done in accordance with the obligations laid down in the framework directive 89/391/EEC.</li> <li>- <b>Results of risk assessment have to be recorded on a suitable medium and kept up to date on a regular basis. The risk assessment shall be furthermore updated on a regular basis, particularly if there have been significant changes which could render it out of date, or if the results of health surveillance show it to be necessary.</b></li> <li>- Carrying out the risk assessment, the employer must give particular attention to level, frequency spectrum, type and duration of exposure, interferences with other electronic devices and fires and explosions resulting from ignition of flammable material.</li> <li>- If the action values are exceeded and if it can not be proven that there is no risk to the health of the workers, employers must implement an <b>action plan to prevent exposure from exceeding the exposure limit values</b>. Action may include adequate technical or organisational measures. If exposure limit values are exceeded, the employer must take immediate action to reduce exposure below limit.</li> <li>- The employer shall ensure that workers who are exposed to risks from electromagnetic fields at work and/or their representatives receive any necessary <b>information and training</b> relating to the outcome of the risk assessment provided for in Article 4 of the Directive.</li> <li>- <b>Member States must adopt provisions to ensure the appropriate health surveillance of the workers. This includes medical examinations of workers in cases of exceeding the exposure limit value.</b></li> <li>- <i>Member States must transpose this directive into national law no later than 30 April 2012 and also provide for adequate sanctions in cases of infringement of national regulations transposing the directive.</i></li> </ul>	<p>Assess and measure the exposure levels</p> <p>Documented risk assessment</p> <p>Action plan to prevent exposure from exceeding limit values Action to reduce exposure</p> <p>Information Training</p> <p>Health records</p>	<p>Recurrent</p> <p>One-off, regular updates</p> <p>One-off, updates</p> <p>One-off, updates</p> <p>Recurrent</p> <p>Recurrent</p> <p>One-off, updates</p>
<p>2006/25/EC</p> <p>Artificial optical radiation (19°)</p>	<p><i>Obligations of employers:</i></p> <ul style="list-style-type: none"> <li>- The employer is obliged to <b>assess and to measure (and/or to calculate) the levels of exposure to artificial optical radiation</b> to which workers are likely to be exposed. Thereby he shall take account of <ul style="list-style-type: none"> <li>o the level, wavelength range, duration of exposure to artificial sources of optical radiation and the exposure limit values set out in the Annexes of this Directive.</li> <li>o special circumstances such as multiple sources, indirect effects (blinding, explosion, fire), particularly sensitive risk groups of workers and possible effects resulting from workplace interactions between optical radiation and photosensitising chemical substances.</li> <li>o standards of the International Electrotechnical Commission (IEC) in respect of laser radiation respectively recommendations of the International Commission on Illumination (CIE) and the European Committee for Standardisation (CEN) in respect of non-coherent radiation.</li> <li>o principles of prevention set out in the framework directive 89/391/EEC.</li> </ul> </li> <li>- <b>Risk assessment shall be recorded on a suitable medium. It shall be furthermore carried out periodically and be updated, particularly if significant changes in working conditions can be observed or if it is indicated by health surveillance results.</b></li> <li>- The reduction of risks shall be based on the principles of prevention set out in the framework directive 89/391/EEC. Taking account of technical progress and of the availability of measures to control risk at source, the risks arising from exposure to artificial optical radiation shall be eliminated or reduced to a minimum. If the results of the risk assessment indicate that exposure limit values may be exceeded, the employer shall devise and implement an <b>action plan comprising</b></li> </ul>	<p>Assess and measure the exposure levels</p> <p>Documented risk assessment</p> <p>Action plan to prevent exposure from exceeding limit values</p>	<p>Recurrent</p> <p>One-off, regular updates</p> <p>One-off,</p>

	<p><b>technical and organisational measures in order to prevent the exposure exceeding the limit values.</b></p> <ul style="list-style-type: none"> <li>- The employer shall ensure that workers who are exposed to risks from artificial optical radiation and their representatives receive any necessary <b>information and training</b> relating to the outcome of the risk assessment.</li> <li>- Member States shall adopt provisions to ensure appropriate <b>health surveillance of workers</b> in order to prevent and to detect timely any adverse health effects, long term health risks and any risk of chronic diseases resulting from the exposure to artificial optical radiation. Such health surveillance shall be done by a doctor, an occupational health professional or a medical authority. <b>Individual health records are to be made.</b></li> <li>- Member States shall transform the Directive into national law until 27 April 2010.</li> <li>- Member States shall provide for adequate penalties to be applicable in the event of infringement of the national legislation adopted pursuant to this directive. These penalties must be effective, proportionate and dissuasive.</li> </ul>	<p>Information Training</p> <p>Health records</p>	<p>updates</p> <p>Recurrent Recurrent</p> <p>One-off, updates</p>
<b>Biological agents</b>			
<p>2005/54/EC</p> <p>Biological agents at work (7°)</p>	<p><i>Employers' obligations</i></p> <ul style="list-style-type: none"> <li>- Employers' obligations are described with respect to work involving (or likely to involve) exposure to biological agents.</li> <li>- Employers should avoid using a harmful biological agent by replacing it with one which is not dangerous or less dangerous to workers' health, if possible. Workers' risk of exposure to biological agents should be reduced where possible to protect their health and safety. <b>Where the results of the risk assessment reveal a risk to workers' health or safety, employers shall, when requested, make available to the competent authority appropriate information.</b></li> <li>- Employers must ensure hygiene and individual protection by <b>prohibiting eating or drinking in working areas, providing protective clothing, providing appropriate toilet and washing facilities, and maintaining protective equipment properly.</b></li> <li>- Moreover, workers and their representatives must receive appropriate <b>training</b> involving working with biological agents and be provided with <b>written instructions and display notices of the procedure to be followed in case of a serious accident or the handling of biological agents of group 4.</b></li> <li>- <b>Employers must keep a list of workers exposed to group 3 and/or 4 biological agents</b> for a minimum of 10 years following exposure (or 40 years following exposure resulting in an infection), indicating the type of work done and the biological agent to which they have been exposed (if possible).</li> <li>- <b>Prior notification must be given to the competent authority at least 30 days before the commencement of work with group 2, 3 or 4 biological agents.</b></li> <li>- <b>Member States must establish arrangements for carrying out relevant health surveillance of workers both prior to exposure and at regular intervals thereafter. Effective vaccines must be made available free of charge for workers not already immune to the biological agent to which they are (or are likely to be) exposed.</b> If a worker is found to be suffering from an infection or illness as a result of exposure, surveillance should be offered to other workers.</li> <li>- Particular attention should be paid to uncertainties about: <ul style="list-style-type: none"> <li>o the presence of biological agents in human patients and animals</li> <li>o the hazards represented by biological agents present in human patients or animals</li> <li>o the risks posed by the nature of the work</li> </ul> </li> <li>- Appropriate <b>decontamination and disinfection procedures should be implemented for contaminated waste</b> to be handled and disposed.</li> <li>- <b>Laboratories carrying out work involving group 2, 3 or 4 biological agents for research must determine the relevant containment measures in order to minimise the risk of infection.</b></li> <li>- Adjustments to biological agent classifications are made in light of technical progress, changes in international regulations and new scientific findings.</li> </ul>	<p>Documented risk assessment, made available on request to the competent authority</p> <p>Training Written instructions and display notices of the procedure to be followed</p> <p>Keep a list of workers exposed to group 3 and/or 4 biological agents</p> <p>Prior notification to the competent authority</p> <p>Health records, surveillance</p>	<p>One-off, regular updates</p> <p>Recurrent In case of a serious accident or the handling of biological agents of group 4</p> <p>One-off, updates</p> <p>Before the commencement of work with group 2, 3 or 4 biological agents</p> <p>Prior to exposure and at regular intervals thereafter</p>





<p>90/270/EEC</p> <p>Display screen equipment (5°)</p>	<p><i>Employers' obligations:</i></p> <ul style="list-style-type: none"> <li>- Employers are obliged to perform an <b>analysis of workstations</b> in order to evaluate the safety and health conditions to which they give rise for their workers, particularly as regards possible risks to eyesight, physical problems and problems of mental stress. They shall take appropriate measures to remedy the risks found taking account of the additional and/or combined effects of the risks so found.</li> <li>- Employers must take the appropriate steps to <b>ensure that workstations meet the minimum requirements laid down in the Annex of this directive.</b></li> <li>- The employer must plan the worker's activities in such a way that daily work on a display screen is periodically interrupted by <b>breaks or changes of activity</b> reducing the workload at the display screen.</li> <li>- Workers shall receive <b>information</b> on all aspects of safety and health relating to their workstation. Workers or their representatives shall be informed of any health and safety measure taken in compliance with this directive.</li> <li>- Every worker shall also receive <b>training</b> in use of the workstation before commencing this type of work and whenever the organization of the workstation is substantially modified.</li> <li>- Workers are entitled to an appropriate <b>eye and eyesight test</b> carried out by a person with the necessary capabilities before commencing display screen work, at regular intervals thereafter, and if they experience visual difficulties during work. Moreover, workers are entitled to an ophthalmological examination if the results of the test show that this is necessary.</li> </ul> <p><b>Annex:</b> lays down the <b>minimum requirements for workstations</b> regarding</p> <ul style="list-style-type: none"> <li>• <b>Equipment</b></li> <li>• <b>Environment</b></li> <li>• <b>Operator/Computer interface</b></li> </ul>	<p>Analysis of workstations</p> <p>Information</p> <p>Training</p> <p>Medical examinations</p>	<p>One-off, updates</p> <p>Recurrent</p> <p>Recurrent</p> <p>Regular, depending on criteria</p>
<p>Sector specific and worker related provisions</p>			
<p>92/57/EEC</p> <p>Temporary or mobile construction sites (8°)</p>	<p><b>Contents</b></p> <ul style="list-style-type: none"> <li>- The client or project supervisor nominates person(s) responsible for the coordination of health and safety at sites where several firms are present. Where a <b>person responsible for coordination</b> is appointed, the project supervisor or client remains responsible for safety and health.</li> <li>- <b>The client or project supervisor also ensures that, before work starts at the site, a health and safety plan is drawn up.</b></li> <li>- Where the site is expected to remain open for longer than 30 working days, and it employs more than 20 workers at the same time - or involves a volume of work in excess of 500 man-days - the client or project supervisor must <b>give prior notice in accordance with Annex III to the competent authorities before work starts.</b></li> <li>- The project supervisor and, where appropriate, the client shall take account of the general principles of prevention set out in framework Directive 89/391/EEC and a safety plan when deciding architectural and/or organisational aspects, and when estimating the completion time of works or work stages.</li> <li>- The person(s) responsible for coordination on the site shall ensure that employers and self-employed persons apply the general prevention principles, particularly in respect of the situations described, and that the health and safety plan is taken into account when necessary. They shall also organise <b>cooperation between employers in matters of health and safety</b> and <b>check that the working procedures are being implemented</b> correctly as well as <b>ensure that no unauthorised persons enter the site.</b></li> </ul> <p><i>The employers' obligations are:</i></p> <ul style="list-style-type: none"> <li>- <b>to adhere to the minimum safety and health requirements applicable to work sites set out in Annex IV.</b> The aspects covered include energy distribution systems, emergency routes and exits, ventilation, temperature, traffic routes and danger areas, sanitary installations, etc.</li> </ul>	<p>Health and safety plan</p> <p>Prior notice</p> <p>Check on implementation of working procedurs and entrance access</p> <p>Adhere to the minimum safety and</p>	<p>Before work starts at the site</p> <p>Before work starts</p> <p>Recurrent</p> <p>Recurrent</p>

	<ul style="list-style-type: none"> <li>- <b>to act on the comments of the health and safety coordinator.</b></li> <li>- Obligations of self employed persons are to comply (by analogy) with the principles on safety and health at work set out for employers in Art. 6 and 13 of the "framework directive" 1989/391/EEC and in the relevant provisions of Annex IV of this directive and certain provisions of the directives on the use of work equipment and personal protective equipment in order to guarantee the health and safety of all persons on the work site.</li> </ul> <p><b>Annexes</b></p> <p>Annex I: <b>Non-exhaustive list of building and civil engineering works referred to in article 2(a) of the directive.</b></p> <p>Annex II: <b>Non-exhaustive list of work involving particular risks to the safety and health of workers referred to in Art. 3 (2), second paragraph of the directive.</b></p> <p>Annex III: <b>Content of the prior notice referred to in Art. 3 (3), first paragraph of the directive.</b></p> <p>Annex IV: <b>Minimum safety and health requirements for construction sites Referred to in Art. 9 (a) and Art. 10 (1) (a) (i) of the Directive.</b></p>	<p>health requirements</p> <p>Act on the comments of the health and safety coordinator</p> <p>On-site workplaces:  Stability and solidity  Energy distribution installations  Emergency routes and exits  Fire detection and fire fighting  Ventilation  Workers must not be exposed to harmful levels of noise or to harmful external influences (e.g. gases, vapours, dust).  The confined atmosphere must be monitored and appropriate steps taken to prevent any hazards  A worker may not in any circumstances be exposed to a high-risk confined atmosphere. He must at least be watched at all times from outside.  Temperature  Natural and artificial lighting of workstations, rooms and traffic routes on the site  Doors and gates  Traffic routes — danger areas  Loading bays and ramps  Freedom of movement at the workstation  First aid</p>	<p>Recurrent</p>
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		<p>Changing rooms and lockers  Showers and washbasins  Lavatories and washbasins  Rest rooms and/or accommodation areas  Pregnant women and nursing mothers  Handicapped workers  The surroundings and the perimeter of the site must be signposted and laid out so as to be clearly visible and identifiable.  Workers must be provided at the site with a sufficient quantity of drinking water and possibly another suitable non-alcoholic beverage both in occupied rooms and in the vicinity of workstations  Workers must be provided with facilities enabling them to take their meals in satisfactory conditions, where appropriate, be provided with facilities enabling them to prepare their meals in satisfactory conditions.</p> <p>On-site outdoor workstations:</p> <p>Stability and solidity</p> <p>Energy distribution installations</p> <p>Atmospheric influences</p> <p>Falling objects</p> <p>Falls from a height</p> <p>Scaffolding and leaders</p> <p>Lifting equipment</p>	
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		<p>Excavating and materials-handling vehicles and machinery</p> <p>Installations, machinery, equipment</p> <p>Excavations, wells, underground works, tunnels and earthworks</p> <p>Demolition work</p> <p>Metal or concrete frameworks, shutterings and heavy prefabricated components</p> <p>Cofferdams and caissons</p> <p>Work on roofs</p>	
<p>92/85/EEC</p> <p>Pregnant workers (10°)</p>	<p><b>Contents</b></p> <ul style="list-style-type: none"> <li>- Under the Directive, a set of guidelines detail the assessment of the chemical, physical and biological agents and industrial processes considered dangerous for the health and safety of pregnant women or women who have just given birth and are breast feeding.</li> <li>- The directive also includes provisions for physical movements and postures, mental and physical fatigue and other types of physical and mental stress.</li> <li>- <b>Pregnant and breastfeeding workers may under no circumstances be obliged to perform duties for which the assessment has revealed a risk of exposure to agents, which would jeopardize their safety or health. Those agents and working conditions are defined in Annex II of the Directive.</b></li> <li>- Member States shall ensure that pregnant workers are not obliged to work in night shifts when medically indicated (subject to submission of a medical certificate).</li> <li>- Employers or the health and safety service will use these guidelines as a basis for a <b>risk evaluation</b> for all activities that pregnant or breast feeding workers may undergo and must decide what measures should be taken to avoid these risks. <b>Workers should be notified of the results and of measures to be taken</b> which can be adjustment of working conditions, transfer to another job or granting of leave.</li> <li>- <b>The Directive grants maternity leave for the duration of 14 weeks of which 2 weeks must occur before birth.</b></li> <li>- <b>Women must not be dismissed from work because of their pregnancy and maternity for the period from the beginning of their pregnancy to the end of the period of leave from work.</b></li> </ul> <p><b>Annexes</b></p> <p>Annex I - <b>Non exhaustive list of agents and working conditions referred to in Art.4 of the directive (assessment and information)</b></p> <p>Annex II - <b>Non exhaustive list of agents and working conditions referred to in Art.6 of the directive (cases in which exposure is prohibited)</b></p>	<p>Risk assessment</p> <p>Notification of results of risk evaluation</p>	<p>Recurrent, updates</p> <p>Pregnant workers as a result of risk assessment</p>
<p>92/91/EEC</p> <p>Mineral-extracting</p>	<p><b>Contents</b></p> <ul style="list-style-type: none"> <li>- To safeguard the safety and health of workers, the employer shall take the necessary measures to ensure that: <ul style="list-style-type: none"> <li>• workplaces are designed, constructed, equipped, commissioned, operated and maintained so that workers can perform their work</li> </ul> </li> </ul>		

<p>industries – drilling (11°)</p>	<p>without endangering their health and safety and those of others</p> <ul style="list-style-type: none"> <li>• <b>work takes place under the supervision of a person in charge</b></li> <li>• <b>work involving a special risk is undertaken only by competent staff and carried out according to employers' instructions</b></li> <li>• <b>safety instructions are comprehensible to all workers</b></li> <li>• <b>appropriate first-aid facilities are provided</b></li> <li>• <b>relevant safety drills are performed regularly</b></li> </ul> <p>- Employers must draw up and keep up to date a safety and health document demonstrating</p> <ul style="list-style-type: none"> <li>• that risks to workers' health and safety in the workplace have been determined and assessed</li> <li>• adequate measures will be taken to meet the requirements of this directive</li> <li>• that the design, use and maintenance of the workplace and equipment are safe.</li> </ul> <p>- <b>Where workers from more than one employer are present in the same workplace, the employer who is in charge of the workplace must coordinate the implementation of health and safety measures.</b> Nevertheless, each employer is responsible for all matters under his control. Any serious or fatal occupational accidents, and situations of serious danger must be reported by the employer to the competent authorities.</p> <p>- Employers must take <b>precautions to avoid, detect and combat the starting and spreading of fires and explosions and prevent the occurrence of explosive or health-endangering atmospheres.</b> Employers must provide and maintain appropriate <b>means of escape and rescue</b> to ensure that workers can leave workplaces promptly and safely in the event of danger. Necessary <b>warning and communication systems</b> to enable assistance, escape and rescue should be provided.</p> <p>- Appropriate <b>health surveillance</b> must be introduced in accordance with national law. Each worker must be entitled to health surveillance prior to and following their duties.</p> <p>- <b>The minimum health and safety requirements specified in the annex of this directive must be satisfied by existing and new workplaces.</b> When workplaces undergo changes, the employer must take the necessary measures to ensure those changes correspond to the minimum requirements laid down in the annex of this directive.</p> <p>- Member States must bring into force laws, regulations and administrative provisions to comply with this directive. Member States must report to the Commission every five years following the implementation of this Directive.</p> <p><b>Annex</b>  Part A: <b>Common minimum requirements applicable to on-shore and off-shore sectors</b>  Part B: <b>Special minimum requirements applicable to the on-shore sector</b>  Part C: <b>Special minimum requirements applicable to the off-shore sector</b></p>	<p>Safety instructions  First-aid facilities  Safety drills  Health and safety document</p> <p>Coordination of implementation of OSH measures</p> <p>Fire precautions</p> <p>Appropriate means of escape and rescue</p> <p>Warning and communication systems</p> <p>Health surveillance</p> <p><b>Common minimum requirements</b>  Organization of workplaces  Person in charge  Supervision  Competent workers  Information, instructions and training  Written instructions  Safe working methods  Work permits  Regular review of safety and health measures  Mechanical and electrical equipment and plant  Maintenance</p>	<p>One-off, updates  One-off  Regularly  One-off, updates</p> <p>Recurrent</p> <p>Recurrent</p> <p>Recurrent</p> <p>Recurrent</p> <p>Recurrent</p>
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		<p>Protection from explosion risks, harmful atmospheres and fire hazards  Explosives and initiating devices  Traffic routes  Outdoor workplaces  Danger areas  Emergency routes and exits  Means of evacuation and escape  Safety drills  First-aid facilities  Natural and artificial lighting  Changing rooms and lockers  Showers and washbasins  Laboratories and washbasins  Overburden dumps and other tips  Stability and solidity  Floors, walls, ceilings and roofs of rooms  Room dimensions and air space in rooms —freedom of movement at the workstation  Windows and skylights  Doors and gates  Ventilation of enclosed workplaces  Room temperature  Rest rooms  Pregnant women and nursing mothers  Disabled workers</p> <p><b>Special minimum requirements for surface</b></p> <p>Safety and health document  Measures for preventing risks of falls or slips of ground  Benches and haul roads must be stable  Stripping and extraction faces above work areas or haul roads must be checked for loose ground or rocks</p>	
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		<p><b>Special minimum requirements for underground</b></p> <p>The safety and health document</p> <p>Plans of underground workings</p> <p>All underground workings must have access to the surface via at least two separate outlets</p> <p>Workings where underground work is carried out must be constructed, operated, equipped and maintained so that workers can work and move in them with a minimum of risk</p> <p>Transport facilities must be installed, operated and maintained in such a way as to ensure the safety and health of drivers, users and other persons in the vicinity</p> <p>Mechanical manwinding or manriding facilities must be properly installed and used</p> <p>Support must be provided as soon as possible after excavation</p> <p>Workings accessible to workers must be inspected regularly for ground stability</p> <p>A ventilation plan containing the pertinent details of the ventilation system must be prepared, brought up to date periodically and held available at the workplace</p> <p>Gassy mines</p> <p>Mines containing flammable dusts</p>	
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		<p>In zones susceptible to gas outbursts with or without the projection of minerals or rock, rock- bursts or water inrushes, an operating plan must be drawn up and implemented</p> <p>Measures must be taken to identify risk zones, protect workers in workings approaching or traversing these zones, and control the risks</p> <p>Fires, combustions and heatings</p> <p>Workers must, where necessary, be provided with self-rescue respiratory protection devices which they must always keep within their reach.</p> <p>Workers must be trained in the use of these devices.</p> <p>These devices must remain at the site and be checked regularly to ensure that they are in good condition</p> <p>Workers must be provided with a suitable personal lamp.</p> <p>Workstations must as far as possible be equipped with artificial lighting adequate for the protection of workers' safety and health</p> <p>Underground workforce accounting</p> <p>Rescue organization</p>	
92/104/EEC Mineral-extracting	<p><b>Contents</b></p> <ul style="list-style-type: none"> <li>- Employers must take the following measures to safeguard the health and safety of workers by ensuring that: <ul style="list-style-type: none"> <li>• workplaces are designed, constructed, equipped, commissioned, operated and maintained to allow workers to perform the work</li> </ul> </li> </ul>		

<p>industries (12°)</p>	<p>assigned to them without endangering their own and others' health or safety</p> <ul style="list-style-type: none"> <li>• operation of workplaces takes place under the supervision of a person in charge</li> <li>• work involving a special risk is only carried out by competent staff in accordance with employers' instructions</li> <li>• <b>all safety instructions are comprehensible to workers</b></li> <li>• <b>appropriate first-aid facilities are available</b></li> <li>• <b>any relevant safety drills are performed regularly.</b></li> </ul> <p>- Employers must ensure that a safety and health document is drawn up and kept up to date. The health and safety document must be drawn up before work starts, and demonstrate in particular that:</p> <ul style="list-style-type: none"> <li>• risks to which workers are exposed have been determined and assessed</li> <li>• adequate measures will be taken to attain the aims of this Directive</li> <li>• the design, use and maintenance of the workplace and equipment are safe.</li> </ul> <p>- <b>Where workers from several undertakings are present in one workplace, each employer must be responsible for all matters under his control. The employer who is in charge of the workplace must coordinate the implementation of measures.</b></p> <p>- Employers must take measures and <b>precautions to avoid, detect and combat the starting and spread of fires and explosions, and prevent the occurrence of explosive or health-endangering atmospheres.</b> The employer must also provide and maintain appropriate <b>means of escape and rescue</b> in order to ensure that workers have adequate opportunities for leaving workplaces in the event of danger.</p> <p>- The employer must take measures to provide <b>warning and other communication systems</b> to enable assistance, escape and rescue operations if the need arises. Workers and their representatives must be informed of all measures taken concerning safety and health in workplaces. This information must be comprehensible to the workers concerned.</p> <p>- Employees should receive <b>health surveillance</b> appropriate to the risks they incur at work. Each worker is entitled to health surveillance before being assigned to duties and subsequently at regular intervals.</p> <p>- New and existing <b>workplaces must meet the minimum requirements for safety and health described in this directive.</b> When workplaces undergo changes, the employer should ensure that those changes comply with the minimum requirements of this directive.</p> <p>- Consultations and participation of workers or their representatives must take place for all measures described in this Directive.</p> <p>- Member States must bring into force laws, regulations and administrative provisions to comply with this directive. Member States must report to the Commission every five years following the implementation of this Directive.</p> <p><b>Annex</b>  Part A: <b>Common minimum requirements applicable to surface and underground mineral-extracting industries and to ancillary surface installations</b>  Part B: <b>Special minimum requirements applicable to surface mineral-extracting industries</b>  Part C: <b>Special minimum requirements applicable to underground mineral-extracting industries</b></p>	<p>Safety instructions  First-aid facilities  Safety drills  Health and safety document</p> <p>Coordination of implementation of OSH measures</p> <p>Fire precautions</p> <p>Appropriate means of escape and rescue</p> <p>Warning and communication systems</p> <p>Health surveillance</p> <p><b>Common minimum requirements</b>  Organization of workplaces  Person in charge  Supervision  Competent workers  Information, instructions and training  Written instructions  Safe working methods  Work permits  Regular review of safety and health measures  Mechanical and electrical equipment</p>	<p>One-off, updates  One-off  Regularly  One-off, updates</p> <p>Recurrent</p> <p>Recurrent</p> <p>Recurrent</p> <p>Recurrent</p> <p>Recurrent</p>
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		<p>and plant  Maintenance  Protection from explosion risks, harmful atmospheres and fire hazards  Explosives and initiating devices  Traffic routes  Outdoor workplaces  Danger areas  Emergency routes and exits  Means of evacuation and escape  Safety drills  First-aid facilities  Natural and artificial lighting  Changing rooms and lockers  Showers and washbasins  Laboratories and washbasins  Overburden dumps and other tips  Stability and solidity  Floors, walls, ceilings and roofs of rooms  Room dimensions and air space in rooms —freedom of movement at the workstation  Windows and skylights  Doors and gates  Ventilation of enclosed workplaces  Room temperature  Rest rooms  Pregnant women and nursing mothers  Disabled workers</p> <p><b>Special minimum requirements for surface</b></p> <p>Safety and health document  Measures for preventing risks of falls or slips of ground  Benches and haul roads must be stable  Stripping and extraction faces above work areas or haul roads must be checked for loose</p>	
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		<p>ground or rocks</p> <p><b>Special minimum requirements for underground</b></p> <p>The safety and health document</p> <p>Plans of underground workings</p> <p>All underground workings must have access to the surface via at least two separate outlets</p> <p>Workings where underground work is carried out must be constructed, operated, equipped and maintained so that workers can work and move in them with a minimum of risk</p> <p>Transport facilities must be installed, operated and maintained in such a way as to ensure the safety and health of drivers, users and other persons in the vicinity</p> <p>Mechanical manwinding or manriding facilities must be properly installed and used</p> <p>Support must be provided as soon as possible after excavation</p> <p>Workings accessible to workers must be inspected regularly for ground stability</p> <p>A ventilation plan containing the pertinent details of the ventilation system must be prepared, brought up to date periodically and held available at the workplace</p> <p>Gassy mines</p> <p>Mines containing</p>	
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		<p>flammable dusts</p> <p>In zones susceptible to gas outbursts with or without the projection of minerals or rock, rock- bursts or water inrushes, an operating plan must be drawn up and implemented</p> <p>Measures must be taken to identify risk zones, protect workers in workings approaching or traversing these zones, and control the risks</p> <p>Fires, combustions and heatings</p> <p>Workers must, where necessary, be provided with self-rescue respiratory protection devices which they must always keep within their reach.</p> <p>Workers must be trained in the use of these devices.</p> <p>These devices must remain at the site and be checked regularly to ensure that they are in good condition</p> <p>Workers must be provided with a suitable personal lamp.</p> <p>Workstations must as far as possible be equipped with artificial lighting adequate for the protection of workers' safety and health</p> <p>Underground workforce accounting</p> <p>Rescue organization</p>	
93/103/EC	<p><b>Contents</b></p> <p>- Member States must take necessary measures to ensure that:</p>		

<p>Work on board fishing vessels (13°)</p>	<ul style="list-style-type: none"> <li>• owners ensure their vessels are used without endangering the safety and health of workers</li> <li>• occurrences at sea that affect or could affect the safety or health of workers are described in a report that should be forwarded to the relevant competent authorities and are recorded in the ship's log or similar document.</li> <li>• vessels are subject to regular checks by authorities.</li> </ul> <p>- New and existing fishing vessels must comply with the <b>minimum health and safety requirements laid down in the Annexes</b>. Where a vessel undergoes extensive repairs, conversions or alterations, these must also comply with the relevant minimum requirements laid down in the Annexes.</p> <p>- Member States must take necessary measures to ensure that owners:</p> <ul style="list-style-type: none"> <li>• ensure that vessels and their fittings and equipment are <b>technically maintained</b> and that defects found are rectified as quickly as possible</li> <li>• take measures to ensure that vessels and all fittings and equipment are <b>cleaned regularly</b> to maintain an appropriate level of hygiene</li> <li>• keep on board the vessel an adequate quantity of suitable <b>emergency and survival equipment</b> in good working order</li> <li>• take account of the minimum safety and health requirements concerning life-saving and survival equipment given in Annex III</li> <li>• take account of the personal protective equipment specifications given in Annex IV</li> <li>• supply the skipper with the means needed to enable him to fulfill the obligations imposed by this directive.</li> </ul> <p>- Workers and their representatives must be <b>informed</b> of all measures to be taken regarding safety and health on board vessels and this information must be comprehensible to the workers concerned.</p> <p>- Workers must be given suitable <b>training on safety and health on board vessels and on accident prevention</b>. The training must cover fire fighting, the use of life-saving and survival equipment, the use of fishing gear and hauling equipment as well as the use of signs and hand signals. Moreover, any person likely to command a vessel must be given detailed training.</p> <p>- Member States must report to the Commission every five years following the implementation of this Directive.</p> <p><b>Annexes</b>  Annex I: <b>Minimum safety and health requirements for new fishing vessels</b>  Annex II: <b>Minimum safety and health requirements for existing fishing vessels</b>  Annex III: <b>Minimum safety and health requirements concerning life-saving and survival equipment</b>  Annex IV: <b>Minimum safety and health requirements concerning personal protective equipment</b></p>	<p>Report on occurrences</p> <p>Technically maintained</p> <p>Cleaned</p> <p>Emergency and survival equipment</p> <p>Information</p> <p>Training</p> <p>Requirements for new fishing vessels:  Seaworthiness and stability  <a href="#">Information on the vessel's stability must be available on board and must be accessible to the men on watch</a>  Mechanical and electrical installations  Radio installation  Emergency routes and exits  Fire detection and fire fighting  Ventilation of enclosed workplaces  Temperature of working areas  Natural and artificial lighting of workplaces  Decks, bulkheads and deckheads  Doors  Traffic routes —</p>	<p>In case of occurrences</p> <p>Recurrent</p> <p>Regularly</p> <p>Recurrent</p> <p>Recurrent</p> <p>Recurrent</p>
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		<p>danger areas  Layout of workstations  Living quarters  Sanitary facilities  Accommodation  ladders and gangways  Noise</p> <p>Requirements for existing fishing vessels:  Seaworthiness and stability  <a href="#">Information on the vessel's stability must be available on board and must be accessible to the men on watch</a>  Mechanical and electrical installations  Radio installation  Emergency routes and exits  Fire detection and fire fighting  Ventilation of enclosed workplaces  Temperature of working areas  Natural and artificial lighting of workplaces  Decks, bulkheads and deckheads  Doors  Traffic routes —  danger areas  Layout of workstations  Living quarters  Sanitary facilities  Accommodation  ladders and gangway</p>	
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Source: <http://osha.europa.eu/en/legislation/directive>

Blue: Administrative burden

Green: Member States obligations

## ***Annex II: OSH individual Directives-related sources***

## **Workplaces, equipment, signs, personal protective equipment**

89/654/EEC - Workplace requirements (1°)

89/655/EEC - Work equipment (2°)

89/656/EEC - Use of Personal Protective Equipment (3°)

Use of personal protective equipment, Summaries of EU legislation, Employment and social policy,  
[http://europa.eu/legislation\\_summaries/employment\\_and\\_social\\_policy/health\\_hygiene\\_safety\\_at\\_work/c11117\\_en.htm](http://europa.eu/legislation_summaries/employment_and_social_policy/health_hygiene_safety_at_work/c11117_en.htm)

92/58/EEC - Safety and/or health signs (9°)

Provision of health and safety signs at work, Summaries of EU legislation, Employment and social policy,  
[http://europa.eu/legislation\\_summaries/employment\\_and\\_social\\_policy/health\\_hygiene\\_safety\\_at\\_work/c11121\\_en.htm](http://europa.eu/legislation_summaries/employment_and_social_policy/health_hygiene_safety_at_work/c11121_en.htm)

99/92/EC - Risks from explosive atmospheres (15°)

Risks of explosive atmospheres, Summaries of EU legislation, Employment and social policy,  
[http://europa.eu/legislation\\_summaries/employment\\_and\\_social\\_policy/health\\_hygiene\\_safety\\_at\\_work/c11141\\_en.htm](http://europa.eu/legislation_summaries/employment_and_social_policy/health_hygiene_safety_at_work/c11141_en.htm)

Communication from the Commission concerning the non-binding guide of good practice for implementing Directive 1999/92/EC of the European Parliament and of the Council on minimum requirements for improving the safety and health protection of workers potentially at risk from explosive atmospheres, COM(2003) 515 final, 25.8.2003

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52003DC0515:EN:NOT>

## **Chemical agents and chemical safety**

98/24/EC - Risks related to chemical agents at work (14°)

Exposure to chemical agents, Summaries of EU legislation, Employment and social policy,  
[http://europa.eu/legislation\\_summaries/employment\\_and\\_social\\_policy/health\\_hygiene\\_safety\\_at\\_work/c11140\\_en.htm](http://europa.eu/legislation_summaries/employment_and_social_policy/health_hygiene_safety_at_work/c11140_en.htm)

2004/37/EC - Carcinogens or mutagens at work (6°)

Exposure to carcinogens and mutagens, Summaries of EU legislation, Employment and social policy,  
[http://europa.eu/legislation\\_summaries/employment\\_and\\_social\\_policy/health\\_hygiene\\_safety\\_at\\_work/c11137\\_en.htm](http://europa.eu/legislation_summaries/employment_and_social_policy/health_hygiene_safety_at_work/c11137_en.htm)

## **Physical hazards**

2002/44/EC - Vibration (16°)

2003/10/EC - Noise (17°)

Exposure to noise, Summaries of EU legislation, Employment and social policy,

[http://europa.eu/legislation\\_summaries/employment\\_and\\_social\\_policy/health\\_hygiene\\_safety\\_at\\_work/c11148\\_en.htm](http://europa.eu/legislation_summaries/employment_and_social_policy/health_hygiene_safety_at_work/c11148_en.htm)

2004/40/EC - Electromagnetic fields and waves (18°)

Exposure to electromagnetic fields, Summaries of EU legislation, Employment and social policy,

[http://europa.eu/legislation\\_summaries/employment\\_and\\_social\\_policy/health\\_hygiene\\_safety\\_at\\_work/c11150\\_en.htm](http://europa.eu/legislation_summaries/employment_and_social_policy/health_hygiene_safety_at_work/c11150_en.htm)

2006/25/EC - Artificial optical radiation (19°)

Exposure to artificial optical radiation, Summaries of EU legislation, Employment and social policy,

[http://europa.eu/legislation\\_summaries/employment\\_and\\_social\\_policy/health\\_hygiene\\_safety\\_at\\_work/c11151\\_en.htm](http://europa.eu/legislation_summaries/employment_and_social_policy/health_hygiene_safety_at_work/c11151_en.htm)

### **Biological agents**

2005/54/EC - Biological agents at work (7°)

Exposure to biological agents, Summaries of EU legislation, Employment and social policy,

[http://europa.eu/legislation\\_summaries/employment\\_and\\_social\\_policy/health\\_hygiene\\_safety\\_at\\_work/c11138\\_en.htm](http://europa.eu/legislation_summaries/employment_and_social_policy/health_hygiene_safety_at_work/c11138_en.htm)

### **Workload, ergonomics and psychosocial risks**

90/269/EEC - Manual handling of loads (4°)

Manual handling of loads involving risks, Summaries of EU legislation, Employment and social policy,

[http://europa.eu/legislation\\_summaries/employment\\_and\\_social\\_policy/health\\_hygiene\\_safety\\_at\\_work/c11118\\_en.htm](http://europa.eu/legislation_summaries/employment_and_social_policy/health_hygiene_safety_at_work/c11118_en.htm)

90/270/EEC - Display screen equipment (5°)

Work with display screen equipment, Summaries of EU legislation, Employment and social policy,

[http://europa.eu/legislation\\_summaries/employment\\_and\\_social\\_policy/health\\_hygiene\\_safety\\_at\\_work/c11119\\_en.htm](http://europa.eu/legislation_summaries/employment_and_social_policy/health_hygiene_safety_at_work/c11119_en.htm)

### **Sector specific and worker related provisions**

92/57/EEC - Temporary or mobile construction sites (8°)

Temporary or mobile construction sites, Summaries of EU legislation, Employment and social policy,

[http://europa.eu/legislation\\_summaries/employment\\_and\\_social\\_policy/health\\_hygiene\\_safety\\_at\\_work/c11120\\_en.htm](http://europa.eu/legislation_summaries/employment_and_social_policy/health_hygiene_safety_at_work/c11120_en.htm)

92/85/EEC - Pregnant workers (10°)

Protection of pregnant workers and workers who have recently given birth or are breastfeeding, Summaries of EU legislation, Employment and social policy,

[http://europa.eu/legislation\\_summaries/employment\\_and\\_social\\_policy/health\\_hygiene\\_safety\\_at\\_work/c10914\\_en.htm](http://europa.eu/legislation_summaries/employment_and_social_policy/health_hygiene_safety_at_work/c10914_en.htm)

92/91/EEC - Mineral-extracting industries – drilling (11°)

Extracting industries by means of boreholes, Summaries of EU legislation, Employment and social policy,

[http://europa.eu/legislation\\_summaries/employment\\_and\\_social\\_policy/health\\_hygiene\\_safety\\_at\\_work/c11123a\\_en.htm](http://europa.eu/legislation_summaries/employment_and_social_policy/health_hygiene_safety_at_work/c11123a_en.htm)

92/104/EEC - Mineral-extracting industries (12°)

Extracting industries in the surface and underground, Summaries of EU legislation, Employment and social policy,

[http://europa.eu/legislation\\_summaries/employment\\_and\\_social\\_policy/health\\_hygiene\\_safety\\_at\\_work/c11123b\\_en.htm](http://europa.eu/legislation_summaries/employment_and_social_policy/health_hygiene_safety_at_work/c11123b_en.htm)

93/103/EC - Work on board fishing vessels (13°)

Fishing vessels, Summaries of EU legislation, Employment and social policy,

[http://europa.eu/legislation\\_summaries/maritime\\_affairs\\_and\\_fisheries/fisheries\\_sector\\_organisation\\_and\\_financing/c11124\\_en.htm](http://europa.eu/legislation_summaries/maritime_affairs_and_fisheries/fisheries_sector_organisation_and_financing/c11124_en.htm)

### *Annex III: References template*

References template	
<b>Title:</b>	(original and English)

<b>Authors/Editors:</b>			
<b>Organisation</b>			
<b>Type of organisation:</b>	Public authority	Worker organization	University/research center
	Employee organization	Expert organization	other
<b>Language:</b>			
<b>Year of Publ/references (title publication, Nr, pages) :</b>			
<b>Coverage</b>			
<b>Theme(s):</b> Please highlight	Evaluation of EU-OSH-Directives	Evaluation of National-OSH Legislation	
	Statistical sources, surveys	Other: e.g. evaluation (general)	
<b>File name:</b>			
<b>URL Link:</b>			
<b>Abstract / Summary (information about methodology, context of the elaboration of the document and remarks or comments of the researcher making the literature study)</b>			
<b>Relevant information to be included in the evaluation report</b>			
Number of the evaluation question / sconcerned	Information		

## *Annex IV: Sourcebook*

Thereafter different European and national sources of importance are listed in order to give an overview and summary of available information sources.

### **NATIONAL SOURCES**

#### **National OSH Strategy Papers**

A key concept and fundamental pillar for reaching the objectives of the Community strategy 2007-2012 on health and safety at work is the development and implementation of coherent national strategies in the EU Member States. The European Agency for Safety and Health at Work gives an overview of the EU Member State strategies and programmes.

Source:

[http://osha.europa.eu/en/organisations/osh\\_strategies/list\\_eu\\_strategies#EU%20Member%20State%20strategies%20and%20programmes](http://osha.europa.eu/en/organisations/osh_strategies/list_eu_strategies#EU%20Member%20State%20strategies%20and%20programmes)

### **National Statistics**

National statistics are maintained by governmental agencies or insurance companies and provide data on the numbers of work accidents and occupational diseases. The statistics are mainly constructed to support compensation and prevention activities stated in the national legislation. Data on the numbers of accidents or diseases depend significantly on national regulations, their coverage and recording praxis.

### **National Labour Inspectorate Reports**

The Annual reports from the Labour Inspection contain figures and information on the labour inspection staff, the number of workplace visits, the infringements and convictions. According to the R81 Labour Inspection Recommendation from ILO, the Annual Reports should supply information on

- (a) A list of the laws and regulations bearing on the work of the inspection system not mentioned in previous reports;

- (b) Particulars of the staff of the labour inspection system

- (c) Statistics of workplaces liable to inspection and of the number of persons therein employed,

- (d) Statistics of inspection visits (e) statistics of violations and penalties

- (e) Statistics of violations and penalties

- (f) Statistics of industrial accidents, including the number of industrial accidents notified and particulars of the classification of such accidents

- (g) Statistics of occupational diseases.

The report of the European Agency for Safety and Health at Work entitled "*Labour Inspectorates' strategic planning on safety and health at work*", 2009 presents the principal OSH-related priorities established by national labour inspectorates and provides information on how these priorities are set. Through the work of labour inspectors, the inspectorates have access to a unique source of data that helps inform their strategic planning in three main areas: research, inspection and awareness-raising.

Source: [http://osha.europa.eu/en/publications/reports/TE-80-09-641-EN-N\\_labour\\_inspectorates](http://osha.europa.eu/en/publications/reports/TE-80-09-641-EN-N_labour_inspectorates)

Relevant information is also contained in the SLIC report: "*Labour Inspection (Health and Safety) in the EU (25 Member States) - A short Guide*", (updated 2005).

### **National Surveys**

Surveys provide valuable information on the employment rate of the population (labour force surveys) or on the working conditions of the active population. Surveys on the work environment provide prevalence of perceived exposure to working conditions and OSH related risks, such as chemical, physical and biological hazards, workload, ergonomic and psychosocial risks.

Interview surveys and other questionnaire-based surveys on working conditions are carried out in many countries and areas. The European Agency published "A review and analysis of a selection of OSH monitoring systems" (2003), in which it assessed the OSH monitoring systems in the Member States and explored the feasibility of a common European approach in monitoring OSH.

On a European level, the European Foundation for the Improvement of Working and Living Conditions carries out a European Working Conditions Survey (EWCS), cf. EWCS.

### **Research Papers**

On request of national authorities, research is nationally conducted on a number of OSH risks and outcomes. The research gives a state-of-the-art of the topic and the conclusions and recommendations are being used as policy preparatory work.

Research results can also be obtained through European research, as is the case with the OSH in Figures project within the Risk Observatory of the European Agency for Safety and Health at Work or the contributions to the European Working Conditions Observatory of the European Foundation for the Improvement of Working and Living Conditions.

## EUROPEAN SOURCES

### **Improving quality and productivity at work: Community strategy 2007-2012 on health and safety at work**

The new Community strategy for 2007-2012 aims to achieve a sustained reduction of occupational accidents and diseases in the EU. It sets out a quantitative objective of 25% reduction of accidents at work through a series of actions at European and national levels. The Member States are requested to develop and implement the strategy in their national policies, cf. National sources.

Source: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52007DC0062:EN:NOT>

### **Impact Assessment Guidelines**

Before the European Commission proposes new initiatives it assesses the potential economic, social and environmental consequences that they may have. Impact assessment is a set of logical steps, which helps the Commission to do this. It is a process that prepares evidence for political decision-makers on the advantages and disadvantages of possible policy options by assessing their potential impact. The Commission initiatives requiring an impact assessment, the roadmaps, the list of impact assessments and all relevant information is available on the Commissions Impact Assessment website.

### **National Implementation Reports to the Commission**

The 1989 Framework Directive on Health and Safety and its daughter Directives, contain provisions requiring Member States to report to the EC on the practical implementation of a number of occupational safety and health directives at either four or five-yearly intervals. The "*Communication on the practical implementation of directives on health and safety at work*"

In the meantime, a Directive to simplify and rationalise the reports on the practical implementation of directives concerning protection of the health and safety of workers at work has been adopted at the Employment, Social Policy, Health and Consumer Affairs Council in May 2007 and came into force 21 June 2007, the day after its publication in the Official Journal (Reference: L165/21). The proposal will extend the reporting obligations to include Directives 2000/54/EC, 2004/37/EC and 83/477/EC on biological agents, carcinogens and asbestos respectively.

Source: <http://webarchive.nationalarchives.gov.uk/+http://www.berr.gov.uk/files/file23018.pdf>

### **Communication on the practical implementation of directives on health and safety at work**

This report examines how the Framework directive of 1989 and five of its individual directives have been transposed and are applied within the Member States. It also draws conclusions on their impact on European health and safety legislation and how they affect the economy and society.

This report is the Commission's response to the call made in the framework directive and in the five individual directives to "submit a report on the implementation of the various directives at regular intervals to the European Parliament, the Council and the Economic and Social Committee"

Source: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2004:0062:FIN:EN:PDF>

### **Transposition Notes**

European Member States keep records of the transposition process of the EU Directives into national legislation. The records indicate clearly how the main elements and provisions of the Directive have been integrated in the national legislation. Countries can decide to make the documents publicly available. as is the case with the UK.

Source: <http://www.hse.gov.uk/aboutus/europe/transposition/index.htm>

### **Annual Report on National Implementation of EU Law**

Every year, the Commission draws up an annual report on its monitoring of the application of EU law in response to requests from the European Parliament and the Member States. The reports contain



General statistics on complaints and infringement procedures, the number of petitions to the European Parliament and issues in implementation, management and enforcement.

Source: [http://ec.europa.eu/eu\\_law/infringements/infringements\\_annual\\_report\\_en.htm](http://ec.europa.eu/eu_law/infringements/infringements_annual_report_en.htm)

### **Labour Force Survey (LFS)**

The EU LFS is a large household sample survey providing quarterly results on labour participation of people aged 15 and over as well as on persons outside the labour force. The data collection covers the years from 1983 onwards. In general, data for individual countries are available depending on their accession date. The Labour Force Surveys are conducted by the national statistical institutes across Europe and are centrally processed by Eurostat.

The EU Labour Force Survey (LFS) provides detailed annual and quarterly data on employment, unemployment and inactivity. From 1999, a set of questions is added to the EU LFS on a yearly but rotating basis. In 1999, 2007 and 2013, the topic is on Accidents at work and other work-related health problems, cf. Work-related accidents and health problems

The European Union Labour Force Survey (EU LFS) is conducted in the 27 Member States of the European Union, 3 candidate countries and 3 countries of the European Free Trade Association (EFTA).

### **LFS Ad hoc modules on health and safety at work 1999 and 2007**

To complement the administrative data, ad hoc modules on health and safety at work outcomes are carried out. These aim to cover groups that are not comprehensively included in the administrative statistics (e.g. self-employed, the public sector), less severe accidents (less than 4 days of absence), and work-related diseases not recognised by the national authorities. An ad hoc module on accidents at work and work-related diseases was included in the 1999 Labour Force Survey (LFS) and was repeated in the 2007 LFS. These surveys are based on subjective information from the respondents.

Source: <http://epp.eurostat.ec.europa.eu/portal/page/portal/microdata/lfs>

### **European Statistics on Accidents at Work (ESAW)**

European statistics on accidents at work (ESAW) database contains harmonised data from administrative sources on accidents at work since 1994. Data on accidents at work are available for 23 EU27 Member states and the EFTA-countries Norway and Switzerland. Data collection started in 1994 for the old Member States. Data collection for the new Member States started in 2002, retrospectively from 1998 onwards or earlier.

ESAW statistics cover non-fatal accidents at work with more than 3 days of absence as well as fatal accidents at work. Data are available at national level for total number and incidence rates (per 100 000 employed workers), broken down by age groups, sex and economic activity of the employer. Some EU aggregate level tables are also disseminated broken down by part of the body injured, type of injury, severity, professional status and size of the enterprise. The Phase 3 of ESAW data collection collects information describing the causes and circumstances of the accidents at work. All countries do not yet finish the implementation of this phase.

Source: [http://epp.eurostat.ec.europa.eu/portal/page/portal/health/health\\_safety\\_work](http://epp.eurostat.ec.europa.eu/portal/page/portal/health/health_safety_work)

### **European Occupational Diseases Statistics (EODS)**

European occupational diseases statistics (EODS) contain harmonised data on occupational diseases from 2001 onwards. Some 22 Member States provide case-by-case data on occupational diseases, as recognised by national authorities. The EODS contains the number of newly recorded occupational diseases and fatal occupational diseases during the reference year. Since national compensation authorities approve the occupational origin of diseases, the concept of occupational diseases is dependent on national legislation and compensation practices.

Source: [http://epp.eurostat.ec.europa.eu/portal/page/portal/health/health\\_safety\\_work](http://epp.eurostat.ec.europa.eu/portal/page/portal/health/health_safety_work)

### **European Working Conditions Survey (EWCS)**

Every five years, the European Foundation for the Improvement of Living and Working Conditions (EFILWC or Eurofound) conducts a survey to study working conditions in Europe<sup>71</sup>. Until now, the survey was carried out in 1990/91, 1995/96, 2000, 2005 and 2010. The 2010 survey provides insight

into the working environment and employment situation across the EU27 Member States as well as Turkey, Croatia, Norway, Macedonia, Montenegro, Albania and Kosovo.

The surveys give an overview of the state of working conditions throughout Europe, and indicate the extent and type of changes affecting the workforce and the quality of work. The recurring nature of the survey gives a picture of trends in working conditions throughout Europe. Topics covered in the survey include working time, work organisation, pay, work-related health risks and health outcomes, and access to training. The survey provides for a rich source of data on harmful exposures, as well as information on health complaints affected by work, and absence due to work-related health problems and occupational accidents. Results can be compared to the data of the Labour Force Survey.

With regard to data comparability across countries it has to be taken into account that legal and cultural differences between countries may influence the way the questions are understood and hence determine the answers given. The level of knowledge or awareness about working environment problems and the attitudes and the concern about such problems may vary greatly from one country to another. Also differences between the industrial structure in the countries as well as the distribution of the workforce between sectors make direct comparisons more difficult.

Source: <http://www.eurofound.europa.eu/surveys/ewcs/index.htm>

### **European Survey of Enterprises on New and Emerging Risks (ESENER)**

The European Agency for Health and Safety at Work conducted a Europe-wide establishment survey asking managers and workers' health and safety representatives about how health and safety risks are managed at their workplace, with a particular focus on the newer 'psychosocial risks', such as work-related stress, violence and harassment.

The survey aims to assist workplaces across Europe to deal more effectively with health and safety and to promote the health and well-being of employees. To this end it provides policy makers with cross-nationally comparable information relevant for the design and implementation of new policies in this field.

The survey, which involves approximately 36000 interviews and covers 31 countries is asking questions directly to managers and employee representatives about the way occupational safety and health (OSH) is managed and includes a separate interview directed at health and safety representatives. The methodology and specifications used by ESENER are in line with those used in the establishment surveys of the European Foundation for the Improvement of Living and Working Conditions (Eurofound), which offers the possibility of combining the data.

Source: <http://osha.europa.eu/en/riskobservatory/enterprise-survey>

### **European Company Survey (ECS)**

The Survey is an initiative of the European Foundation for the Improvement of Working and Living Conditions. It was implemented in 2004 and 2009 and it gives an overview of workplace practices and how they are negotiated in European establishments. The survey is based on the views of both managers and employee representatives. The survey was first launched in 2005 as the European Survey on Working Time and Work-Life Balance. It was repeated in 2009 as the European Company Survey, focussing on flexibility practices and the quality of social dialogue.

Source: <http://www.eurofound.europa.eu/surveys/ecs/index.htm>

### **Risk Observatory**

The European Agency for Safety and Health at Work has developed a European Risk Observatory (ERO) aiming to identify new and emerging risks in occupational safety and health, in order to improve the timeliness and effectiveness of preventive measures. To achieve this aim, the ERO provides an overview of safety and health at work in Europe, describes the trends and underlying factors, and anticipates changes in work and their likely impact on occupational safety and health.

The monitoring and forecasting activities are based, as far as possible, on the collection, analysis and consolidation of existing empirical data from national and international data sources. Next to the collection of statistical data, the Observatory also provides more qualitative information to support the identification of new and emerging risks, for instance collected by means of expert forecast and research reviews. The data of the Risk observatory are partly data from European sources such as

Eurostat (LFS, ESAW, and EODS) and Eurofound (EWCS), but also national representative research and statistical databases are used in order to provide for a more integrated picture.

Source: <http://osha.europa.eu/en/riskobservatory>

### **The European Working Conditions Observatory**

Eurofound set up in 2003 a European Working Conditions Observatory (EWCO), providing regular information on quality of work and employment issues in the EU Member States and at EU level. The Observatory is supported by an extensive network of correspondents covering all EU countries, plus Norway.

The work of EWCO is focused on the following research themes: career and employment security, health and well-being of workers, developing skills and work-life balance. The Observatory also contributes to the identification of good practice examples on a company/worker level.

### **Survey Date Reports**

Survey data reports are summaries of national working conditions survey findings in countries covered by the EWCO network. Results from these surveys provide an interesting complement to the results of the Foundation's own working conditions surveys. These national reports can be read in conjunction with the comparative analysis of national working conditions surveys

Source: <http://www.eurofound.europa.eu/ewco/>

### **Health and safety at work in Europe (1999-2007)**

Eurostat published in July 2010 a report presenting a statistical portrait of health and safety at work in Europe from 1999 to 2007. It focuses on accidents at work, work-related health problems, occupational diseases and exposure to risk factors at work. Data from different European surveys and register based statistical systems are presented in this report, including the Labour Force Survey (LFS) (more specifically the ad-hoc modules on safety and health at work), European Statistics on Accidents at Work (ESAW), European Occupational Diseases Statistics (EODS), the European Survey on Working Conditions (EWCS), and the European Survey of Enterprises on New and Emerging Risks (ESENER).

Source: [http://epp.eurostat.ec.europa.eu/cache/ITY\\_OFFPUB/KS-31-09-290/EN/KS-31-09-290-EN.PDF](http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-31-09-290/EN/KS-31-09-290-EN.PDF)

### **OSH in Figures**

The European Agency for Safety and Health at Work published a series of reports which provide information on specific worker groups, exposures, health outcomes, and industrial sectors, based on the collection, analysis and consolidation of existing hard data from national and international data sources such as Labour Force Surveys, Workers surveys, Accident Registers, Registers on occupational diseases, Death registers and Exposure registers.

The sources are both statistical and analytical background documents. The statistical sources are a combination of administrative registers and statistics (occupational disease registers, exposure registers), surveys, voluntary reporting systems and inspection reports. The combination of different sources with non-comparable data, examples from one Member State only, one-off studies and studies from outside national official data, helps to fill in gaps in knowledge.

The intention is to provide an evidence- base, as comprehensive a picture as possible of the potential OSH issues, risks and health effects on the selected topics and provide recommendations for research, policy and practice. For some topics, more detailed information is available from Member states. Where this is the case, separate national reports are provided.

Source: [http://osha.europa.eu/en/publications/publications-overview?Subject:list=risk\\_observatory](http://osha.europa.eu/en/publications/publications-overview?Subject:list=risk_observatory)

### **Case studies**

The European Agency for Safety and Health at Work developed a database with case studies of real examples, which show the steps that have been taken to solve health and safety (OSH) problems. They may also be examples of campaigns or other activities that have taken place to promote OSH and help solve problems at workplaces. The case studies are collected and compiled from the EU Member States and worldwide.

Source: <http://osha.europa.eu/en/practical-solutions/case-studies>

## ***Annex V: Conditions of an optimal evaluation***

### **1. Documents and data**

The Member States possess national statistics, data or surveys, which cover the questions of the evaluation.

### **2. Language**

The evaluator has the language competencies and corresponding budget capacities to analyse the relevant national studies and documents, which are related to the topic.

### **3. Period**

The evaluation design allows to cover the period since the legislation was issued, or at least the past five to ten years and get an excerpt of the literature in English.

### **4. Reliability**

The country information is reliable, i.e. not only based on survey but on the control of the survey data but additionally on labour inspection reports.

### **5. Field studies**

The evaluation team can arrange enterprise visits and interviews with local/regional or sector related actors.

### **6. Specialization**

The evaluation team includes / is supported by specialists for the topics.

### **7. Access to national stakeholders and specialists**

The evaluation team can identify and reach stakeholders and specialists in each country.

### **8. Access to witnesses**

The evaluation team is able to find witnesses concerning the development process in the area, which is scope of the legislation.

### **9. Workplace and enterprise level**

The evaluation team can arrange field visits in different sectors and enterprise sizes.

### **10. Review**

The evaluation team finds the time to let the results checked by national and international reviewers.

### **11. Independency**

The evaluation team stays independent from opinions of the contractor or some groups of interviewees / respondents.

## ***Annex VI: Data collection checklist***

<b>DESK RESEARCH</b>	<b>Item</b>	<b>Remark/Reasons</b>
<b>Period</b>	From ..... to ....	
<b>Countries</b>	No. of countries:	

	.....	
--	-------	--



<b>English plus national literature</b>	Tick the countries and languages to be covered	
---	--	--



FIELD RESEARCH	Item	Remark/Reasons

<b>Countries</b>	No. of countries: .....	
------------------	----------------------------	--



<b>Visits, interviews, group meetings</b>	Tick the countries and languages to be covered	
---	--	--



STAKEHOLDER AND EXPERT SURVEY / INTERVIEWS	Item	Remark/Reasons

Countries	No. of countries: .....	
-----------	----------------------------	--



Interview guide / Questionnaire in how many languages	Tick the countries and languages to be covered	
---	--	--

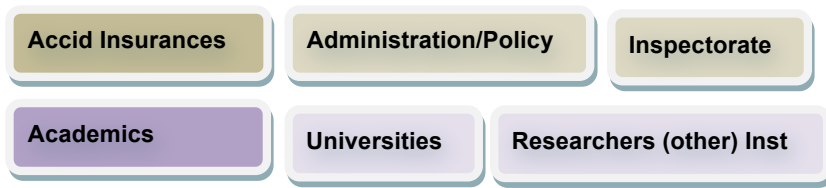


Groups be addressed (e.g. by different questionnaires)		
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Employers' Rep.    Associations    Chambers of Commerce / Craft    Individual Employers

Workers' Rep.    Unions    Works Councils    Shop Stewards

OSH Practioners    OSH Services Int    OSH Services Ext    Occ Phys services    Prof Ass OSH services







Kooperationsstelle  
Hamburg IFE

Institute for International Research,  
Development, Evaluation and Counselling



# WPD Analysis Report

Based on

The Generic Methodology for the evaluation of  
EU OSH Directives

Progress Project 2010-2011, extended April 2012

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April 2012

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# 1.INTRODUCTION

This document presents an evaluation of the impact of the Workplace Directive (89/654/EEC) from 1989 (WPD), undertaken by mandate of the European Commission, Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL), by an international consortium of researchers from PREVENT, Brussels (Belgium), the Kooperationsstelle Hamburg IFE (Germany) and TNS Infratest, Munich (Germany).

The evaluation is part of a broader study commissioned by DG EMPL, the “Contract to further develop a methodology for the systematic evaluation of Health and Safety at Work Directives and to test the methodology in a pilot evaluation of Directive 89/654/EEC concerning the minimum safety and health requirements for the workplace”. The aim of this contract was twofold: first, to develop a generic standard methodology for the evaluation of the Occupational Safety and Health (OSH) Directives issued by the EU and, second, to test this methodology in a pilot evaluation of the WPD. This pilot study on the WPD was co-ordinated by Kooperationsstelle Hamburg IFE.

The evaluation was carried out in 2010 and 2011, i.e. more than 20 years after the WPD was enforced. Its basic aim was to assess the initial, current and future relevance of the WPD, as well as the effectiveness (implementation and results). The cost-benefit of the implementation of the WPD was only partially included in the scope of this test. The information demand of DG EMPL concerning the impact of the WPD was specified in 17 questions, included in the tender document as recommended guideline for information extraction for the study. These tender questions have been adapted during the development of the generic methodology. They are called generic questions in this document and correspond to the 17 questions of the generic methodology.

The present evaluation report starts off with a description of the applied methodology and follows in its structure the four analysis steps: ‘Initial relevance’, ‘Quality of the preparation’, ‘Implementation’ and ‘Impact’. Effectiveness, current and future relevance and some findings on the ‘cost-benefit’ aspects constitute the following chapters. For each of the four analysis steps, the findings are divided according to the sources of the data, namely the literature (desk research), the stakeholder survey and the employers and workers surveys. The generic questions and their corresponding questions in the surveys are presented in the introduction of each item under evaluation. In the last chapter, overall conclusions are drawn.

## 2.METHODOLOGICAL APPROACH

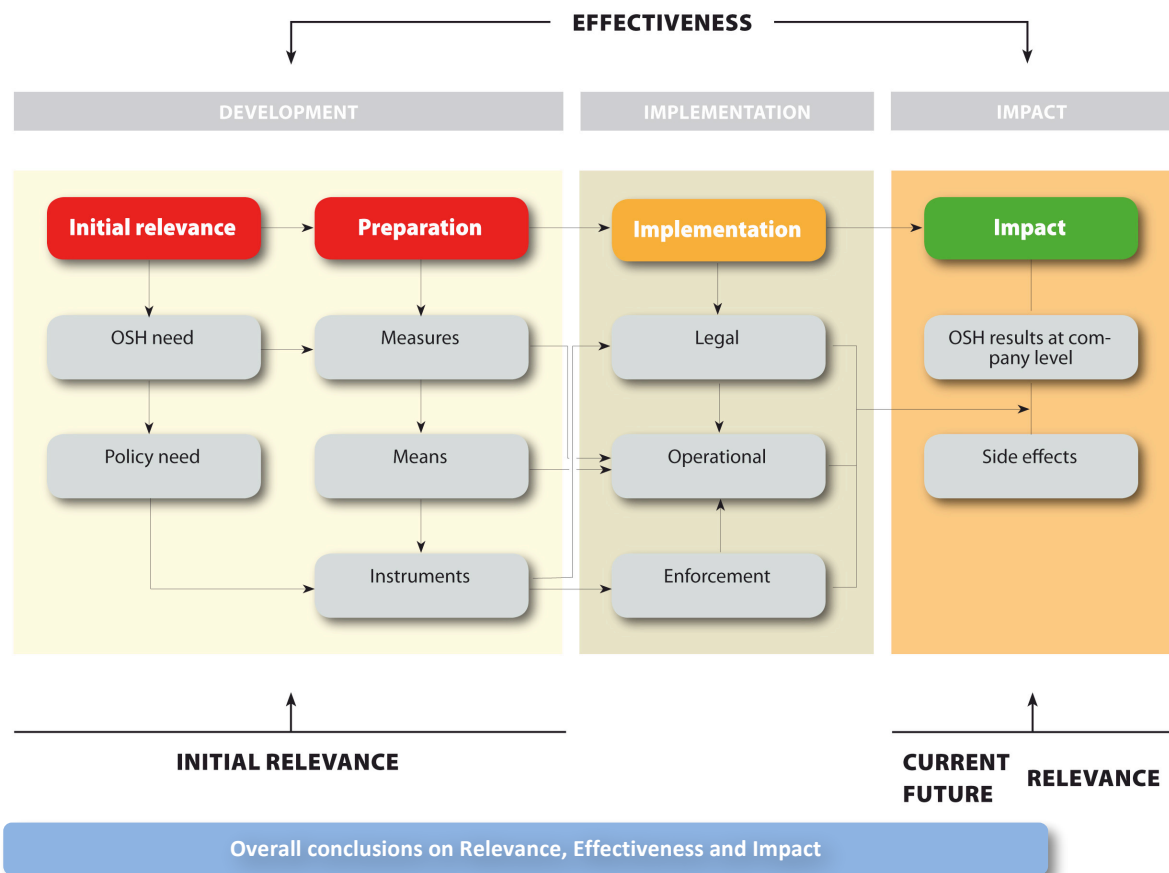
EU OSH Directives cover different topics that are all related to one target – the improvement of OSH – but they allow for remarkably different approaches. The implementation of these Directives is done in the frame of national OSH systems, which also vary widely between EU Member States. To enable the evaluation of the impact of any EU OSH Directive in all Member States, a common ‘generic’ approach was seen as the optimum approach. The major task of the study has been to develop and apply **one generic methodology** for all types of directives and all EU countries. Accordingly, the WPD analysis was based on this generic approach, and has been conducted to test the feasibility of the generic methodology for the evaluation of EU OSH Directives in all EU Member States.

The generic methodology is based on four chronological steps and one final concluding step, aggregating the findings of the former four steps. These steps are:

- Initial relevance (OSH and policy need);
- Preparation of the Directive (measures, means and instruments);
- The results of the implementation at company level;
- The results in terms of OSH and the possible side effects.

=> Drawing overall conclusions about effectiveness and current and future relevance

**Figure 1 Generic evaluation methodology model**



## ***Evaluation Design***

According to the particular features of the WPD, a specific evaluation design was elaborated upon. This design had to take into account the time-related aspects of the Directive (date of issue and time for implementation), its content and the concerns and opinions of all types of stakeholders. The frame of the contract allowed covering several types of data collection for all Member States; for other data collection methods a certain group of Member States were selected. The analysis had to take into account the character of the information sources and the information demand from DG EMPL as specified in the tender.

- ***Ex-post evaluation***

The WPD was issued in 1989, i.e. the evaluation had to be carried out as ex-post evaluation. The data collection went back to this date and as far as possible back to the discussion and preparatory phase. The conceptual evaluation work started in 2010 and the major tasks were performed in 2011.

- ***Definition of major aspects***

As the WPD has a lot of various provisions in the annexes, we focussed in the desk research and the employers and workers surveys on some of the most important provisions such as emergency routes, room temperature, fire detection and fire fighting, lighting, room dimensions.

- ***Information from different stakeholders by different means***

For obtaining optimum information, we have chosen to survey different groups as OSH specialists and practitioners, social partners, employers and workers. The information collection consisted of three major pillars:

- desk research in every EU Member State plus EFTA Countries;
- a stakeholder and specialist survey in every Member State;
- an employers' and workers' survey in five Member States.

The reason for this multiple approach was the complexity of the issues related to the national implementation of the WPD. Some of the issues regulated by the WPD can be easily assessed by employers and workers without any special OSH knowledge (as e.g. daylight, restrooms, etc.). Other aspects (as e.g. the safety of elevators etc.) can only be assessed by specialists and OSH practitioners.

The stakeholders were addressed in personal or written interviews, the employers and workers in computer aided phone interviews (CAPI). Both types of surveys covered the same topics but in the case of stakeholders the questions addressed particularly the impact in a sector or in a certain Member State.

The questions to employers and workers were directed to the WPD application and impact in their respective enterprises. Both the employers' and the workers' surveys were carried out by phone in a total of five countries (Bulgaria, Germany, Poland, Portugal and Finland). In each of these countries, around 500 employer interviews of about 18 minutes' duration and 500 worker interviews of about 15 minutes' duration were completed.

- ***Extent of the data collection***

Budget related criteria were crucial for the decision on the extent and limitation of the

evaluation; in desk research and in the stakeholder and specialist surveys all countries were covered, the worker and employer surveys covered five countries.

All together 78 stakeholders replied to the questionnaire and a total of 2,535 employers and 2,515 workers were interviewed, of which approximately 500 from each of the countries.

### ***Quality of the data***

With few exceptions, national evaluation studies directly related to the implementation and impact of the national transposition of the WPD could not be identified by the desk research. Instead, the identified national and international literature sources (reports, studies, statistics etc.) contained data and analyses covering at least one or more aspects of the regulative areas of the WPD, e.g. emergency exits.

Concerning the issue of the differences between the former national legislation vs. the EU Directive and its national transposition, only a few specialists on high legislative and administrative levels possess the relevant knowledge. It has also to be taken into account that only very few people have been in a comparable professional function for at least 25 years – as for the EU15 Member States, in which the WPD has been transposed in the short term after issuing the European Directive. The information thus obtained is partly not based on explicit sources but represents personal knowledge of the persons involved.

For some countries it was extremely difficult to get all the stakeholders to give input for the survey and even when contacting many stakeholders via telephone and email, in certain cases we did not succeed in getting an answer at all.

### ***Information source ‘Desk research’***

A source book (see the report on generic methodology) was compiled and relevant references and literature were collected, reaching back to 1989. The literature and statistics were analysed following a common template.

There were approximately 150 major sources of common relevance for all Member States. These documents include presentations of specialists, impact studies and implementation reports, comparable evaluations, European surveys, European Commission official documents and international academic publications.

The basic documents of our Europe-wide evaluation of the WPD analysis are individual Member State reports. These individual Member State reports (between 6 and 25 pages, not published) cover again a wide range of literature with 5 to 25 references per country (altogether approximately 300 sources). A number of the references in these reports consists of quotes of laws, regulations and guidance related to the WPD; other sources comprise articles and studies, statistics and survey reports referring to national WPD aspects.

### ***Information source ‘Stakeholder survey’***

The stakeholder survey was used to describe two groups: political stakeholders from associations of employers and workers and governmental representatives. The role of stakeholders can vary in the EU Member States as their OSH systems also vary significantly. The questionnaire was also addressed to specialists from professional organizations, prevention services or research institutes.

A major challenge in drafting the questionnaire was the question on how to deal with the diverging knowledge of different experts. It seemed likely that many experts would not be familiar with the original wording of the Workplace Directive and, therefore, they would not be able to comment on general aspects regarding the original WPD. In order to prevent such problems, interviewees were provided with a web link of the WPD in all EU languages. Due to time limits, however, it was not possible for all respondents to familiarize themselves with the original WPD text.

Nonetheless, the issue of different stakeholder groups and their different roles within the OSH processes was encountered with the “Four Pillars Approach”: Only one questionnaire was used for all stakeholders, but this questionnaire has been divided into four thematic sequences, as they are:

- Part A: EU level – Aspects of quality of the Workplace Directive
- Part B: National level – Aspects of quality of the transposition of the WPD into national law
- Part C: National level – Practical implementation of the transposition of the WPD
- Part D: Opinions

Following this approach, stakeholders were invited to reply to all four parts, but they were free to only answer the parts that best fit their knowledge and expertise. It seemed likely that workers’ representatives, being active within the companies, might not be able to provide input for Part A (EU level). On the other hand, some public authorities, being involved in formulating and implementing legislation, might not be able to give answers on questions regarding the practical implementation of the law in companies (Part C).

The stakeholders have been selected by different means:

- Members of SLIC and the ACHSW received a letter asking them to appoint appropriate stakeholders in their country, whom they would consider having the expertise for replying to the questionnaire;
- Those persons were then contacted and asked whether they were the appropriate person or whether they could recommend another competent person;
- In case the request did not result in the finding of appropriate stakeholders, other OSH contacts and networks were contacted and asked for help.

The respondents received a written questionnaire in English with a request for an interview. It was decided to give free choice of the interview technique to the respondents, some of whom requested to fill in the questionnaire with colleagues or to consult colleagues before answering the questions. Others explained that it would be easier for them to fill in the questionnaire, instead of being interviewed, for other reasons (language skills, time schedule, etc.). Thus, for collecting data from the stakeholders, interviews were performed by the contractors as well as questionnaires were distributed. In some cases, interviews were conducted in the national language by a native speaker if the interviewee and the interviewer spoke the same language. Translations of the questionnaire into French, Hungarian and Romanian were provided.



Stakeholders were contacted personally via email, as a first step. In the email, reference was made to the persons proposing the stakeholder's participation (members of the working group), and the background of the project was explained to them in a few sentences.

When getting a positive reply, stakeholders were contacted about a possible date for the interview. In cases the stakeholders failed to answer, they were sent a second email, referring to the first email, and an offer of the possibility to answer the survey in written form. It turned out that several stakeholders preferred the written format, due to various reasons.

Stakeholders who did not even answer to a third email were contacted via phone if their phone number was available. If they did not react, they generally were not contacted again. However, exceptions were made when it was extremely difficult to find an appropriate person for answering the survey.

In several cases, the ministry in charge forwarded the survey to the labour inspectorate and for this reason, we received joint input from the ministry in charge and the labour inspection. In other cases, several stakeholders or representatives of a stakeholder group felt responsible for answering. This was the case, e.g. in Germany, where two employers' associations participated; one representing SMEs and the other representing large-sized companies. Other experts offered to provide a comprehensive feedback from their organisation. Their efforts resulted in a single questionnaire containing the joint feedback of different cooperating parties, this was the case of the Finnish Institute of Occupational Health and the Luxembourg Inspection du Travail et des Mines.

**Table 1 Stakeholder responses**

Austria	4	Greece	2	Norway	1
Belgium	4	Hungary	5	Poland	1
Bulgaria	3	Iceland	2	Portugal	2
Cyprus	3	Ireland	3	Romania	-
Czech Republic	3	Italy	2	Slovakia	1
Denmark	2	Latvia	4	Slovenia	3
Estonia	4	Lithuania	1	Spain	1
Finland	4	Luxembourg	4	Sweden	1
France	5	Malta	2	UK	4
Germany	4	The Netherlands	3	<b>Total</b>	<b>78</b>

### ***Information source "Employers' and workers' surveys"***

In the context of the evaluation, employers' and workers' surveys were carried out. Both the employers' and the workers' surveys were taken as computer assisted telephone interviews (CATI) in a total of five countries. The countries where the survey was conducted represent a good sample with regard to geographic coverage and the date when the country joined the EU:

- Bulgaria (Eastern Europe, EU member since 2007)
- Germany (Western Europe, an EU founding member)
- Poland (Central Europe, EU member since 2004)
- Portugal (Southern Europe, EU member since 1986)

- Finland (Northern Europe, EU member since 1995)

In each of these countries, around 500 employers' interviews of about 18 minutes' duration and 500 workers' interviews of about 15 minutes' duration were conducted. Within the establishments, the "managing director respectively the most senior manager in charge of coordinating safety and health activities in the establishment" was targeted for the interview. In detail, the net sample sizes finally achieved, are as follows:

**Table 2 Number of interviews (n =)**

Number of interviews (n=)	BG	FI	GE	PL	PT	ALL
Employers survey	503	501	500	500	531	2.535
Workers survey	504	505	506	500	500	2.515

Addresses for the employer survey were drawn randomly from representative address registers available for survey purposes. Care was taken as to conduct a sufficiently high number of interviews in establishments of different size-classes (stratified sampling method). Establishments from one dependent employee upwards and from all sectors of activity, except for NACE Rev.2 B (Mining and Quarrying) and "Private Households", were included. The distribution of the final net sample over the size classes is shown in the following table:

**Table 3 Distribution of employers' interviews over size classes**

Distribution of employers' interviews over size classes	BG	FI	GE	PL	PT	ALL
1 to 9 employees	121	117	116	93	144	<b>591</b>
10 to 49 employees	145	129	141	137	151	<b>703</b>
50 to 249 employees	145	142	147	142	134	<b>710</b>
250 or more employees	92	113	96	128	102	<b>531</b>
<b>Total</b>	<b>503</b>	<b>501</b>	<b>500</b>	<b>500</b>	<b>531</b>	<b>2535</b>

Data of the employer survey were afterwards weighted, in order to compensate for the disproportional sample design. Both an establishment proportional weighting and an employee proportional weighting were applied:

- The establishment proportional weighting puts the interviews in ratio to the distribution of all establishments in the country. In this perspective, which is mostly used in the report, small establishments influence the average results very much because the absolute number of small establishments is much higher than the absolute number of large establishments.
- The employee proportional weight in turn puts the interviews in ratio to the real distribution of employees in the country. In this perspective, the large establishments have a much bigger influence on the average results because the number of employees working in large establishments is high. This perspective is used in the report only where direct comparisons between data from the employers' and workers' surveys are made.

It is important to note that the "ALL" averages shown in the report were calculated as averages of the weighted total sample, i.e. that the average values of each of the five

countries have the same influence on the total average. (In many other reports of cross-national survey data, in turn, the large countries have a very large influence on the average results while the results from the very small countries hardly have any impact on the overall averages.)

For the workers' survey, only dependent employees were interviewed. In Germany and Finland, the workers' surveys were part of multi-client surveys (omnibus surveys), and in Bulgaria, Poland and Portugal they were carried out as independent surveys. The workers' survey dataset was weighted on the base of the Labour Force Survey data on the distribution of employees by sex, age groups and educational level (low/medium/high). Due to the unavailability of reliable data on this matter, the workers' interviews were not weighted by the size of the establishment. The distribution of the workers' data over size-classes is, in a representative survey among individuals, automatically roughly employee-proportional.

It is important to keep in mind that the workers' survey was carried out with entirely independent samples, i.e. workers were not selected from those establishments where the employers' interviews were being conducted. Questions on the broad sector of activity (Production / Market-oriented Services / Public or Social Services) and on the size of the establishment within the workers' survey do, however, ensure that a comparison of employers' and workers' data is possible on the aggregated level (comparing e.g. the statements of employers and workers of small establishments in the production sector with each other).

For the employers' and workers' survey questionnaires, it was not possible due to time constraints for the interview to ask questions about all the aspects regulated in the WPD or its Annex. Therefore, a set of issues was selected. An important criterion for that selection was that the aspects should be relevant to all establishments and workers and that they should concern areas that can easily be judged by employers and/or workers. The minimum standards for disabled workers were therefore not tackled in the surveys: They concern only a minority of establishments (those currently employing disabled workers) and workers.

### ***Methodology of the analysis***

The overall evaluation task was to evaluate the impact of the WPD. Specific information demands and accordingly, evaluation goals, were pre-defined by the 17 generic questions (see below), those questions cover the mandatory questions included in the tender document that served as a guideline for the study. Those questions are connected to the various steps presented in figure 1, namely the initial relevance and preparation, the legal and operational implementation, and the impact on OSH results and side effects. The analysis and the presentation of the findings follow this logic and allow an overall evaluation in the form of a current and future relevance evaluation and a global appraisal of the effectiveness of the WPD. The present document presents also some findings on cost-benefit aspects but outside of the scope of the specific methodology (developed in parallel to this generic methodology) that has not been tested during this project.

### **I. Initial relevance:**

Question 1: Does/did the EU Directive respond to an OSH need?

### **II. Quality of the preparation:**

Question 2: Are/were the objectives of the EU OSH legislation/Directive clearly formulated and do they correspond to the defined OSH needs?

Question 3: Have the measures required to achieve the desired objectives been chosen adequately?

Question 4: Have the necessary means to apply the chosen measures been estimated?

Question 5: Have the instruments required to achieve the desired objectives/results been chosen adequately?

### **III. Legal and Operational Implementation:**

Question 6: Has the EU Directive been transposed into national regulations in a qualitative way (process quality)?

Question 7: Have the national provisions transposing the EU legislation been applied in a qualitative way (process quality)?

Question 8: To what extent are the national provisions transposing the EU OSH Directive known by the stakeholders?

Question 9: How coherent is the perception of the fulfilment of the national provisions transposing the EU OSH Directive (legal and operational)?

### **IV. Impact (OSH results):**

Question 10: What are the objective and subjective results at national level of the EU OSH Directive?

Question 11: Are there sector specific national results or diversified results for specific categories of workers?

Question 12: What are observable side effects at national level related to the scope of the EU OSH Directive?

Question 13: Is there an observable level playing field between the Member States, after x years of implementation?

### **V. Current and Future Relevance and Effectiveness:**

Question 14: Have the objectives and expected impact been achieved x years after the adoption of the EU OSH legislation?

Question 15: What is the (actual and future) relevance of the EU OSH Directive?

### **VI. Findings on Cost-Benefit Aspects:**

Question 16: What means have been deployed and what are the corresponding costs induced by the EU OSH Directive?

Question 17: What is the cost-benefit of the chosen EU measures (provisions) and the EU Directive as instrument?

For every question, the report document clearly differentiates between the results from the sources, 'Desk research', 'Stakeholder survey' and 'Employer / worker survey'. In a final subchapter, conclusions are drawn. In the analysis of the stakeholder survey, we decided to provide not only statements in form of a qualitative analysis, but also quantitative figures.

Although statistically irrelevant, yet even from such a small number of respondents (78) it was possible, by quantitative analysis to conclude where the 'hot spots' were.

To make the application of the methodology transparent for the reader, the generic questions and the corresponding questions in the various surveys are presented for each step under evaluation. Finally, a summarizing part is provided after each chapter.

Concerning qualitative information (opinions, assessments, and proposals from stakeholders), we tried to identify major trends where possible. In some cases, no such trends could be identified, although a number of individual opinions or proposals were significant. We then described the possible reasons behind these answers.

As a third major information source, the employers' and workers' surveys were analysed based on a quantitative analysis of the answers. Quite a few tables show the percentage distribution of the responses. For some connected questions aggregated indicators were created, partly a multivariate analysis was performed.

As the WPD analysis was conducted as a pilot study within the frame of a larger task, we included some deliberations in this chapter about the usefulness of the generic methodology, and a larger set of recommendations on how to adapt the generic methodology.

### **3.RESULTS OF THE TEST ON THE WORKPLACE DIRECTIVE**

#### **I. EVALUATION OF THE INITIAL RELEVANCE**

##### **I.1 Introduction**

According to the generic methodology, the starting point of our evaluation is the initial relevance (OSH needs and need for policy responses) and the quality of the legislation.

The question of the initial relevance can be formulated in a simple question: "*Do the objectives (of the Directive) correspond to the needs and problems?*" A high relevance should clearly be the most essential quality of any directive. The awareness and knowledge about the WPD are strongly connected to the perception of its relevance by all involved parties, be it authorities, stakeholders, specialists, enterprises or workers.

In our evaluation, we used the generic question 1 to evaluate the initial relevance. As this question refers to the relevance of the Directive at the time of its elaboration, only the literature provided some answers.

#### **Generic questions**

Question 1: Does/did the EU Directive respond to an OSH need?

## Data collection questions

**Desk Research:**  
Generic question

There was very limited information about initial relevance and discussion in the preparation phase available. Some stakeholders addressed significant changes in the work environment which, according to the view of the stakeholders, required amendments in the Directive. This point will be addressed by the evaluation of the current relevance of the WPD in OSH.

The desk research could only identify very limited literature with clear statements directly related to the generic question.

## **I.2 Findings on initial relevance**

### *1.2.1. DESK RESEARCH*

The preparatory documents of the Directive refer to the observation that in all Member States there are laws and regulations relating to the safety of workplaces. In most cases, legislative frameworks contain general provisions regarding the requirement for designers to consider safety and health of workers in the study and construction of workplaces.

The particular technical specifications are usually in the form of technical regulations, national standards or recommendations. However, the areas covered and the nature of these provisions are very varied and, within the context of the European Union, a certain degree of harmonization should be provided.

The goal clearly desired in this Directive, besides the gradual improvement of the workplace, is the promotion of equal conditions of competition within the European internal market. The second objective is clearly identified in the introduction text of the Directive and should not be underestimated in terms of relevance.

The "progressive" approach of the provisions is linked to the particularities of SMEs. The European legislator's intention was to allow the modulation of the Directive's requirements according to company size, taking into account the "socioeconomic factors".

This phased approach is also included in the consideration of existing buildings and new infrastructure development:

- Existing workplaces should comply with specific minimum requirements;
- Workplaces modified or altered shall, to the extent possible, meet the minimum requirements set for the new workplace;
- New workplaces must comply with minimum requirements.

The provisions of the Directive are expressed as goals to be reached. However, the European legislator recognizes that for some of the goals technical specifications are required. The establishment of a normative framework is the responsibility of standardization bodies.

The HSE (UK) provided – as an outstanding example - an evaluation report, which aims to monitor the impact of the WPD. In the Second Five Year Review from 2003, HSE reported that companies acknowledged the high level of relevance of the WPD for their enterprises.<sup>1</sup>

### **I.3 Summary on initial relevance**

The initial relevance is difficult to assess, as it is necessary to analyse the initial OSH situation at the time of the WPD preparation. This information is clearly missing. However, the objective of the WPD was mainly to harmonize existing national regulations and ensure a covering of all issues in all Member States. Also the stakeholders generally pointed out that the provisions of the WPD constitute the necessary basis for a good level of occupational safety and health at the workplace. From this point of view, the initial relevance is largely recognised.

## **II. EVALUATION OF THE QUALITY OF PREPARATION**

### **II.1 Introduction**

Once the existence, the extent, the objective and subjective dimension of an OSH risk or OSH problem have been demonstrated, the next step consists of preparing the appropriate response, which may be legislation or other forms of intervention. Objectives or targets should first be defined, followed by adequate measures to deal with the problem. Measures refer to the obligations, such as carrying out a risk analysis. Implementing the range of chosen measures requires means. In the case of EU Directives, means are mainly provided by Member States and this refers in turn to the quality of the transposition. A good quality of the reflection on those dimensions should result in a EU OSH legislation, which is adequate to tackle the OSH needs. To evaluate the quality of the preparation we combined the generic questions 2 to 5. Those questions have been further developed and transposed into operational questions for stakeholders.

#### **Generic questions :**

Question 2: Are/were the objectives of the EU OSH Directive clearly formulated and do they correspond to the defined OSH needs?

Question 3: Have the measures required to achieve the desired objectives been chosen adequately?

Question 4: Have the necessary means to apply the chosen measures been estimated?

Question 5: Have the instruments required to achieve the desired objectives/results been chosen adequately?

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<sup>1</sup> Dunn, C. & Ludbrook, R., 2003.



### Data collection questions:

#### Desk research:

All generic questions

#### Stakeholder survey:

A01: Have the requirements of the WPD have been chosen adequately?

A04: Are there any unnecessary aspects mentioned in the WPD?

A05: Are there any important aspects missing in the WPD?

A06: The WPD has a perfect level of detail

A07: The obligations laid down in the WPD are clearly formulated

A08: The targets mentioned in the WPD are important for efficiently improving health and safety at workplaces in Europe

A09: The Directive is still the best possible option to reach the objectives. Alternatives for regulation would not have provided the same level of prevention and protection.

## II.2 Findings on quality of the preparation

### II.2.1 DESK RESEARCH

No specific information has been found on the preparation phase of the WPD directive. That is why the evaluation will only be based on the opinions of stakeholders.

### II.2.2 STAKEHOLDER SURVEY

The respondents, who appraised all provisions of the Directive as relevant, consequently did not see any irrelevant provisions in the WPD. Two thirds of the stakeholders answered negatively when being asked “*Are there any unnecessary aspects mentioned in the WPD?*” (A04), appraising that no paragraph of the WPD can be seen as obsolete.

**Table 4 Are there unnecessary aspects mentioned in the WPD?**

STAKEHOLDER A04	%
Yes	3
No	68
No answer	14
Other comments	15
<b>Total</b>	<b>100</b>

Source: Stakeholder survey

A few respondents remarked that most of the provisions were already covered by their former national legislation:

*“The former regulation in Hungary was also adequate; the Directive only facilitates the creation of a unitary European system.”* (HU, Empl)

Nevertheless, the provisions of WPD generally were not seen as unnecessary, even if they do not represent an innovation in legal terms for all Member States.

*“No. All provisions need to be there, even if the annex does not bring any revolutionary or innovating elements. The list has the merit to be exhaustive.”* (FR, Expt)

*“No, for Luxembourg these elements were already regulated but a reminder is always useful.” (LU, Empl)*

However, some aspects were referred to as unnecessary by some respondents who critically commented on this question. The distinction between workplaces existing before 1993 and after 1993 was criticised as an unnecessary complication:

*“However, there is no necessity to have two Annexes - i.e., regarding workplaces in use before 1993 and workplaces used for the first time.” (AT, Empl)*

Some provisions of the Directive are regarded as a matter of course and, therefore, were pointed out as unnecessary: *“E.g. Annex I, 6.1: «If a forced ventilation system is used, it shall be maintained in working order». - Which equipment/facilities shouldn't? Annex I, 13: «Escalators and travelators must function safely». - Are there any that must not?” (HU Gov)*

45% of the respondents answered that there were no missing aspects in the WPD (A05), while 4% answered that there were some.

**Table 5 Are there any important aspects missing in the WPD?**

<b>STAKEHOLDER A05</b>	<b>%</b>
Yes	4
No	46
No answer	14
Rather broad terms	24
Other comments	12
<b>Total</b>	<b>100</b>

Source: Stakeholder survey

Some of the respondents took the opportunity to submit suggestions and recommendations for enhancement and expansion of the WPD. The topics mentioned are summarized in following table.

**Table 6 Proposals from stakeholders to expand or enhance the WPD (part 1)**

Aspect	Respondent	Selected Quotes
Well-being Long term health and safety	De Gov, Expt; EE Empl	<i>Other aspects than room climate should be covered Wellbeing and work performance should be taken into account with more emphasis. (DE Gov)</i>
Lighting	DE Gov; ELR Expt	<i>The impact of lighting should get more attention. (DE Gov) Concrete provisions are missing (EL Expt)</i>
Windows	GER Gov; SWE Gov	<i>The possibility to have a window or some other kind of intervisibility with the outside (not only roof light) should be mentioned. (DE Gov) In the section about daylight there is no mention about outside view. (SV Gov)</i>
Ergonomic aspects	DE Gov, Expt; EE Empl; HU Empl, Expt; FI Expt; IS Gov, Expt, Work	<i>Sitting possibilities enabling dynamic positions. (GER Gov) The national legislation also considers seats at workplaces (FI Expt)</i>
Psychosocial risks	LU Work	<i>[the stakeholder proposes inclusion into a revised WPD, no specific comment]</i>
Indoor vs. outdoor workplaces	DE Gov	<i>Priority to the establishment of workplace in rooms compared to those outside is missing. (DE Gov)</i>
Indoor climate / air quality, air conditions	HU Empl, Expt; AT Work; FI Work; EE Gov	<i>Instead of the formulation "Ventilation of enclosed workplaces" the formulation and content "Air conditions / air purity of workplaces" should have been more adequate, since it would set the requirements in a more general way (+ air flow, + humidity, + biological quality) (HU Expt) Wherever possible, exposure limits or minimum requirements should be established. (AT Work) ... building technology has come to the point where our extreme cold/damp conditions have started to produce mass problems with indoor air quality and mould. (FI Work) The fact that room climate is not only determined by temperature but by many other aspects as well should be included. (GER Gov)</i>
Room temperature / low temperature	AT Work, GR Expt	<i>Concrete specification is missing (AT Work), low temperature (GR Expt)</i>
Noise and vibration (absorption)	HU Empl, SWE Gov; FR Expt, GER Gov	<i>Noise should not only be taken into consideration when it comes to the question of damaging the hearing capability but also by bearing in mind none aural impact of noise, for example on concentration. In the former German law, this threshold for noise while working in an office was 55dB. (GER Gov)</i>
Electromagnetic environments	FR Expt	<i>[the stakeholder proposes inclusion into a future WPD, no specific comment]</i>
Biological quality	HU Empl, Expt	<i>[the stakeholders propose inclusion into a future WPD, no specific comment]</i>
Par 2. Stability and solidity	HU Expt	<i>There is no specification of the dimensions of the room (HU Expt)</i>

**Table 6 Proposals from stakeholders to expand or enhance the WPD (part 2)**

Aspect	Respondent	Comment
Technical installations and storage	FR Expt	<i>Particular design provisions concerning the technical installations and of storage</i>
Fire protection and fire fighting	HU Expt; FR Gov	<i>No mentioning of measures to dissipate heat and smoke (HU Expt) The obligations as regards fire risks relate to evacuation conditions, alert devices the fire fighting measures. A more preventive approach could be useful (smoke clearing, characteristic of fire performance of materials etc.) (FR Gov)</i>
Emergency situations	IT Expt	<i>Specific norms on emergency situations in skyscrapers</i>
Guardrails	SV Gov	<i>[the stakeholders propose inclusion into a future WPD, no specific comment]</i>
Materials for construction	FR Empl	<i>Precision regarding the harmfulness of certain materials for construction and the installation of certain workplace equipment (FR Empl)</i>
Work in basements	EL Expt	<i>[the stakeholder proposes inclusion into a future WPD, no specific comment]</i>
Eating rooms on the premises	FR Gov	<i>[the stakeholder proposes inclusion into a future WPD, no specific comment]</i>
Drinking water and food	UK Gov	<i>Include provisions on wholesome drinking water to be present at each workplace and suitable facilities to be made available for food to be eaten. (like in the Workplace (Health, Safety and Welfare) Regulations 1992 (UK Gov)</i>
Handicapped workers	FR Gov	<i>The requirements as regards accessibility of handicapped people are not imperative</i>
Buildings used for the first time	FR Gov, FR Expt	<i>Include stricter safety by design (FR Gov) Different provisions relating to on the one hand the phases of construction, and, on the other hand, start up activity and maintenance (FR Expt)</i>
Agricultural workers	CY Gov	<i>There is (...) a need to define requirements for the protection of workers engaging in agricultural works and means of transport who are working in outdoor workplaces not covered by the WPD</i>
Sustainable development	FR Expt	<i>Integration of the dimension of sustainable development</i>

Source: Stakeholder survey

A very large majority of the stakeholders agreed or rather agreed to the fact that the requirements of the WPD have been chosen adequately.

**Table 7 Have the requirements of the WPD been chosen adequately?**

STAKEHOLDER A01	%
Agree	44
Rather agree	42
Rather disagree	3
Disagree	3
Don't know / NA	8
<b>Total</b>	<b>100</b>

Source: Stakeholder survey

The small number of stakeholders disagreeing or rather disagreeing makes a further quantitative analysis obsolete, e.g. looking for differences between particular groups of disagreeing stakeholders (countries, social partners, etc.).

The respondents had the opportunity to add comments. Positive comments came both from representatives from the EU 15 (PT, BE, FR) as well as from EU 12 (CZ, CY, SI).

The positive comments emphasised that the principles of the WPD are of crucial importance to ensure minimum standards at workplaces. Some quotes might illustrate the character of these comments:

- *“The requirements of WPD were prepared, negotiated and accepted to be introduced almost 20 years ago. I believe that these requirements were in fact adequately chosen based on the conditions and data of that time.” (CY, Gov)*
- *“Yes, because the annexes give the principles for the conditions of a good workplace. You get an overview of how a workplace should look ideally, how to build workplaces that are adequate for the work that needs to be done. On the level of principles the requirements have been chosen adequately.” (BE, Gov)*
- *“Requirements of the WPD are the basis for Occupational Safety and Health.” (CZ, Empl)*
- *“Given the fact that the Directive defines minimum standards for health and safety at work, the requirements are reasonable.” (CZ, Gov)*
- *“In our opinion, ensuring the safety and health at work in the workplace is of great importance.” (CZ, Work)*
- *“Yes, because this Directive concerns essential transversal questions, which are the base of the implementation of a prevention policy in a company.” (FR, Gov)*
- *“The Directive covers all relevant risk factors in the workplace and adapts the national legislation.” (SI, Gov)*

The question mainly provokes statements on a very general level; the absolute majority of the stakeholders are satisfied with the WPD in such general terms. Critical opinions and statements are mostly related to specific aspects.

Two stakeholders raised the issue of temporary workplaces, mentioning that the WPD leaves too much room to exclude temporary workplaces (NL, Gov) as well as workplaces that are used very occasionally (UK, Gov).

A similar pattern as for item A01 can be found for item A08, asking whether the targets mentioned in the WPD are important for efficiently improving health and safety at workplaces in Europe. 81% of the stakeholders agree or rather agree, and less than 8% disagree.

In answers to this question – and also to other related questions – we found the recurring appraisal that the WPD is mainly concerned with avoiding accident risks, and that it insufficiently covers health risks.

Most stakeholders ‘agreed’ (44%) or ‘rather agreed’ (42%) that the requirements of the WPD have been chosen adequately. Only a minority of 6% ‘disagreed’ or ‘rather disagreed’.

**Table 8 The targets mentioned in the WPD are important for efficiently improving health and safety at workplaces in Europe.**

STAKEHOLDER A08	%
Agree	54
Rather agree	27
Rather disagree	8
Disagree	0
Don't know / NA	11
<b>Total</b>	<b>100</b>

Source: Stakeholder survey

Several comments were made on this topic. Many general comments emphasise consent with the statement provided in the questions, while others also express some concerns here because of principal deficits to the WPD. The general consent is expressed in wordings like:

*“The provisions concerning workplaces are essential to ensure the safety of the workers in their work environment. They constitute the framework in which the provisions of other directives must be implemented. If this framework is not well designed, it will be very difficult to correctly implement the other provisions.”*

*“The measures mentioned in the Directive are among the key points for overall OHS improvements at places of work.”*

*“Some provisions are really important (fire prevention, exits and routes, electric installations) others have just some kind of utility (cloak room). As far as the building is concerned, the enterprise is powerless. Regulation should be directed to architects.”*

*“When assessing the benefits of the Directive to health and safety, 90% of organisations responding to the most recent questionnaire review of the WPD felt that there was a greater awareness of health and safety.”*

Other respondents mention a lack of clarity and detail. It seems that for them, the overall positive and adequate requirements are somehow devaluated by an all too general approach:

*“If the WPD is clearly and concisely formulated and if it reacts to the development of modern approaches to the work environment and working conditions, to the technical and technological advancement and the resulting technological and work procedures,*

*it will contribute to the elimination of risks and will be acceptable for all employers and employees throughout Europe.”*

*“The targets mentioned in the WPD are important but the question is if the low level of detail gives sufficient background regulation for making any change.”*

*“In general, the intended purpose is o.k., which is unfortunately not reflected by the single articles. There are good approaches, which are not extensively explained in the Directive. (Targets are ok, detail has to be discussed).”*

*“Globally the legislation covered the provisions of the Directive but certain not very detailed provisions could be taken into account.”*

*“Clearly defined targets are missing in the WPD.”*

Some respondents emphasise that the progress between the former national legislation and the WPD is ‘marginal’:

*“From the national point of view, the directive only changed marginal aspects. But parameters are missing for assessing efficiency.”*

*“The topic is over mystified by the enquirer. These objectives have been present since the 1960s.”*

Some comments put it vice versa; they complain that the major requirements deal with ‘old’ risks, which have no notable importance in ‘modern times’.

*“There is no active policy or enforcement any more with regard to the provisions of the workplace regulations, since they do not involve important risks (any more).”*

All these critical comments stem from respondents belonging to the EU15 (DE, NL, IE, AT and PT).

Several stakeholders from the EU 15 and EU 12 state that a non-implementation of the WPD would not have changed the situation in their country. Most of them refer to the former regulation that was already in place (Austria, Germany, Ireland, Hungary, Czech Republic). Others state that new similar regulations would have been implemented instead (Estonia, Finland) and a few just say that there would not have been a great difference without giving reasons (Belgium, Sweden).

For Iceland the comment is a bit more multisided, including the belief that the WPD improved the national OSH situation, while also assuming that similar changes would have been made but in much slower pace.

It is striking that mainly stakeholders from the EU 12 make remarks on the positive influence the WPD had in their country, like e.g. an answer from Latvia:

*“If the WPD would not have been transposed to national legislation there would be no common minimal standards for health and security equipment in workplace so this would negatively affect the situation of employees’ health and safety in workplace.”*

Other positive comments came from Estonia, Lithuania, Greece and Hungary. No respondents from the employees’ side disagreed.



The statements on Question A09 (“The Directive is still the best possible option to reach the objectives. Alternatives for regulation would not have provided the same level of prevention and protection”) can also be used as indication of a mainly positive assessment.

As the majority of stakeholders agree, that a directive is the best possible option, to reach the objectives related to the discussed topic, most comments were of course in favour of the Directive. Comments can be divided into four groups.

- Several respondents emphasized the importance of a directive compared to other possible options, like standardisation or regulation and state that a directive is the best option for coming closer to reaching an equal OSH level in Europe.
- Quite a lot of comments referred to the **nature of directives in general**, describing the way it works and underlining why the choice of a directive was right. A Lithuanian trade union representative states that a directive “...gives a certain freedom for every EU Member State to choose the ways and legal forms of transposition of the provisions of directive into national law but it is compulsory for the Member States to make the process of transposition.” Others put the focus on the fact that a directive obliges the Member States to transpose the requirements, which makes the Directive a powerful tool.
- Many comments did target an additional aspect. While supporting the idea of choosing a directive to improve certain OSH aspects, they further **require more action** by supporting not only the legal implementation but also the general OSH ideas behind the Directive, by boosting other measures like practical standards, informative materials, stronger supervisions and sanctions. They all fit very well together in the comment from an Austrian government representative stating that “Other aspects apart from legislation can only be complementary. [These] are important amendments, but [they] cannot replace the Directive”.
- Only very few remarks were made that **did not support the idea of a directive**, like e.g. an OSH expert from the UK answering that “From the UK perspective, I believe that sensible non-regulatory guidance could have achieved the same end result.”

Overall, the stakeholders state that the obligations are clearly formulated, more than 80% agree or ‘rather agree’ to the statement “The obligations laid down in the WPD are clearly formulated”.

**Table 9 The obligations laid down in the WPD are clearly formulated**

STAKEHOLDER A07	%
Agree	33
Rather agree	47
Rather disagree	8
Disagree	4
Don't know / NA	8

Source: Stakeholder survey

Those respondents who commented criticised the general character of the WPD. A very typical remark is:

*“Some of the requirements are too general, i.e., when an employer has to fulfil the requirements, he needs to obtain additional information in order to understand, what some of the requirements actually mean and how exactly to comply to them.”* (LV, Gov)

The Dutch employee federation FNV appraised that some of the wording in the Directive is too vague, and companies need clearly defined targets:

- *Words such as ‘sufficient’ (annex I, art. 6.1) are fairly vague and uninformative.*
- *What is ‘as safely as possible’? (annex I, art. 4.2)*
- *When is there ‘an adequate number’ of escape routes?*
- *Buildings must have a certain ‘solidity’ – but how much solidity is that? (annex I, art. 2)*
- *What exactly is ‘sufficient natural light’? (annex I, art 8.1)*

A larger number of respondents mention that they would appreciate more quantitative standards and norms and ‘metrics’. The criticism refers to WPD-wording like “it should be adequate”, “if it is technically possible”, “the safest possible way”, “if possible, it should be arranged in a certain manner”, “as far as possible” etc.

*“Some ‘metrics’ parameters should be included and not just ‘enough’/sufficient number.”* (CY, Gov)

*“Concrete data on room dimensions, room temperature and other aspects is missing. Wherever possible, exposure limits/minimum requirements expressed in numbers should be included.”* (AT, Work)

This aspect of low detail clearly influences the practical implementation.

Others considered some paragraphs as matters of course, e.g. the provision of maintenance. This paragraph is simply seen as superfluous:

*“There are quite a number of unnecessary aspects. E.g. Annex I, 6.1: ‘If a forced ventilation system is used, it shall be maintained in working order.’”* (HU, Empl)

## II.3 Summary of the quality of the preparation

On a general level, the **quality of the preparation** of the WPD is widely accepted by stakeholders. The majority of stakeholders agree that the WPD, in general, targets relevant and basic OSH aspects and that these aspects are important for efficiently reducing accidents and improving health and well-being at work in the EU. The stakeholders expressed their high consent with the regulations of the WPD.

Some stakeholders expressed their wish to incorporate important OSH issues, e.g. long term health aspects, ergonomics or noise in offices into the WPD. Others argued in favour of a separation of the legislation into one for safety aspects and one for well-being and health. Some of the respondents also took the opportunity to submit particular and very specific suggestions and recommendations on different aspects for enhancement and expansion of the WPD, e.g. provisions on wholesome drinking water, inclusion of electromagnetic fields, a better definition of climate and provisions for indoor pollution; others advocated for user-friendly design and eco design.

Consequently, we found the fewest problems concerning those paragraphs which deal with WPD issues related to the building and equipment, i.e. issues like safety of electrical installation, safety of lifts, floors, roofs and windows, loading bays and ramps, room size, traffic routes, fire installation and similar issues.

## III. EVALUATION OF IMPLEMENTATION

### III.1 Introduction

According to the generic methodology the third step of the evaluation is the analysis of the implementation. Implementation covers on the one hand the description of the legal implementation (transposition of the EU Directive into the national regulatory framework and consequently the choice of means by the Member States). On the other hand, it covers the operational implementation (the compliance of businesses to the legal provisions) and the activities of all concerned parties that contribute to the practical/operational implementation (information campaigns and enforcement).

The question of implementation can be formulated as follows: *“How did you implement the Directive and what is the practical implementation at workplace and enterprise level like?”*. High levels of activities and effective application are the main indicators for a successful implementation.

In our evaluation we combined the most appropriate generic questions to describe the legal implementation (transposition) and the level of practical implementation:

### **Generic questions:**

Question 6: Has the EU Directive been transposed into national regulations in a qualitative way (process quality)?

Question 7: Have the national provisions transposing the EU legislation been applied in a qualitative way (process quality)?

Question 8: To what extent are the national provisions transposing the EU OSH Directive known by the stakeholders?

Question 9: How coherent is the perception of the fulfilment of the national provisions transposing the EU OSH Directive (legal and operational)?

In the interviews and surveys with stakeholders or employers and workers these overarching questions were split up into several, more specific, questions.

### **Legal implementation**

#### **Data collection questions:**

##### **Desk research:**

Generic question 6

##### **Stakeholder survey:**

B03: Can you explain in how far the national legislation had to be changed?

B04: Were there any aspects of the WPD discussed controversially when the Directive was transposed into national law?

B06: The transposition of the WPD into national law resulted in relevant legislation changes in my country.

B07: The transposition of the WPD into national law led to national legislation that is almost the same, stricter, less strict

B08: The transposition of the WPD into national law led to national legislation that is almost the same, better defined, less defined

B09: To what extent does the national law transposing the WPD differ from the original Directive?

B10: Did the transposition of the WPD into national legislation take into account pre-existing national law?

B11: Has the WPD improved or positively influenced the national legislation?

### **Operational implementation**

#### **Data collection questions:**

##### **Desk Research:**

Generic questions 7 to 9

Studies or reports measuring the level of compliance with general OSH obligations, basically risk assessment and, information and participation of workers

##### **Stakeholder survey:**

C01: Employers are generally aware of the national transposition of the WPD.

C02: Companies usually comply with the national transposition of the WPD.

C03: When doing risk assessments, companies usually take the WPD requirements into account.

C04: Consultation of workers' representatives usually includes questions related to the requirements of the WPD.

C05: In cases of infringement, what is the reason why companies do not comply with the national law/transposition of the WPD?

#### **Employer survey:**

Awareness: not asked for in the survey (problems with comparability)

E301: Thinking about the current situation in your establishment: Do you agree, partly agree or disagree with the following statements. (Statements on compliance with legal regulations concerning: escape routes and emergency exits, fire alarm and fire fighting facilities, indoor workplace ventilation, lighting, workstations dimensions, traffic routes, toilets and washrooms)

E306: Are workstations at this establishment regularly checked for safety and health as part of a risk assessment or similar measures?

E307: Are these risk assessments or workplace checks being documented?

E308: Are workers during these checks consulted about their work habits or about health problems they attribute to their work environment?

E401: Do you regularly provide employees with information on occupational safety and health issues?

E402: On which of the following topics do you provide your workers with information?

E403: In which ways do you usually provide employees with information on occupational safety and health issues? By way of...

E404: For which of the following reasons are employees in this establishment not regularly provided with information on occupational safety and health issues? Is it because...?

#### **Worker survey:**

W301: Since you have been working there: On which of the following topics has your establishment provided you with information concerning safety and health?

W501: Are you familiar with the emergency exits and escape routes in the building where you work?

W502: Is your establishment equipped with fire extinguishers?

W503: Do you know where to find the fire extinguisher closest to your workstation?

W504: Are you generally happy with the room climate at your workstation?

W506: Is there always enough light available at your workstation to carry out your work without risks to your safety and health?

W507: Are the room dimensions of your workstation large enough as to allow you to perform your work without risk to your safety or health?

W508: Are the traffic routes and – if applicable – loading bays and ramps at your workplace consequently kept free of trip hazards and obstacles?

W509: If you had a work accident: Would you know where to find the first aid installations or first aid equipment?

W510: Are toilets and washrooms in your establishment kept to an adequate level of hygiene?

W511: All things considered, how satisfied are you with the safety and health situation at your establishment? Are you very satisfied, satisfied, not very satisfied or not at all satisfied?

### **Information and enforcement**

#### **Data collection questions:**

##### **Desk research:**

Statistical data on infringements, information about labour inspectorates and other instances, campaigning practices

**Stakeholder survey:**

C05: In case of infringement, what is the reason why companies do not comply with the national law/transposition of the WPD: (The infringement is not regularly checked, is not sanctioned...)?

A closer analysis starts with the description of the means, measures and instruments<sup>2</sup> that are introduced by the Directive and more specifically, those that are used by the national actors to achieve its goals. The degree of implementation can differ between the topics set in the WPD. Furthermore, it can differ depending on the target group; and it certainly differs between Member States as well as between sectors, between small, medium and large enterprises etc. Therefore, the aim of the present evaluation should not be restricted to drawing an overall picture of the situation, but should also cover the identification of success and drawback areas/segments, and secondarily, the identification of those factors that determine success and drawbacks.

Before that, as businesses do not apply the requirements of the Directive but of its national transposition, it is necessary to analyse the impact of the Directive on the national legal framework. For this evaluation questions such as in how far the national transposition of the directive led to changes in the national regulation and did the transposition of the Directive lead to a national legislation that is the same, stricter, less strict, more or less detailed were used.

This chapter will be divided in three parts: findings on legal implementation, findings on operational implementation and findings on information and enforcement. In the first part (legal implementation), a special section is dedicated to national contexts related to enforcement and support/information practices.

The chapter on practical implementation is completed by a section presenting a comparison between the stakeholders', employers' and workers' views on practical implementation as well as by a section presenting the results of the employers' and workers' surveys according to the sector, the size of the companies, the gender and the types of work contracts.

## III.2 Findings on legal implementation

### III.2.1 DESK RESEARCH

#### ***National adaptation of instruments***

The question: "Are the obligations laid down in the Directive clearly formulated" (see chapter on quality of preparation) is of course one of the necessary elements for effective implementation: changes in wording can be introduced by the Member States. Also, many

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<sup>2</sup> **Measures** refer to the obligations that the regulated target group will have to fulfill; such as: the obligation to carry out risk analysis, to rely on external services, to have qualified staff, etc.

**Means** refer to the human, financial, technical, and other resources that are required to implement the prescribed measures

**Instruments** refer to the type of intervention, regulatory or other public intervention which imposes the chosen measures: legislations, criminal penalties, administrative fines, encouragement of self-regulation, awareness campaigns, extra research, financial incentives for the industry concerned etc.

Member States took additional measures to raise the level of implementation and understanding. In particular, they issued further ordinances, regulations and guidance with a higher degree of detail. Here are some examples.

The **Austrian** AStV contains very detailed regulations for ensuring that emergency evacuations can be conducted in a safe manner. General requirements contain construction aspects and the evacuation of handicapped workers (§16). §17 and §18 give detailed requirements on the establishment of emergency routes, areas and exits, including the maximum distance of any workplace from the emergency exit (depending on the size of the workplace) and the necessary dimensions of emergency routes and exits (depending on the number of workers). Requirements are very well defined and the regulation gives clear instructions, like e.g. emergency exits for up to 60 workers should have at least a minimum width of 1,0m.

Further requirements for emergency routes and areas are given in §19 and §21, regulating for example that floors, walls and ceilings should consist of slow-burning material etc. Emergency exits are treated in §20, including for example the prohibition of sliding or revolving doors in emergency exits. The last paragraph on emergency routes and exits contains the construction of stairs being used as emergency routes.

Height of rooms, room dimensions and room space are also specified in detail by given thresholds (§23 and §24). Room height should generally not be under 3,0m. Exceptions are made for special room dimensions if the physical workload is very low. For working space and air space concrete numbers are given that have to be adapted to the circumstances (number of workers, physical work load, etc.).

Emergency routes and exits are mentioned in the main text as well as in the annex of the ArbStättV of **Germany**. The main text requires that traffic routes, escape routes and emergency exits must be kept constantly clear so that they can be used at all times. The employer shall take precautions to ensure that the workers can get to safety without delay and can be rescued quickly in the case of danger. The employer shall draw up an escape and rescue plan if the location, extension and nature of the use of the workplace render this necessary. The plan must be laid out or displayed at suitable points at the workplace. Exercises according to this plan must be carried out at reasonable intervals. In an annex special aspects are mentioned in more detail.

*“Emergency routes and exits must*

*a) be geared in terms of their number, distribution and dimensions to their use, equipment and dimensions of the workplace and the maximum number of persons that may be present,*

*b) lead as directly as possible to the outdoors or, if this is not possible, to a safe area,*

*c) be permanently identified in an appropriate form.”*

*“The emergency routes must be fitted with safety lighting if it cannot be guaranteed that workers can leave the workplace safely, especially if there is a failure of the general lighting.”*

Further requirements are given for doors on emergency routes and exits, saying that those must *“be easy to open from inside without any special tools as long as workers are present in the workplace,..”*

Doors of emergency exits must open outwards. For emergency exits that are designed exclusively for emergencies and are used exclusively in emergencies, it is not permitted to



have revolving or sliding doors. For all possible rooms (working rooms, sanitary rooms, rest and standby rooms, first aid rooms and accommodations) the employer shall provide an adequate floor area and height and adequate air space in the rooms.

**Estonian** regulations prescribe that the height and area of workrooms shall be sufficient for workers to perform their work without damaging their health. There shall be at least 10 m<sup>3</sup> of airspace in the workroom per worker (up to 3.5m of the height of the room shall be taken into account when calculating the airspace). Workrooms shall be sufficiently thermo isolated from the outdoor environment, taking into account the type of work being performed in the room. The building and finishing materials of workrooms shall be safe to health and easy to clean. Workrooms and work equipment shall be kept clean (Regulation no.176, § 3).

**Finland** regulates in a decree that the air space of a working room has to be at least 10 cubic meters. For the height of the room maximum three and a half meters are counted. The minimum height is specified with 2.5 meters. **Iceland** has more detailed requirements in terms of minimum height (2.5 m). Room dimensions and air space in rooms – freedom of movement at the workstation, this article includes more detailed requirements in terms of room dimensions (8 - 12m<sup>3</sup>). In **Denmark** the national labour inspection has provided 16 guidelines on the different parts of the regulations in the Directive, e.g. ventilation, high and low temperatures, artificial light, the working conditions of pregnant women, emergency exits, workplace equipment etc.

Obviously the enterprises and also the regulatory authorities demanded such detailed regulations to improve the applicability of certain regulations. Some examples **of the national regulations** for **room temperature** illustrate the variety of approaches and regulations.

**Table 10 Selected national regulations or recommendations on 'Room temperature'**

WPD	United Kingdom <sup>3</sup>	Ireland <sup>4</sup>																						
<p>WPD 7.1. During working hours, the temperature in rooms containing workstations must be adequate for human beings, having regard to the working methods being used and the physical demands placed on the workers.</p>	<p>The Workplace (Health, Safety and Welfare) Regulations 1992, Regulation 7 workplaces and states for indoor workplaces that: 'During working hours, the temperature in all workplaces inside buildings shall be reasonable.' Minimum temperature: <b>16 C° or 13C°</b> 'if much of the work is physical'.</p>	<p>The Guide to the Safety, Health and Welfare at Work, General Application Regulations published by HSA: "An employer shall ensure that— (a) during working hours, the temperature in rooms containing workstations is appropriate for human beings, having regard to the working methods being used and the physical demands placed on the employees, (b) for sedentary office work, a minimum temperature of <b>17.5° C</b>, so far as is reasonably practicable, is achieved and maintained at every workstation after the first hour's work, (c) for other sedentary work, at every workstation where a substantial proportion of the work is done sitting and does not involve serious physical effort, a minimum temperature of <b>16°C</b> is, so far as is reasonably practicable, achieved and maintained after the first hour's work,...."</p>																						
	<p><b>Spain<sup>5</sup></b></p>	<p><b>Finland<sup>6</sup></b></p>																						
	<p>It is stipulated that the temperature of the premises where sedentary work or similar is carried out should be between 17° and 27 ° C. The temperature in rooms where light work will be performed should be between 14° and 25°C.</p> <p>Original text: "La temperatura de los locales donde se realicen trabajos sedentarios propios de oficinas o similares estará comprendida entre 17 y 27° C. La temperatura de los locales donde se realicen trabajos ligeros estará comprendida entre 14 y 25° C.</p>	<p>Beside temperatures other factors contribute to the room climate: humidity, air circulation and thermal radiation. Another factor is the physical workload. The standards have been formulated by taking these factors into account:</p> <table border="1"> <thead> <tr> <th>Classification of work</th> <th>Body - production of heat</th> <th>Temperature recommendation</th> <th>Air circulation</th> </tr> </thead> <tbody> <tr> <td>Sedentary work</td> <td>Less than 150 W</td> <td>21 - 25 °C</td> <td>under 0,1 m/s</td> </tr> <tr> <td>Other light-weight work</td> <td>150 - 300 W</td> <td>19 - 23 °C</td> <td>under 0,1 m/s</td> </tr> <tr> <td>Medium-weight work</td> <td>300 - 400 W</td> <td>17 - 21 °C</td> <td>under 0,5 m/s</td> </tr> <tr> <td>Heavy work</td> <td>400 -</td> <td>12 - 17 °C</td> <td>under 0,7 m/s</td> </tr> </tbody> </table>				Classification of work	Body - production of heat	Temperature recommendation	Air circulation	Sedentary work	Less than 150 W	21 - 25 °C	under 0,1 m/s	Other light-weight work	150 - 300 W	19 - 23 °C	under 0,1 m/s	Medium-weight work	300 - 400 W	17 - 21 °C	under 0,5 m/s	Heavy work	400 -	12 - 17 °C
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<sup>3</sup> See: <http://www.hse.gov.uk/temperature/faq.htm>, accessed on 24.11.2011.

<sup>4</sup> HSA, 2007, p8/9.

<sup>5</sup> Real Decreto 486/1997.

<sup>6</sup> See: <http://www.tyosuojelu.fi/se/temperatur>, accessed on 24.11.2011.

## ***Comparison of WPD requirements and national transposition***

This paragraph will discuss the issues being regulated in the corresponding national legal acts compared to the WPD. Several examples of deviations will be pointed out, without the claim to provide an exhaustive list. The question is also to examine in how far the WPD transposition has modified the national legal framework.

In **Austria**, some aspects of the WPD haven't been mentioned in the former law and were transposed by the corresponding national legal act (AStV) for the first time. These include provisions regarding windows and roof lighting (windows shouldn't constitute any danger for workers even when open; safe maintenance and cleaning should be possible in line with protection measures against falls from height), doors for pedestrians, requirements for emergency exits, loading bays, dimensions of traffic routes, emergency routes and exits etc. Further amendments were introduced on January 1, 2010, due to a decree of the European Court of Justice to include aspects on first-aiders as well as on persons being responsible for fire fighting and evacuation (BGBl. II Nr. 256/2009).

The WPD contained only a few new elements as compared to the existing **Belgian** requirements on prevention policy. The Royal Decree of 18 June 1993, which transposes the Directive, predates the introduction of the Codex. To a limited extent, the transposition work affected the requirements set out in the General Regulations on Occupational Safety. On the one hand, provisions were introduced whose object was more specific in nature than the general field of application envisaged by the existing prevention policy (e.g. transparent walls, upward-opening gates); on the other hand, existing articles were supplemented or replaced to make the rules match the wording of the Directive to a higher extent (e.g. emergency exit doors, room for manoeuvre in the workplace).

In the **United Kingdom**, the WPD was not transposed one to one into the Workplace Regulations 1992. The WPD and the Workplace Regulations 1992 differ on many issues, starting from the global structure of the document and the titling of the different articles. At some points, differences exist in the content of both legislations. For example, the Workplace Regulations 1992 include provisions on wholesome drinking water to be present at each workplace and suitable facilities to be made available for food to be eaten. They also include a provision on thermometers to be present at workplaces to enable employees to determine the inside temperature. The Workplace Regulations 1992 also demand a seat (and footrest) to be provided at the workplace for each person whose work must be done while sitting. In article 12 of the Workplace Regulations 1992 on the condition of floors and traffic routes, provisions are made to provide handrails on staircases. Article 13 takes special precautions to prevent persons at work from falling into a tank containing dangerous substances. Furthermore, articles on washing, clothing and sanitary facilities are a bit more extensive than the WPD. For example, the Workplace Regulations 1992 demand that sanitary conveniences are adequately ventilated, cleaned and lit. They demand the presence of soap and towels in washing facilities and suggest facilities for drying clothing.

However, in article 11 on workstations and seating, the Workplace Regulations 1992 do not demand that people working outdoors are protected from falling objects nor from dangerous levels of noise or dangerous influences (gas, steam, dust, etc.) as does the WPD in article 21.3. The Workplace Regulations 1992 do not mention any provisions concerning doors on emergency routes nor doors for pedestrians in nearby car garages. Neither do they make

any recommendations on the number, location and size of doors at the workplace. In addition to this, the Workplace Regulations 1992 do not include provisions on emergency exits and routes, on fire detection and fire fighting, and on electrical installations.

In **Iceland**, Directive 89/654 EEC was transposed in January 1996 through Regulation No. 581/1995 on the Premises of Workplaces governed by the Act on Working Environment, Health and Safety in Workplaces. The main requirements of the WPD were already covered in former Icelandic law and regulation on working environment, health and safety in workplaces. Prior to the EEA Agreement, the Icelandic government took notice of other Nordic countries regarding laws and regulations on working environment, health and safety in workplaces. It resulted in detailed instructions regarding several factors in the workplace, for example specific norms for room height, number of washbasins and showers per employee etc.<sup>7</sup> In addition, the regulation makes a distinction between two types of spaces in the workplace. One is referred to as workspace and is defined as the area one works in. The other is defined as staff area in the regulation and refers to changing rooms, lockers, restrooms, toilets, showers, cafeteria and canteens (Reglur um húsnæði vinnustaða nr. 581/1995). Nevertheless, several factors not included in previous regulations are to be found in Regulation No. 581/1995 on the Premises of Workplaces after the transposition of the Workplace Directive. Factors concerning restrooms and rest areas, loading bays, doors and gates and handicapped workers are examples of additions. Due to this increased coverage in current regulation, the Directive has a positive impact on standardisation of the Icelandic law on working environment, health and safety in workplaces.

In **the Netherlands**, it was stated that the WPD did not lead to significant changes in Dutch policy on occupational safety and health regulations. Most of the topics in the Decree were already regulated at a comparable level of protection. For a number of articles, it was felt that the implementation of the WPD has had the effect of complicating Dutch regulations, due to the extensive and, sometimes, detailed annexes. For example, the ban on sliding doors in emergency routes was problematic, because every route in a building is also an emergency route. The requirement for non-slip floors is hard to reconcile with the requirements for the hospitality and catering sector and the food sector to use smooth floors, which can be easily cleaned. It was the service sector that turned out to be affected the most at the time of Directive's transposition. At the time of preparation of the WPD, there were not yet many OSH rules in this sector.

In **Germany**, the former Ordinance on Workplaces was expanded by §18 und §19 for complying with the Workplace Directive in 1996. The main requirements of the Workplace Directive were already reflected by the former Ordinance on Workplaces from 1976. However this Ordinance was, until 1996, only valid for industrial economy. The coverage of the new Ordinance was much broader, and included also the public sector, so-called independent professions like lawyers and physicians, the agricultural sector and non-profit organisations. Due to this enlargement of coverage, the Directive is seen as a positive impact on the standardisation of the German OSH law.

The **French** regulations on workplaces were in need of modernisation. However, the changes resulting from the transposition of Directive 89/654 had less to do with increasing the level of requirements than with integrating those requirements into a formalised approach

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<sup>7</sup> Information obtained in an interview with employees at the Administration of Occupational Safety and Health in Iceland.

to prevention based on the principle of risk assessment. Another specific feature of the changes is that they include provisions that apply to when premises are being designed. This principle already existed in French law before the Directive. Thus, Decree 92-333 transposes the general provisions of Annex II on the use, organisation and maintenance of workplaces already in use, and Decree 92-332 implements the general provisions of Annex I on the design and layout of workplaces to be used for the first time.

Directive 89/654 only distinguishes one level of responsibility, whereas the French regulatory system, since the law of December 6, 1976, has distinguished between the responsibility of the head of the establishment that uses the workplace, and that of the owner, who has buildings constructed or developed that are intended to be used as workplaces.

With regard to environment and hygiene, the transposition has enabled certain areas, such as heating, to be dealt with that had not been previously addressed. There are also provisions which complement existing legislation on:

**Table 1** fire safety (revision of the classification of flammable materials in order to use current terminology, passageways, evacuation procedures, etc.)

**Table 2** safety of doors and gates

**Table 3** access to zones where there is a danger of falling

**Table 4** first-aid equipment

**Table 5** access for disabled workers

**Table 6** temperature of ancillary areas (rest area, canteen, toilet areas, etc.)

In addition, the transposition of the Directive has provided an opportunity to set out numerous legal requirements, which had not previously been specifically defined for building owners.

In **Estonia**, the Regulation n° 176 “Occupational Health and Safety Requirements” includes several aspects that are not covered by the WPD. § 2, clause 3 regulates the placement of the chair and work desk; the working level shall ensure an ergonomically correct positioning of the worker’s body. §5, clause 3 and 5 mention that devices or constructions placed on walls or on the ceiling shall be fixed in a safe manner so that the possibility of their falling down is eliminated. §10 concerns the provision of eye wash facilities: An eyewash that is located at an easily accessible and clearly indicated location shall be provided, if there is danger of a foreign body or a chemical coming into contact with eyes in the workplace.

In the corresponding Hungarian legal act, the following additional aspects are included: drinking water provision, protection against noise and vibration at the workplace, the handling of litter at workplaces.

In the **Latvian** requirements N° 359, there is an extra paragraph (§12) on planning, organising and maintaining a work area. According to this, the work area shall be, as much as possible, planted with greenery, and shall have well-organised traffic routes; waste shall be collected, sorted and temporarily stored in specially arranged places; warehouses for fine (powder-like) materials shall be located at a distance of least 25 metres from other buildings, if the size of the undertaking allows for this (Min. Cab., 2009). Furthermore, §29.10 stipulates that “workers shall be ensured with drinking water and protection against natural optical radiation (solar radiation)” (Min. Cab., 2009).

Additional provisions in the **Romanian** national law include the definition of and specific provisions for work in isolated conditions and ergonomic principles. The provisions are

however not specific; they only list the aspects that should be taken into account for the designing, installation and equipment of workplaces and work processes.

### **Contextual factor: national debates**

The national and sectorial debates at the time of the transposition of the EU OSH Directive will influence the final transposition text. The discussions give an indication of the 'perceived legitimacy' of the new legislative text. A consensus gives a favourable context for the implementation process at company level. Heated debates are a rather unfavourable base for the implementation process.

This paragraph presents, for some countries, the context of national debate during the transposition phase.

In **Belgium**, the text of the Directive did not provoke any severe discussions in the High Council. The way in which the text has been transposed into national legislation however, has been discussed. The advice was not anonymous: the workers' organisations did agree with the text, the employers' organisations wanted a complete rewriting of the General Regulations. Since there were only minor adaptations necessary, some of the existing articles were adopted, others were integrated in the text. The employers' organisation wanted a separate text, but this was not feasible at that time.

In **Bulgaria**, special working groups including representatives from concerning ministries and institutions and from organisations of employers and of the employees, recognized as representative at the national level, were created for preparation of Ordinance No 7. After its development, the draft Ordinance has been coordinated with national representative organisations of employers and of employees. The draft Ordinance was submitted for discussion and adoption by the Council of Ministers after receiving the views and comments of social partners and their reflections on the draft. This procedure is followed for the development and adoption of all legal acts in the field of labour and social security relations and issues concerning the standard of living.

In **Spain** it was mentioned in the second national information bulletin that one of the negative aspects of the Directive is the lack of specificity in a number of matters that are regulated by the Directive such as environmental conditions (temperature and humidity) at the workplace. A greater accuracy was seen as recommendable.

The **French** legislative texts have been debated in the special committees on information and on chemical, biological and physical environment risks within the supreme council for the prevention of occupational risks (now the advisory council on working conditions) in order to establish the French position in relation to the Directive. Apparently, the regulatory texts have not been controversial<sup>8</sup>.

In **Latvia** the legislative norms related to Labour Protection Law are developed in working groups consisting of the social partners including the Ministry of Welfare, State Labour Inspectorate, Latvian Free Labour Unions, Latvian Employer confederation, and Riga Stradina University Agency (Labour safety and environment health institute). Articles in Latvian press from time to time reported on cooperation of social partners for the development of regulations. However there are no indications on the possible effects of this

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<sup>8</sup> Oral information from the Ministry of Labour (France) and INRS.



cooperation. The State Labour Inspectorate (VDI) regularly cooperates with different state institutions with regard to labour protection issues, so e.g. with the State Income Service, State Social Security Agency, State Education Inspectorate (to visit and inform educational institutions before the new study year), State Sanitary Inspectorate, Railway Technical Inspectorate, State company Latvian Forests, State Employment Agency, State Construction Inspectorate, Consumer Protection Centre, Fire and Saving Services Employers Confederation, Local authorities in regions, Police departments in regions, Labour Unions (VDI, 2002, p. 22.).

### III.2.2. OPINION OF THE STAKEHOLDERS

The table below presents an overview of the results of the responses of experts and social partners to the question on the extent of changes brought to the existing national regulation by the transposition of the WPD. Especially, the aspects of the relevance of the transposed requirements and the form of these, namely the strictness of the new requirements in comparison with former national regulations and the appraisal of the level of definition of the new requirements in comparison with pre-existing regulation. Also the question of controversies during the transposition has been submitted to the stakeholders: differences of opinion can indeed influence the practical implementation of regulatory requirements.

The overview of the various national situations shows that very few countries have stated that some specific aspects of the national legal text resulting from the transposition of the WPD were the subject of a debate amongst stakeholders. In many cases, the transposition only marginally impacted the pre-existing regulation (some missing aspects were added or changes were induced to the form but not significantly to the content). The stakeholders of only a few countries agreed on the idea that the relevance of the transposed requirements was questionable.

Approximately one third of all stakeholders declare that the **national laws transposing the WPD are exactly the same** (9%) or differ to a **very small extent** (almost 28%) from the original directive. Another one third (35%) of the stakeholders state that the national legislation includes additional requirements, that were to a large extent already available in the legislation in force before the transposition.



**Table 11 To what extent does the national law transposing the WPD differ from the original Directive?**

<b>STAKEHOLDER B09</b>	<b>%</b>
Very small extent, not much	28
Exactly the same	9
Additional requirements/The national law is more specific about some aspects	35
Other comments	13
Don't know /NA	15
<b>Total</b>	<b>100</b>

Source: Stakeholder survey

The stakeholders mention some aspects, which differ from the original directive.

The **Hungarian** national decree is more detailed. Two additional domains, namely the provision on drinking water and protection against vibration, that do not feature in the WPD, are also covered by the Hungarian act (HU, Gov and Exp). The **Icelandic** legislation has provisions concerning requirements to ergonomic working-conditions such as adjustable working heights and requirements for special rooms for equipment for daily cleaning (IS, Exp). The **Latvian** legislation is more precise in having additional requirements of lightning level, indoor microclimate, as well as limits of time and breaks from outside work in cold environments (LV, Exp).

The harmonized **Cypriot** legislation includes additional requirements, e.g. for sanitary equipment, restrooms, room temperature, lighting and ventilation. These requirements were included in the old Cypriot legislation on factories and have been added to the requirements of WPD to facilitate employers and employees to use a comprehensive legal document (CY, Gov).

The **Portuguese** Law contains more details on some aspects such as the penalties and fines and the minimum space dimensions (PT, Wor). In **Slovakia**, the first legal act that resulted from the transposition of the WPD into national law was a literal translation of the WPD. Latter versions were more specified, taking into account quantitative details such as workplace dimensions and the minimum surface per employee (SK, Gov). The **Maltese** legislation includes a section on smoking, it defines the frequency of fire drills, and it contains a clear definition of the duties of employers to ensure structure and solidity, the traffic routes & danger areas (MT, Gov).

Two thirds of the stakeholders state that the transposition of the WPD has taken **into account their pre-existing national law**. (Question B09)

The transposition was carried out in a process of dialogue with all stakeholders (MT, Empl). Included are requirements that already proved to be positive in the previous legislation (SI, Gov). The process of the transposition of the Directive triggered the screening of national legislation to ensure no duplication of clauses (MT, Gov). The transposition of the WPD in

Cyprus took into account pre-existing national Law and reflects the size of the Cypriot economy, the system of labour relations and the system and culture on Health and Safety at the Workplace (CY, Empl). In Hungary, the corresponding Decree takes into account the pre-existing national legal acts as well as secondary legislation (standards, e.g. lighting EN 12464) (HU, GOV).

App. 10% of the stakeholders state that the transposition of the WPD did not take into account their pre-existing national law. This can be related to the lack of former OSH provisions.

As an example, one **Estonian** stakeholder assessed that there was no need to take on board the former legislation, since the old soviet-time acts were totally out-dated. The national version of the WPD came into force together with the Occupational Health and Safety Act as the national version of the framework Directive (EE, WORK).

Almost 70% of the stakeholders state that the **WPD positively influenced their national legislation**. 17% of the stakeholders disagree or rather disagree with this statement. The remaining stakeholders do not know or have not answered.

Stakeholders that agree or rather agree, state that the legislation became clearer. Legal duties are now more defined and clearer to employers (MT, Gov), the requirements became more specific (EE, Gov).

The **Danish regulation** was improved with regard to the pregnant and the handicapped (DK, GOV) and added additional requirements. According to the **Latvian stakeholder** as well, the transposition of the WPD made the national legislation clearer and included additional requirements (LV, Work).

Also the existing legislative structure was reviewed in a number of Member States. The approval of the Directive resulted in the updating of the relevant legislative acts, thus, naturally had a positive effect (HU, GOV). In Austria, the structure of the corresponding legal act was improved (AT, Gov).

The transposition initiated even broader discussions in some Member States. The transposition, as previously indicated, was the occasion of a reflexion on the related regulation, which led to a certain reorganization, modifications and additions ensuring the modernization of the existing legal texts (FR, Gov). For Luxembourg an employer representative stated:

*“These discussions should be seen in an overall reflexion on the impact of the new approach to directives, starting with the framework directive. It is mostly the framework directive, which had a positive impact on the national legislation because it permitted to rethink the existing regulation. A debate on OSH issues at national level could take place. It has been an important stimulation. I should say then that the framework directive with all the particular directives had together a positive impact on the national legislation but not the WPD as such” stated (LU, Empl).*

A positive influence on national legislation was due above all to the wide discussion opened in Italy by the Decree transposing Directive 89/391 and all other accompanying Directives, including WPD (IT, Exp).

Stakeholders that disagreed with the positive influence, find the provisions in the WPD too detailed and would prefer a deviation from them at national level. In their report on the practical implementation of WPD the stakeholders in the **Netherlands** state that there is little room to deviate from the requirements at the national level. It is believed that it would be more appropriate for the essential requirements to be worked out by parties other than the government, for example by employers' and employees' organisations. For example, they could determine which requirements apply in which situations at sector level (NL, Gov).

***Contextual factor: Pre-existing legislation and extend of changes***

The existing legal framework in a country before transposition of the EU OSH Directive is an important contextual factor with regard to coverage and type of regulatory approach.

If the regulatory provisions of the EU OSH Directive are already to a large extent covered by the existing national legislation, than the transposition process will cause fewer problems.

The EU OSH Directive can add regulatory provisions to the existing legislation, it can replace existing articles and it can fill a legal vacuum, for example with regard to the scope of legislation, or to specific types of workplaces or workers.

Closely related to the coverage is the question of the underlying legislative model in a country. Objective-based regulation does not specify the means of achieving compliance but sets goals that allow alternative ways of achieving compliance. In prescriptive regulation, the specific means of achieving compliance is mandated. A country with a legal tradition of objective-based regulation will have difficulties with the prescriptive provisions of the EU OSH Directive, while a country with a strong legal tradition of prescriptive regulation will find it difficult to organise its enforcement policy, for example.

The more legal adaptations are necessary for a certain country, the more difficult it will be to transpose the EU OSH Directive in a qualitative way in the national legislation.

**Table 12 Changes in existing legislation**

Country	Years since transposition	Transposition controversy	Extent of changes	Relevance of transposed requirements	Strictness	Definition
Austria	10-15	none	limited	-	=	+/=
Belgium	> 15	some	limited	-	=	=
Bulgaria	10-15	some	important	+	=	+
Cyprus	< = 10	some	important	+	+/=	+/=
Czech Rep	10-15	none	moderate	+	=	=
Denmark	> 15	none	limited	+	=	=
Estonia	< 15	some	important	+	+/=	+
Finland	10-15	none	limited	+	+/=	+
France	> 15	none	limited	+/-	+	+
Germany	> 15	some	limited	-	-	-
Greece	< = 15	none	moderate	+	+/=	+
Hungary	< 10	none	important	+/-	+/=	+/=
Ireland	> 15	some	important	+	+/=	-
Italy	> 15	none	limited	+	+/=	+/=
Latvia	< = 10	none	limited	+	+	+
Lithuania	< 10	none	important	+	=	+
Luxembourg	> 15	none	limited	+	=	+
Malta	< = 10	some	important	+	+	+
Poland	10-15	N/A	limited	+/-	+	+
Portugal	> 15	N/A	important	+	+	+
Slovakia	10-15	N/A	important	+	N/A	-
Slovenia	10-15	some	important	+	+/-	-
Spain	< = 15	some	limited	-	=	-
Sweden	> 15	N/A	limited	+	=	=
The Netherlands	> 15	some	limited	+	+/=	+/=
UK	> 15	none	limited	+	=	+

Source: Stakeholder survey

## **Reading of the table:**

*Limited changes* correspond to some additional requirements or changes in the form without significant abrogation and replacement of the former regulation.

*Moderate changes* correspond to a more significant revision of the legal framework, some changes on fundamental aspects.

*Important changes* constitute a deep revision of the legal framework (repeal of entire sections of the legislation for the formulation of new regulation).

*Relevance:* + (all or most of the stakeholders), +/- (opinions are clearly mixed among the stakeholders), - (consensus on not obvious relevance of changes in the national regulation)

*Strictness:* + (new rules make the regulation stricter than before), = (the level of strictness is almost the same), - (the new regulation is less strict than before). Opinion of the stakeholders is sometimes mixed on this issue also.

*Definition:* + (the new regulation gives a more defined framework than before), = (the new regulation gives the same level of framework definition than before), - (the new regulation gives a less defined framework than before).

Remark: for some countries the overview is based on a single opinion.

## ***Controversial discussion items***

Many respondents indicate there were no particular controversial discussions or are not aware of any. Some mentioned the following issues:

- a) Transposition 1:1 and existing detailed character of the current legislation (GE, Gov)
- b) Handicapped workers (IRL, Employers)
- c) First aid room (EST, Gov)
- d) Pregnant and nursing mothers (IRL, Employers)
- e) Fire exits and security issues (FIN, workers; IRL, workers)
- f) Solidity of the building, obligation applied to user of a building (FIN, workers)
- g) Temperature and type of company (ES, Expert)
- h) Penalties in case of infringement (CY, Employers)
- i) Direction of opening of emergency door and sliding door (BE, Gov)
- j) Level of details of the annexes and rising complexity of existing legislation (NL, Gov)
- k) Separated toilets for males and females (BE, Employers)

## **III.3 Findings on practical implementation**

### ***III.3.1 DESK RESEARCH***

#### ***Awareness of companies***

The Workplace Directive report established by HSE for **UK** revealed that all companies employing over 250 staff were aware of the Workplace Regulations, as were 98% of smaller companies. All these companies believed the regulations applied to their company to some extent. This finding is in line with the majority of statements from stakeholders.

In **France**, a survey of firms (ADIGE) carried out at the request of the Ministry of Labour for the evaluation report on the European Commission's Workplace Directive (2000) showed that the level of penetration of information, measured against four other directives evaluated at the same time (framework directive, work equipment, construction sites, and personal protective equipment) was among the lowest: only one in two people knew about the Workplace Directive. The theme of the Directive is the one on which participants in the survey were the most vague, probably due to the multifactorial nature of the provisions, which have not always led to significant changes to existing regulations.

## ***Compliance***

In 2002, HSE produced a questionnaire in order to ascertain the effectiveness of the OSH regulations in the **UK**. All companies aware of the regulations believed they applied the regulation to their company at least to some extent. 94% believed they applied it extensively or to a large degree. 39% of the respondents claimed they had problems implementing the regulations in their workplace, the majority of the problems being related to cost and management issues, thermal comfort (lack of a maximum working temperature), working space, ventilation and implementation in older buildings. Most problems are expected in the construction and manufacturing industries.

In 2009/10, a survey also undertaken by HSE, of almost 3000 health and safety representatives, union representatives, individuals and managers, found that the majority of respondents did not experience problems with high workplace temperatures.

## ***Compliance with regard to risk assessment***

The data gathered in the **Communication from the Commission** to the European Parliament, the Council, the European Economic and Social Committee and the Committee of Regions on the practical implementation of the provisions of the Health and Safety at Work Directives 89/391 (Framework), 89/654 (Workplaces), 89/655 (Work Equipment), 89/656 (Personal Protective Equipment), 90/269 (Manual Handling of Loads) and 90/270 (Display Screen Equipment)<sup>9</sup> show that risk assessment is, in general, not universally carried out. A significant number of companies, mainly small and medium sized enterprises (SMEs), still do not assess risks. The risk assessment exercise must be dynamically with the prevention programmes continuously updated as long as the risk situations persist. It is reported that the tasks of risk assessment, documentation and supervision is not universally spread, including in Member States with a tradition based on preventive prescriptions.

From the European Survey of Enterprises on New and Emerging risks (ESENER)<sup>10</sup>, we learn that the overwhelming majority of respondents (87% from EU27) stated that risk assessments are carried out in their establishment and that differences between countries are small with the establishments in Italy (99%), UK (97%) and Spain (95%) reporting the highest levels. Across the EU, 36% of establishments reported that they outsource risk assessments to external providers. The figures vary widely between countries. 83% of the establishments, which carry out risk assessments declare doing it at regular intervals. The most frequently covered issues by these checks are equipment and working environment

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<sup>9</sup> EU Commission, 2004.

<sup>10</sup> European Agency for Safety and Health at Work, 2010.

(96%) just before the work organization (75%). If the results show a correlation between size of the company and share of risk assessment practice, in terms of areas covered there are no major differences.

Information about specific items of the risk assessment is not really available. Nevertheless, below some empirical results about the risk assessment practice in general are presented:

During a nationwide campaign in **Bulgaria**, carried out in late 2004, the Bulgarian General Labour Inspectorate identified 7,316 cases of labour law infringements, of which almost 70% concern health and safety in working conditions. The inspection covered 1,480 employers (2,138 work sites) and involved 84,007 workers (about 4% of the total number of salaried workers in the country). The lack of risk evaluation represented 518 cases. This was particularly common in small and micro sized companies, as well as those being inspected for the first time. Here also, the inspectors found that only minimal evaluation had taken place in order to cover the requirements<sup>11</sup>.

A **Danish** study from 1998 showed that almost half of the enterprises had not carried out any risk assessment in that year. Among the enterprises with 5 to 19 workers, only 27% had conducted a study on the evaluation of risks. Among the enterprises with 20 to 49 workers the percentage was with 61% significantly higher and in enterprises with 50 to 199 workers it accounted for 67%. Among the large-sized enterprises with 200 and more workers, 95% had conducted studies on the conditions at the workplace<sup>12</sup>. However, the practice of risk assessment has apparently improved since then as the data of the analysis of the health and safety activities of enterprises done by the National Research Centre for the Working Environment in 2006 show that the mandatory risk assessment is conducted in some 78% of enterprises with 1-9 workers, whereas this is the case for 88% for small enterprises with 10-19 workers and around 96% for enterprises with 20 or more workers<sup>13</sup>.

Studies in **Germany** indicate that depending on the size of the enterprises, between a quarter and a third of the companies had carried out systematic and comprehensive risk assessments. In average, this nevertheless covers 75% of all workplaces<sup>14</sup>.

The results of the 2008–2009 works council survey, carried out by the Institute of Economic and Social Research within the Hans-Böckler-Foundation, highlight the effects of various management practices on work strains in German companies. The survey findings provide a new insight into health risk management at establishment level, also highlighting that only a minority of companies are carrying out health risk assessments.

Health risk assessments, albeit statutory, are carried out by 46% of all companies surveyed, and only 29% of these acknowledge psychological stress as a health risk. Companies that proceeded with a health risk assessment indicated different reasons for doing so: in 46% of the cases, a consultancy provided the impetus for carrying out such an assessment; in 38% of the cases, high workload was the reason for such an assessment; and in 24% of the cases, a restructuring process preceded the risk assessment initiative.

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<sup>11</sup> Gladicheva, R., 2005.

<sup>12</sup> EU Commission, 2004, 62 final.

<sup>13</sup> Christiansen, R. H. and Nielsen, H. O., 2010.

<sup>14</sup> EU Commission, 2004, 62 final.



On the other hand, the works councils of establishments that do not carry out a health risk assessment (54%) indicated that management and/or the works council do not know how to carry out such a risk assessment (69%) or do not know this type of instrument at all (34%). In these cases, workers' health is considered to represent a minor problem (64%), or is said to be too costly (40%) or too demanding for the company (40%). Some 32% of the works councils surveyed claim that they are too busy to consider carrying out a health risk assessment at the workplace<sup>15</sup>.

A 2005 study by the Labour Institute of the **Greek** General Confederation of Labour and the Confederation of Public Servants aimed at evaluating the implementation of legislation on workplace health and safety in Greece. With regard to the written occupational risk assessment, which is a statutory obligation of the company, the study revealed that only 47.2% of the survey sample knew of such an assessment. This finding corroborates the answers to specific questions relating to the risk assessment, such as whether measurements are taken of harmful substances in the workplace. Only 26% responded that measurements of harmful substances had taken place.

Furthermore, only about half of the respondents answered yes to the question on whether a manual was available containing advice and guidelines from the safety officer and occupational doctor. At the same time, just 46% of those surveyed gave an affirmative response to a similar question on whether the prescribed record of occupational accidents was kept.

Hence, it is not surprising that 50% of the workers and managers in the companies included in the research sample believed the labour legislation to be incomplete or somewhat incomplete as regards their employment. Taken in conjunction with the survey responses on the strength of the legislation, the data lead to the conclusion that most workers believe the legislative framework to be comprehensive but simply ineffective in its implementation. The high percentage of respondents (42.6%–59.3%) who did not answer the above questions is also striking; this probably has to do with poor knowledge of the labour legislation on their part. Overall, the majority (66.9%–79.9%) answered that they had little or no knowledge of the basic labour legislation, while a minority (20.1%–33.1%) responded that they had good or very good knowledge in this regard.

In relation to differences between sectors, the study revealed that, compared with the other two sectors investigated, the broader public sector reported significant deficits in the area of health and safety.

This view emerged from the following findings in the broader public sector:

- 64% of respondents answered that the position of an occupational physician was not implemented;
- 66% of respondents reported that no written risk assessment existed<sup>16</sup>.

In the first six months of 2005, the National Labour Inspectorate of **Hungary** carried out inspections and assessments at more than 13,000 premises. A total of 5,000 employers did not keep to the work safety regulations, and a similar number did not possess the required documentation. Disregarding machinery controls or failing to maintain adequate supervision

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<sup>15</sup> Kraemer, B., 2010

<sup>16</sup> Kretsos, L., 2007.

were also frequent causes for fining. At more than 4,500 firms, the compulsory risk assessment was not available or was of unsatisfactory quality<sup>17</sup>.

There are no surveys about the level of applied risk assessment in **Romania**. However, from the Esener survey we learned that 77,8% of Romanian employers declares they do have a documented OSH policy. In a recent Romanian survey<sup>18</sup>, about 55.4% of the responding workers stated that their employers provided good working conditions (such as running water, first aid facilities, electricity, heating, air conditioning). The existence of in-house first aid/consulting rooms was confirmed by less than 40% of the interviewed workers and by over 80% of the employers.

In 2005, the **Slovakian** National Labour Inspectorate (NIP) conducted a nationwide inspection aimed at identifying the level of compliance with conditions of occupational safety and health (OSH), including measures for the elimination or reduction of risk originating from noise in the working environment. The inspections were carried out at selected workplaces in small and medium-sized enterprises (SMEs) in the wood-processing, metal and metal-processing, chemicals and textiles sectors. NIP visited a total of 136 companies and 19 workplace controls were coordinated with the state health surveillance authorities.

In total, as many as 1,092 health and safety infringements were detected, of which 82 cases were considered as serious. Among them, cases also emerged where employers did not implement risk assessment for the operation of individual machines, and reviews of risks in respect of noise were not prepared.<sup>19</sup>

In 2007, the **Swedish** Union for Technical and Clerical Workers' and the Salaried Workers' Union, which merged to form the "Unionen" trade union on 1 January 2008, carried out the second work environment survey.

According to the study, 20% of trade union members report that their employer conducts surveys to identify work-related physical risk, while only 12% of trade union members report that their employer does the same to identify psychosocial risks. This finding highlights the general perception that ill-health is mainly associated with physical risks; hence, the identification of psychosocial risks is neglected<sup>20</sup>.

The information gathered in the **Netherlands** in 2004 indicated that 58% of the enterprises fulfil the newly introduced obligation to analyse the risks present at the workplace. In enterprises with more than 20 workers this figure amounts to more than 80% and in enterprises with more than 100 workers to 96%. The percentage for small-sized enterprises is lower. Amongst the smallest enterprises with 2 to 9 workers only 52% have fulfilled their obligations. The reasons for refusing to carry out risk assessments are as follows: 30% of the employers are of the opinion that this is not necessary, 21% so far have not yet found the time, 9% did not know about their obligation, 8% had never even heard about this beforehand and 7% expressed the view that it was too time-consuming and too expensive. For the Netherlands, data concerning the measures put in place on the basis of the risk assessment was also submitted. According to this information, approximately two thirds of

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<sup>17</sup> Balogh, K., 2006.

<sup>18</sup> Voinea, L., 2011.

<sup>19</sup> Matulová, S. 2007.

<sup>20</sup> Andersson, P., 2008.

the enterprises that had carried out risk assessments have started to work out the appropriate measures and also two thirds of the enterprises have already put in place concrete measures for occupational safety and health<sup>21</sup>.

The Dutch Employers Work Survey (WEA) is held among a stratified sample of about 5,000 employers that are questioned on company characteristics and company policy (Oeij et al., 2008). The WEA is made representative by weighting<sup>22</sup>.

The obligation for all companies to develop and write a policy document on all occupational OSH risks is called the Risk Inventory and Evaluation (RI&E). This risk assessment instrument describes all risks in a company or establishment. Despite the obligation, small companies are less likely to have such an RI&E (see table).

One can get a good overview by combining these sources of information in time, e.g. subdivided by company size and sector.

**Table 13 Dutch companies with a risk assessment instrument (2008) by company size (%)**

Presence of a risk assessment (RIE)	< 5 workers	5-9 workers	10-49 workers	50-99 workers	100 workers
Yes, and approved by an occupational health service	22	48	56	83	92
Yes, but not approved by an occupational health service	12	13	17	10	4
<b>Total</b>	<b>33</b>	<b>66</b>	<b>73</b>	<b>94</b>	<b>96</b>

In sectors with many small companies like the hotel and restaurant sector, or retail such a RIE is less often present than in sectors with many large companies like the public administration, education and manufacturing. A positive exception is the building and construction industry with many SME's.

When they perform or have performed a risk assessment, smaller companies also more often use a model RIE in use of or developed by the sector<sup>23</sup>. The use of standard risk assessment models could mean that all mandatory aspects are covered.

30% of the enterprises in the **United Kingdom** that were familiar with the new provisions had analysed the conditions at the workplace even before the European provisions were implemented. Approximately half of the enterprises have conducted risk assessments for the first time after the implementation of the European Directives. In total, more than 80% of all the enterprises have carried out risk assessments. 22% of the enterprises do not have any documentation on the most important findings of these assessments. Amongst them, there

<sup>21</sup> EU Commission, 2004, 62 final.

<sup>22</sup> Kwantes, J. H.; Houtman I. & Hesselink, J. K., 2010.

<sup>23</sup> Kwantes, J. H.; Houtman I. & Hesselink, J. K., 2010.

are many of the smallest enterprises with less than 5 workers which were discharged from the documentation obligation. But also 3% of the large-sized enterprises and 24% of the enterprises with less than 50 workers do not fulfil their documentation obligation<sup>24</sup>.

### ***Compliance with regard to information, consultation, participation and training***

In its Communication to the European Parliament in 2004, the European Commission estimated that as far as the participation of workers is concerned, their general participation in the enterprises has still not been organized in a satisfactory manner and that greater opportunities for the participation of the workers were opened up by the Framework Directive. This is also true for countries in which the participation of workers has traditionally been given a high priority, as in Germany and the Netherlands.

It is furthermore noticed that the obligations to inform workers also refer to the workers from other enterprises working on the same premises. The practical implementation of this provision is lagging far behind the average of the other categories of employers' obligations. This problem occurs in practically all of the industrial sectors, in all Member States and in all the different enterprises of diverging sizes and is of particular importance in the case of temporary workers. In the majority of cases temporary workers are being used for less qualified jobs with heavy physical burdens. Since these temporary workers, frequently switch jobs changing from one enterprise to another, they do not know about the potential risks and operational processes.

The Commission notes that as for works councils, empirical studies and interviews also indicate that they only seize these new opportunities with certain reluctance.

Special reference should be made here of the institutions specifically responsible for occupational health and safety. These can be committees in which in addition to the workers, the employers or the persons responsible for occupational health and safety are also represented or institutions in which only the workers are represented. Very little is known about the activities of these organisations in relation to all countries of the EU. French experts estimate that only one fifth of the existing Health, Safety and Working Conditions Committees make effective preventive efforts.

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<sup>24</sup> Communication from the Commission, 62 Final.

The Commission also noted that in Member States with a clearly defined culture in co-management, a negative trend has been observed concerning the institutionalised representation of interests. The more clearly defined employment relationships and the higher the number of institutions and committees dealing with occupational safety and health, the less likely workers themselves actively participate in the definition of the prevention policy in the enterprise.

As regards training, according to the Commission's report, the levels of education and training in large companies are considered adequate. However, there is a general lack of education and training of workers, safety representatives and employers on health and safety risk management in small and medium sized companies. This situation impairs an effective application of the health and safety legislation.

However, the last data from the European Working Conditions Survey of Eurofound show that the share of workers declaring that they are well or very well informed about safety and health at work is improving at the European level. They were between 81 and 90% (according to the level of qualification) to express they are well informed in 2005 and between 90% and 92% declaring the same in 2010 (data for EU27).

The ESENER survey also shows that 91% of OSH representatives said that they are provided with the information necessary for carrying out their OSH tasks properly. Changes in equipment and working environment are the second most frequent issue on which they get information. Training coverage varies considerably by topic, with the most frequently granted being related to the most immediate health and safety dangers. Close to eight out of ten health and safety representatives received training in the prevention of accidents (79%) or in fire safety (78%).

### ***Other findings on general obligations***

Data of the analysis of the health and safety activities of enterprises done by the **Danish** National Research Centre for the Working Environment in 2006 show that the mandatory risk assessment is conducted in some 78% of enterprises with 1-9 workers, whereas this is the case for 88% of small enterprises with 10-19 workers and around 96% for enterprises with 20 or more workers. This indicates that workers are being involved in some way in health and safety in approximately four fifths of micro enterprises (non-formal meeting structure), and informed and consulted in 63% (formal meeting structure). These figures increase with the number of workers in the enterprise<sup>25</sup>.

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<sup>25</sup> Christiansen, R. H. and Nielsen, H. O., 2010.

**Table 14 Organisation of OSH activities, by number of workers in enterprises (2006)**

In %	1-9 workers	10-19 workers	20 workers
Safety Group(s) at the workplace	12,4	26,7	51,5
Safety Committee covering the workplace	12,5	30	59
Safety and Co-operation Committee amalgamated	6,5	11,7	16,7
No formal organisation of health and safety activities	56,9	29,5	4,9
Risk assessment conducted	77,6	88	96,4
1 or more meetings on health and safety within the last year – formal meeting structure	63	77,9	93,8
Working environment is discussed by workers and employer or representatives – non-formal meeting structure	77,3	82,8	93,3

In 2005 the **French** working conditions survey found that in workplaces with a Health and Safety Committee, workers are at least twice as likely to report that they received information or training in health and safety in the previous 12 months. For example, when covered by such a committee, 29% of workers have had some training on health and safety in the previous year, against 9% of workers without a committee. Also, 57% of workers covered by a committee receive written safety instructions, against 25% of non-covered workers<sup>26</sup>.

In North Rhine Westphalia (the largest state of **Germany**) only one third of the workers were able to give a positive answer when being asked whether a risk assessment had been conducted at their workplace. Approximately one third gave a negative answer and almost one third was not able to answer this question at all. It can be assumed that this last group has no knowledge about its rights and obligations in relation to occupational safety and health provisions. Even one fourth of the German occupational physicians were not able to provide any information in this context<sup>27</sup>.

In **Ireland** a survey was conducted in 2006 by postal questionnaire, and 453 workplaces completed the survey; it was used to gather information on workplace health policies and activities. The project was undertaken by a partnership which included: the Irish Health and Safety Authority ([HSA](#)), the national agency charged with responsibility for occupational health and safety, the Health Promotion Services of the Health Services Executive West (the Health Services Executive ([HSE](#)) is the national agency with responsibility for managing the country's health services) and the Roscommon County Enterprise Board. Overall, 72% of the workplaces surveyed were micro-sized companies employing less than 10 people, 22% were small companies employing between 10 and 49 people, 5% were medium-sized companies employing from 50 to 249 people, and 1% were large companies employing 250 people or more.

While Irish law requires all undertakings to provide health and safety training, just over half

<sup>26</sup> Thomas Coutrot, Ministry of Labour.

<sup>27</sup> EU Commission, 2004, 62 final.



(52%) of workplaces provided some form of health and safety training for workers. The most common types of training provided were manual handling training (44%), general training (43%), first aid (36%), Safe Pass (23%) and fork-lift truck driving (18%). The fact that less than half of the companies provide core mandatory training – namely general training and manual handling training, which should be provided in every workplace – confirms the perception among safety professionals that a high rate of non-compliance with legal requirements prevails<sup>28</sup>.

From the CVT's surveys in **Luxembourg** it is noted that compared to 1999, more time was spent on training in personal skills (17% in 2005, up from 9.6% in 1999), as well as environmental protection and health and safety (6.6% in 2005, up from 5.1% in 1999)<sup>29</sup>.

The General Workers' Union of **Malta** carried out a study regarding health and safety representatives at different workplaces. The study revealed that company management does not always consult health and safety representatives, and in general representatives are not satisfied with how much they are being consulted on issues affecting workers. Similar percentages of representatives, amounting to about 33%, stated that they were properly consulted by management, that they were not consulted at all, or that they were only consulted occasionally. Two thirds of the sample of workers reported that they received most support from their trade union, while about one fifth said that they received support from more than one organisation, for example also from the Maltese Occupational Health and Safety Authority (OHSA).

According to a working conditions survey of 2,500 **Portuguese** workers, there are significant weaknesses in safety, hygiene and health measures in the workplace. Among the causes are lack of motivation due to low wages, a disregard for protective equipment, and a low level of worker participation in risk prevention procedures. The study *Condições de Trabalho e Humanização* was carried out as part of the project *Agir para alqualdade* ('Acting for equality'), developed between 2002 and 2004.

The survey results show low worker participation levels in preventive procedures: 32.4% reported participation in safety, hygiene and health training at work; 34.7% stated that they had participated in training for emergency situations.

In addition, the results reveal worker dissatisfaction with employer commitment to risk prevention measures. Only 18.2% of workers viewed company commitment to prevention as 'high' or 'very high', while 40% categorised it as 'insufficient' or 'non-existent'. At the same time, 72% of workers found that the preventive measures developed by companies are 'important' or 'very important'. This means that 28% of workers find such measures to be 'not very important' or even 'not important at all', which suggests that there is still a lack of awareness among workers regarding risk prevention in the workplace<sup>30</sup>.

A recent **Romanian** survey shows that 73.2% of the workers attended regular work safety training. Over 90% of the employers claimed that they had put in place the requisite conditions for the regular training of workers in work safety matters. Only 25,1% of the workers knew that there was an emergency plan/scheme in the event of serious or

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<sup>28</sup> Mulligan, H., 2006.

<sup>29</sup> De Broeck, V. 2008.

- <sup>30</sup> Perista, H. and Cabrita, J. 2005.



impending danger. More than 90% of the employers said that an emergency action plan/scheme had been developed<sup>31</sup>.

In 2005, the **Slovakian** National Labour Inspectorate (NIP) conducted a nationwide inspection aimed at identifying the level of compliance with conditions of occupational safety and health (OSH), including measures for the elimination or reduction of risk originating from noise in the working environment.

In the field of OSH management, 300 shortcomings were detected, most of which pertained to irregular information flow to workers about legal and other regulations for ensuring OSH. For example, training was not provided or training packs were not filed properly. Moreover, workers did not receive any information about results of noise measurements and about preventive and protection measures; in particular, the employers did not outline safe working methods, including protection against noise.

In relation to the working environment, 67 violations were recorded, most of them concerning insufficient warning notices in workplaces with noise hazard, and inadequate provision of information about the risk of noise and about an efficient protection and prevention against it. However, the inspectors also found cases where the noise exposure limits were exceeded and employers did not take relevant measures regarding regulations; in particular, the employers did not ensure noise measurements at the workplace at set intervals<sup>32</sup>.

In 2007, OSH management inspections were conducted at 88 employers, covering about 24,000 workers, located in all regions and operating in all sectors of economic activity. Of the organisations inspected, 75 were private sector businesses, eight were cooperatives and five were state-owned organisations. With regard to workers' participation in OSH affairs, the 2007 inspections found 130 shortcomings in the following areas.

Basic procedures for worker participation in dealing with OSH issues – in the organisations concerned, either no defined procedure existed for workers' participation or a procedure existed but was not used in practice and did not give the workers an opportunity to express their opinions about the employer's treatment of OSH issues. A related problem was the failure by some employers to act on workers' objections and demands.

Workers' OSH representatives – obstacles in this area included the employer's failure to appoint OSH representatives; the appointment of an insufficient number of representatives; the appointment of representatives without their agreement; a lack of training for representatives in performing their duties; or failure to provide the basic conditions for representatives' activities as laid down by the law.

Enterprises' OSH policy and programming documents – shortcomings in this respect included a lack of worker participation in drawing up policies and programmes; a failure to inform workers about the relevant documents, or to make them available to workers; and a lack of participation by worker representatives in regular evaluations of the fulfilment of set objectives. Problems in the area of risk management – included the lack of opportunities for workers to express their opinions about the employer's approach to the assessment of safety and health risks; the failure to make relevant documentation available to all workers; and the

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<sup>31</sup> Voinea, L., 2011.

<sup>32</sup> Matulová, S., 2007.

failure to provide this documentation in an understandable format.

Provision of information, communication and motivation – shortcomings in this respect included the failure to draw up training curricula or to provide training; the limiting of training content to general requirements and not informing workers about the real risks; and an absence of motivational systems<sup>33</sup>.

In **Spain**, 90% of the employers have stated during interviews carried out in 1999 that they had not informed their workers. A Spanish survey from 1999 confirmed that only 11% of the employers have informed or instructed their workers<sup>34</sup>.

Some 23% of the workplace safety representatives in **Sweden** have not received any training in either health and safety at the workplace or systematic work environment management.<sup>35</sup>

Every employer in **The Netherlands** is legally obliged to call for assistance upon professionally trained safety personnel in the case of emergencies where the health and safety of colleagues is at risk. These safety professionals are the so called 'bedrijfs-hulpverleners' (BHV-ers). Also the employer personally can adopt this task, and/or can hire external professionals to fulfil this task. The tasks of the BHV-ers are (1) to assist in case of accidents, (2) reducing and combating fire and reducing and preventing accidents, and (3) in case of emergency evacuating all workers and other personnel and visitors from the building. In 63% of all companies workers are trained as 'BHV-ers'. This percentage has been rather stable over the years. However, the percentage of companies that have these kinds of 'BHV-ers' varies according to company size<sup>36</sup>.

Three quarters of the enterprises in the **United Kingdom** stated that, after the implementation of the five first individual directives' provisions, they provided much more information to the workers, and half of the enterprises carry out further-training schemes. The demand for information was the highest for the provisions on the use of personal protective equipment and the manual handling of loads. The number of enterprises having reported problems with information and qualification amounts to less than 20%. These are first and foremost problems in relation to the time-schedule for the compilation of material and the organizational structures for giving instructions<sup>37</sup>.

A survey of 71 organisations by *Employment Review* in 2008 showed that the numbers of employers consulting their workforce on health and safety has started to decline. Less than half (44%) now consult them on health and safety, compared with 68% in 2006. This despite it being a legal requirement. A 2005 HSE paper '*Plans for the worker involvement programme*' also found that: 'Approximately six out of ten workers in Great Britain are not consulted (whether directly or indirectly through safety representatives) on health and safety matters that affect them'. Both studies concluded also that adequate information and consultation on the topic of health and safety in SMEs was pivotal in improving health and safety in SMEs<sup>38</sup>.

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<sup>33</sup> Teodor, H., 2008.

<sup>34</sup> EU Commission, 2004, 62 final.

<sup>35</sup> Andersson, P., 2008.

<sup>36</sup> Kwantes, J. H.; Houtman I. & Hesselink, J. K., 2010.

<sup>37</sup> Ibidem

<sup>38</sup> Prosser, T., 2010.

### III.3. 2. OPINIONS OF STAKEHOLDERS

#### **Awareness of companies**

The stakeholder survey shows that almost 70% of the respondents agree or rather agree that employers are generally aware of the national transposition of the WPD. 22% rather disagree or disagree with the idea. The rest of the respondents do not know or did not answer the question.

Among those agreeing, one respondent justified his answer by stating that the regulation is easily accessible to everyone on the internet or that efforts are made by the authorities to inform employers (FIN, Gov and Expert; NL, Gov). The consultation of the employers before the transposition is also mentioned (ICE, Gov and Empl; CZ, Work).

However, some respondents introduced nuances in this awareness related to the size of the companies or to specific groups of companies such as newly created companies (LV, Expert; CY, Gov).

*“Especially in big companies and companies having safety engineering assistance, knowledge is assumed to be comprehensive. Smaller companies, especially micro enterprises and new established small companies might have a certain lack of knowledge. However the regulation on workplaces has some links with other regulations like the regulation on construction sites etc. This assures a high knowledge in these special topics” (DE, Gov).*

Others insist on the fact that the link with European regulation may not be known as such but that many employers know that there is a legislation related to the workplace. (IRL, Gov; ES, Gov; BE, Employers; F, Employers).

Among those disagreeing, some specified that the transposition did not change much the existing legislation. Therefore those changes may not be known. (DK, Expert; BE, Gov). Others stated that employers in general pay less attention to the OSH regulation (PT, Workers). The Luxembourg Employers’ representative also pointed out that the transposition is known by the employers’ representatives but not necessarily by employers at the company level.

#### **Compliance with the regulation**

A quarter of the respondents totally agree that employers comply with the WPD regulation. 45 % only partially agree while 16% rather disagree or totally disagree.

It is difficult to answer the question with much precision as evidence is missing. There are different levels of enforcement, some aspects are the subject of statistical analysis, some are not. The answer is nuanced by many respondents. For example, in Ireland, of all the visits by the labour inspection about 20-30% would result in enforcement action but there is no clear statistic down to the necessary level of detail. In many cases, inspectors might not send an enforcement notice. Also, different legislation is competing. (IRL, Gov)

There is little statistical evidence from enforcement authorities to make a judgement whether all the provisions of the WPD are usually complied with.

Among those agreeing, some however point out that compliance is related to the size and nationality of the company or the presence of a workers' safety representative. Also the fact that the company has been newly created or, on the contrary, uses old facilities is mentioned. *"In general, employers comply with the provisions. Smaller enterprises to a lesser extent; German, US, French companies comply at a high level. This cannot be claimed for Korean companies, e.g."* (HU, Gov).

*"Mostly big and medium enterprises comply with legislation. SMEs and micro enterprises comply less. The compliance is higher in places where workers' safety representatives and safety committees are present."* (CY, Gov).

*"There are only about 50% of workplaces of those visited by work inspectors, which have no major shortcomings."* (EE, Work).

Some respondents focussed on the fact that the WPD is very large and that it is difficult to answer the question of compliance. Some provisions are very technical and difficult to apply in SMEs (FR, Gov). On the contrary the lack of precision of the provisions leads to different interpretations and levels of protection. (NL, Work). Also some provisions would require more enforcement to be properly applied such as exit and evacuation routes (NL, Gov).

Inspection reports in Belgium show that issues such as temperature and sanitary equipment still constitute a problem. (BE, Gov)

### ***Compliance with regard to risk assessment, information, consultation and training***

To the question *"When doing risk assessments, companies usually take the WPD requirements into account"*, 67 persons out of 75 declared that they agree or rather agree (35 totally agree, 22 partially agree). 7 rather disagree or disagree. The rest did not answer or did not know.

If one looks at the comments of those disagreeing, the representative of a French research and prevention institute, the representatives of Greek trade Unions, the expert of a Latvian External OSH service and the representative of Luxembourg employers express doubts about the fact that companies (especially the smallest ones) do a written risk assessment at all. A representative of the Belgian government insists on the fact that only large companies do risk assessments. Another one expresses the same doubts and adds that if the risk is assessed, it is at least for the aspects with regard to fire prevention with less attention to the rest of the requirements, unless in very large companies. A representative of the Irish employers notes that the national provisions regarding the workplace are so precise in some cases that no risk assessment is actually needed, businesses just have to comply to the national prescriptions. The representative of the Dutch Government believes that risk assessment is generally applied, but not so much for the WPD requirements as they do not represent the biggest risk in a company. Following the same idea, the representative of Belgian employers notes that the risk assessment is then focussed on risks due to the activities and not on comfort.

Many of the respondents that agree justify their answer simply by the fact that it is obligatory (mostly respondents from new Member States). But some refer to the fact that some easy to use tools are available in their country and that these tools take the requirements of the WPD into account (Government representative in Austria and Ireland e.g.). Also, the German governmental representative expresses the idea that the goals of the WPD prescriptions are not precise enough which make the exercise of risk assessment difficult for some companies which do not have the necessary expertise. A problem which is solved in countries where risk assessments are mostly executed by external expert services. This point is noted by a Bulgarian representative of an external OSH service.

To the question “*Consultation of workers’ representatives usually includes questions related to the requirements of the WPD*”, 41% of the respondents totally agree on the fact that workers’ representatives are usually consulted as far as the requirements of the WPD are concerned. 28 % think that it is sometimes the case but not necessary systematically so.

In their comments, the stakeholders focussed on the fact that when the consultation is formally organised, WPD issues should be dealt with in the consultation structures. But some indicated that the consultation practices are poor in general (LV, Workers; PT, Workers) or especially poor for these aspects because they are no longer a hot topic in companies in comparison to a few years ago (NL, Gov).

However, some WPD issues still seem to retain much attention from trade unions in Belgium to the detriment of other issues:

*“Sanitary equipment, temperature, air-conditioning are items that are of interest to workers organisations. They pay attention to items that are of immediate interest to the workers. They do not necessarily look at the broader picture”* (BE, Gov).

A trade union representative from Portugal as well as a representative of an Hungarian OSH institute believe that in their countries it is rarely the case. The representative of Employers in Austria notes that it is not the case because there is no need: Austrian companies do comply with the WPD provisions.

According to the Trade Union Congress survey of TU safety representatives (UK) – Focus on Health and Safety 2008, 55% of representatives reported that their employer had conducted suitable and sufficient risk assessments. 56% reported some or total involvement in the risk assessment process. These assessments included many factors relevant to the WPD, including slips and trips, MSD and psychosocial risk.

When asking “*In cases of infringement, what is the reason why companies do not comply with the national law/transposition of the WPD?*”, the respondents (69 valid responses) believe that:

- Employers do not know the regulation: 47
- Employers do not have the necessary means to comply: 33
- It is too cost expensive to comply: 31
- Compliance is not regularly checked: 27
- Employers do not know how to implement the regulation: 24
- Employers do not find the regulation useful: 19
- Employers do know the regulation but do not understand it: 14
- There are no sanctions for infringements: 14

This means that for a majority of stakeholders, beyond the attitude toward risk assessment practice, the knowledge of the WPD requirements is a real issue.

### III.3.3 EMPLOYERS’ AND WORKERS’ SURVEY

In this section, an overview of the implementation of the Workplace Directive across five countries (Bulgaria, Finland, Germany, Poland and Portugal) is given. The results come from the Employers’ and Workers’ surveys in those countries. It is focussed on the extent to which employers have fulfilled the requirements of the Directive in terms of:

- the traffic routes to emergency exits and the exits themselves,
- the technical maintenance of the workplace and of the equipment and devices (particularly those referred in Annexes I and II),
- the adequateness (“to be cleaned”) of the workplace and of the equipment and devices (particularly those in Annexes I and II),
- the maintenance and checks of the safety equipment and devices to prevent or eliminate hazards,
- Annex I and II

#### **III.3.3.1 Employers’ survey**

##### ***Awareness***

The issue of awareness of the legislation has not been asked about in the employer survey due to methodological concerns:

- In some countries, the regulations of the WPD have been directly transformed into one easily recognisable, national law. In others, they have been spread over different laws and regulations. In the former countries, questions on the awareness of the regulations would be relatively easy to answer. But in the latter countries a direct link between the various regulations and the WPD would be difficult to establish.
- In smaller establishments, OSH issues are often either the direct responsibility of the branch manager or managing director or they are outsourced to external service providers. In larger establishments, these tasks are usually delegated to an internal OSH specialist. The employer survey is addressed to the most senior person in



charge of the coordination of OSH issues. Depending on the regulation of OSH duties in an establishment, this person will sometimes be the person who is most familiar with OSH laws in the establishment. But in other cases, it will be someone at the management level with little knowledge about the OSH details (because these are dealt with by competent specialists). These differences will be reflected in the answers to questions about the awareness of the WPD (or other legal OSH provisions): Managers of larger firms might e.g. turn out to be much less aware of the WPD than those of smaller firms where the managing director is also responsible for the implementation of OSH in daily practice. These larger firms would then be classified as having little awareness of the regulations, while in fact their specialists will probably have a very good knowledge. This could be overcome to a certain extent by asking "Are you or another person in your establishment familiar with the regulation?", but this was avoided in the case of the WPD evaluation because answers would have the character of a guess rather than a clear fact. These differences would probably lead to some strange and implausible results already at the national level, but even more so on the cross-country level where different OSH cultures and infrastructures lead to even more comparability problems regarding the awareness.

- In case of buildings or rooms that are rent, some provisions of the WPD are relevant for the landlord rather than for the firm that rents the rooms. Therefore, for these issues significant differences might arise between workplaces that are owned by the firm itself and workplaces that are rented from anybody else.

The awareness is nevertheless an important aspect to be considered in an evaluation about an OSH regulation. Therefore this aspect was asked about in the stakeholder interviews.

### ***Compliance with the national regulation on workplaces***

To assess what employers have done in terms of an implementation of above requirements (including the Annexes), the employers were questioned on the current situation in the establishment. They were asked to what extent they agree to the statements. The questions and statements do not explicitly mention "implementation", however, the agreement on the given statements can be interpreted as a proxy for the compliance with the requirements of the Directive. Therefore, a survey respondent who agrees e.g. with the statement "all indoor workplaces can be adequately ventilated" can reasonably be considered to work in an establishment which has implemented the requirements laid down in Annex I 6. (ventilation of enclosed workplaces).



**Table 15 Implementation, general requirements (%), all countries**

Questions	Agree	Partly agree	Disagree	Don't know / NA
All escape routes and emergency exits in our establishment are clearly marked and well accessible	83	13	3	2
The fire alarm and fire fighting facilities are being checked regularly	84	8	5	3
All indoor workplaces can be adequately ventilated	91	6	2	0
All workstations receive either enough daylight or are well lit by an artificial lighting system	92	6	1	1
At all workstations rooms are dimensioned so as to allow for safe and pain-free working	92	8	0	0
The traffic routes in our establishment are well surfaced and kept free from obstacles	85	10	1	3
Toilets and wash rooms are kept at an adequate level of hygiene	95	5	1	0

Question: Thinking about the current situation in your establishment: Do you agree, partly agree or disagree with the following statements  
 Source: Own calculations; each observation is weighted relative to the universe of all establishments; multiple answers per respondent. Deviations from 100 % are due to rounding errors.

Data: N = 2,535 observations from five countries (Bulgaria, Finland, Germany, Poland, and Portugal); Employer Survey, TNS Infratest, 2010.

Across all items more than 80% of the employers report that they agree with the statements indicated in the questionnaire, i.e. a vast majority of the survey respondents argues that their organisation (fully) meets the general requirements of the WPD. Between 5% (toilets and wash rooms) and 13 % (escape routes and emergency exits) of all firms only partly agree with the items and a mere 0 % to 5 % admits that there may be clear deficiencies concerning the fulfilment of the Directive's requirements.

About 5 % of all respondents disagree and 8% only partly agree with the statement that their fire alarm and fire fighting facilities are regularly checked. Since this is the highest share of disagreement across all items, the table below examines this topic in an exemplary way in more detail. The results show that firms with more than nine workers pay considerably more attention to the successful operation of their fire fighting facilities than smaller organisations with less than ten workers.

**Table 16 Implementation, fire detection and fire fighting (in %), all countries, by firm size**

The fire alarm and fire fighting facilities are being checked regularly (in %)	Agree	Partly agree	Disagree	DK/NA
1–9 workers	82	9	5	3
10–49	94	4	2	1
50–249	95	4	1	1
250 +	96	3	0	1
<b>Total</b>	<b>84</b>	<b>8</b>	<b>5</b>	<b>3</b>

Source: Own calculations; each observation is weighted relative to the universe of all establishments. Deviations from 100 % are due to rounding errors.

Data: N = 2,535 observations from five countries (Bulgaria, Finland, Germany, Poland, and Portugal), Employer Survey, TNS Infratest, 2010.

The next table provides the cross tabulation of the employers' agreement with the fire detection statement and the (aggregated) sector to which the firms belong. It reveals that there are considerable sector differences in the implementation of fire fighting measures. The highest level of agreement with the given statement is found in public and social services (91 %), whereas the highest levels of disagreement (partial agreement) can be found in market oriented services and producing industries. When looking at the differences between the public and private sector<sup>39</sup>, 90 % of all public enterprises argue that they regularly check their fire alarm system and fire fighting facilities, whereas only 83 % of all privately owned firms agree with this statement.

**Table 17 Implementation, fire detection and fire fighting (%), all countries, by sector**

The fire alarm and fire fighting facilities are being checked regularly	Agree	Partly agree	Disagree	DK/NA
Producing industries	83	11	4	2
Market oriented services	83	8	5	4
Public and social services	91	4	2	2
<b>Total</b>	<b>84</b>	<b>8</b>	<b>5</b>	<b>3</b>

Source: Own calculations; each observation is weighted relative to the universe of all establishments. Deviations from 100 % are due to rounding errors.

Data: N = 2,535 observations from five countries (Bulgaria, Finland, Germany, Poland, and Portugal), Employer Survey, TNS Infratest, 2010.

<sup>39</sup> Question E701 explores whether the establishment belongs to the public or private sector. Public sector organisations may exist in all sectors of activity, though they are concentrated on the sector group "Public and social services" which embraces the Public administration (NACE O), Education (NACE P) and health and social work sector (NACE Q).

Looking at the national agreement levels concerning the fire detection statement, helps to understand how the implementation of the WPD is spread across Europe. The table below indicates that between 76 % (Finland) and 87 % (Germany) of the establishments comply with their national OSH legislation. The highest rates of disagreement/partial agreement are found in Finland and Bulgaria.

**Table 18 Implementation, fire detection and fire fighting (%), by country**

The fire alarm and fire fighting facilities are being checked regularly	Agree	Partly agree	Disagree	DK/NA
Bulgaria	84	13	0	4
Finland	76	10	9	4
Germany	87	6	4	4
Poland	86	7	5	2
Portugal	85	7	5	2
<b>Total</b>	<b>84</b>	<b>8</b>	<b>5</b>	<b>3</b>

Source: Own calculations; each observation is weighted relative to the universe of all establishments. Deviations from 100 % are due to rounding errors.

Data: N = 2,535 observations from five countries (Bulgaria: N = 503; Finland N = 501; Germany; N = 500; Poland N = 500; Portugal: N = 531), Employer Survey, TNS Infratest, 2010.

When taking a closer look (see next table) it becomes clear that in both countries – Bulgaria and Finland — high disagreement/partial agreement rates are prevalent in the smallest firm size class, which indicates that the above results are mainly a result of answers of respondents from firms with less than ten workers.

**Table 19 Implementation, fire detection and fire fighting (%), by firm size**

The fire alarm and fire fighting facilities are being checked regularly	Agree	Partly agree	Disagree	DK/NA
<b>Bulgaria</b>				
1–9 workers	82	14	0	4
10–49	94	5	1	1
50–249	96	4	0	0
250 +	97	3	0	0
<b>Total</b>	<b>84</b>	<b>13</b>	<b>0</b>	<b>4</b>
<b>Finland</b>				
1–9 workers	75	11	10	4
10–49	89	7	2	2
50–249	95	3	1	1
250 +	92	4	1	3
<b>Total</b>	<b>76</b>	<b>10</b>	<b>9</b>	<b>4</b>

Source: Own calculations; each observation is weighted relative to the universe of all establishments. Deviations from 100 % are due to rounding errors.

Data: Bulgaria: N = 503 obs., Finland N = 501 obs. Employer Survey, TNS Infratest, 2010.

### ***Comparison before – after the WPD transposition***

An effort to establish some kind of comparison of the situation before and after the WPD was made for Bulgaria as one of the countries that joined the EU only recently, with a question on the development of the number of accidents as compared to the situation between 2000 and 2007, i.e. the situation before Bulgaria joined the European Union. There, it turned out that indeed the number of accidents had decreased in a number of establishments (8%) and increased in none, which is a positive sign as regards effects of the WPD (and other EU OSH Directives). But the item non-response rate on this question was very high for Bulgaria (32%) and puts serious doubts about the validity of the results for this country. However, it is interesting to see that among the most frequently named reasons for the declining accident rates were some that have links to the WPD, such as “modification of the work building or move to another building (44%)” or “the intensification of preventive safety and health work” (70%) which is a quite general issue, but has links to the WPD in so far as important preventive measures like the information and consultation of workers are regulated in the WPD on a general level. As a further reason for decreasing accident figures, the modification of the work organisation (89%) has also links to the WPD in so far as it can be the outcome of the consultation process with workers or of risk assessments. The results to the question on the reasons for a decrease in the number of accidents are thus at least an indication that the implementation of the WPD (respectively of its national transposition) in Bulgaria had an effect on the changes that finally led to a decrease in the number of accidents in the establishments.

In spite of the difficulties to establish a counterfactual situation or to build control groups, there are some hints from the representative survey that can contribute to answer this question.

### ***Changes made at the workplace and their causes***

Another hint that not all WPD-related OSH improvements would have happened in any case, are the questions on changes: Establishments were asked whether in the past 3 years there had been any need for changes in OSH on a set of seven selected areas regulated in the Annex of the WPD. All in all, for 37% of establishments changes in any of these areas were necessary. About half of these (47%<sup>40</sup>) were necessary for an adjustment of the workstations to the legal minimum safety and health requirements. This means that in roughly every fifth establishment adaptations had to be made in order to fulfil the legal requirements of the WPD which is a sign that the legislation is still relevant and that at least part of the improvements made in the last 3 years would not have happened without the legal standards.

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<sup>40</sup> The figure is composed of those who have made changes for an adjustment to the legal requirement, plus those who made both changes going beyond these requirements and changes for an adjustment to these.

**Table 20 Aims of changes at the workplace**

Aims of changes at the workplace	All	BG	DE	PL	PT	FI
For an adjustment to the legal minimum	35%	38%	30%	34%	34%	38%
Changes going beyond the minimum requirements	48%	31%	50%	46%	56%	45%
Both changes mentioned above apply	12%	28%	10%	18%	5%	10%
Don't know/no answer	5%	3%	10%	1%	4%	7%

Source: Own calculations; each observation is weighted relative to the universe of all establishments. Deviations from 100 % are due to rounding errors. Data: Employer Survey, TNS Infratest, 2010; N = 1,342 establishments from five countries (establishment that had indicated the need for the implementation of changes on areas regulated in the WPD annex in the past 3 years).

A good part of the changes were necessary due to relocations or the rearrangement of workstations – reasons that are not necessarily related to the WPD. There is however also a considerable number of changes that became necessary due to the identification of deficiencies in risk assessments and on the base of ‘recommendations’ of the Labour Inspectorate. These are related to the legislation and in particular to the WPD which regulates the issues that were covered by the question on changes. Those changes that were made on the base of the findings from risk assessments and from Labour Inspectorate recommendations are certainly for a good part changes that would not have happened in the absence of any legal regulation on the issue.

**Table 21 Reasons for necessary changes (in %), by countries**

Share of positive answers (in%) on the following measures	All	BG	FI	DE	PL	PT
Requests or complaints from workers or their representatives	25	34	44	14	16	15
Deficiencies discovered during risk assessments or other routine checks	37	22	35	48	27	44
Recommendations of the Labour Inspectorate or other authorities	23	36	11	19	18	36
A relocation of the establishment or single workstation	24	30	31	16	19	26
A rearrangement of the workstations	39	58	42	30	33	41
The occurrence of work accidents	5	8	3	1	7	7
Any other reason	37	15	41	30	45	41

Source: Own calculations; each observation is weighted relative to the universe of all establishments; multiple answers per respondent. Data: Employer Survey, TNS Infratest, 2010, N = 1,342 establishments who mentioned that there has been some need to implement changes in the context of safety and health issues (any E302\_A to E302\_G = 1) from five countries (Bulgaria: N = 122, Finland: N = 360, Germany N = 234, Poland N = 298, and Portugal = 328).

Another way to examine whether other tools/measures would have led to the same results, is by investigating the question whether a firm would pay the same attention to an area if there were no legislation regulating the issue (E505). By using this kind of question we are trying to shed a light on the “counterfactual” dimension of the regulations, i.e. reconstructing what would have happened if there had been no national legislation at all. The next table presents the average value of three dimensions 1) “the same attention”, 2) “somewhat less attention”, and 3) “considerably less attention” across our country sample. The more the depicted values exceed “one” the less likely it is that firms would be willing to pay the same attention if

there were no legislation. Across all countries and across all statements the average value is quite equally distributed (around 1.3). This means that in all countries and on all items establishments gave about the same answers. An exception to this rule are perhaps German firms which would pay significantly less attention (1.5) to the provision of workers with information on health and safety issues if there was no legislation regulating these issues.

**Table 22 Attention to safety and health issues—attention indicator**

Attention (1(same) to 3 (considerably less))	All	BG	FI	DE	PL	PT
Indication and control of escape routes and emergency exits	1.3	1.4	1.3	1.3	1.4	1.3
Provision of ventilation or air conditioning facilities	1.2	1.2	1.2	1.2	1.3	1.2
Regular check-up of first aid installations and first aid equipment	1.2	1.2	1.2	1.2	1.3	1.2
Regular check-up of the room lighting	1.2	1.2	1.2	1.3	1.3	1.1
The dimensioning of workstations	1.2	1.4	1.2	1.3	1.2	1.1
The state and clearance of traffic routes	1.2	1.4	1.2	1.2	1.2	1.1
The information of workers on health and safety issues	1.3	1.2	1.3	1.5	1.3	1.2

Source: Own calculations; each observation is weighted relative to the universe of all establishments; multiple answers per respondent. Data: Employer Survey, TNS Infratest, 2010, A: N = 2,463; B N = 2,460; C: N = 2,484; D: N = 2,485; E: N = 2,472; F: N = 2,435; G: N = 2,477 establishments from five countries (Bulgaria, Finland, Germany, Poland, and Portugal).

Overall, the relatively low indices in this table can be interpreted as tentative evidence that firms would almost conduct the same measures without any provisions. Even when looking at different firm sizes and different sectors these results are confirmed throughout the branches and size classes. We almost always find a share of more than 70 % of all firms who argue that they would pay the same attention. The share of firms stating that they would pay considerably less attention is for each single aspect only 3 to 5% of the average of all countries.

### **Risk assessment**

The employers' view on risk assessment is significantly different (80 % of all firms argue that they conduct risk assessments) from the workers' view (52 % positive responses with respect to the awareness of risk assessments).

From the employers' point of view the highest share of firms who conduct risk assessments is found in Bulgaria and Portugal (both 88 %), followed by Poland (84 %), Germany (74 %), and Finland (64 %). Establishments in the public and social sector carry out risk assessments more often than firms in market-oriented services.

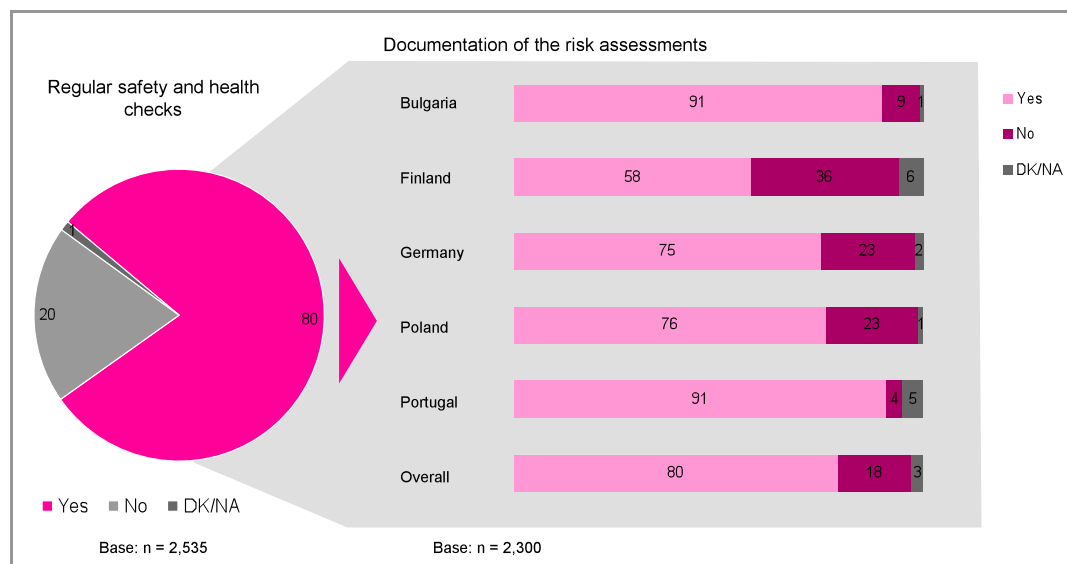
**Table 23 Risk assessment (in %), by firm size and sector**

In %	Bulgaria		Finland		Overall	
	Yes	No	Yes	No	Yes	No
1-9 workers	86	11	61	38	77	22
10-40	97	3	89	10	91	9
50-249	98	1	91	8	96	4
250+	100	0	94	4	98	2
Producing industries	96	4	66	31	85	15
Market-oriented services	85	12	62	38	77	22
Public and social services	96	3	75	22	83	16
<b>Total</b>	<b>88</b>	<b>9</b>	<b>64</b>	<b>35</b>	<b>80</b>	<b>20</b>

Source: Own calculations; each observation is weighted relative to the universe of all establishments. DK/NA not depicted.  
 Data: Overall: N = 2,535 observations; Bulgaria: N = 503 observations; Finland: N = 501 observations, Employer Survey, TNS Infratest, 2010.

Since the information generated by a risk assessment should be used to improve health and safety actions in the future, it is necessary that risk assessments or workplace check-ups are documented. This allows reviewing and revising the assessment at a later point in time. Overall 80 % of all firms who regularly conduct risk assessments also document these check-ups. This finding varies across countries: In Bulgaria and Portugal 91 % of the establishments document their workplace check-ups, whereas in Poland (76 %), Germany (75 %), and Finland (58 %) the documentation rates are lower.

**Figure 2 Risk assessment—documentation (in %), by country**



Source: Own calculations; each observation is weighted relative to the universe of all establishments. Deviations from 100 % are due to rounding errors.

Data: N = 2,300 establishments who regularly check the workstations at their establishment for safety and health as part of a risk assessment or similar measures (E306 = 1) from five countries (Bulgaria: N = 483, Finland: N = 426, Germany N = 440, Poland N = 470, and Portugal = 481), Employer Survey, TNS Infratest, 2010.



## ***Participation***

In a stepwise approach to risk assessment a further aspect is the participation of workers. Therefore, both the employer and the worker survey include questions on how workers are consulted with respect to their work habits during the assessment. The majority (81 %) of employers claim to interact with their workers during the workplace check-ups. The very high share of Bulgarian firms who directly communicate with their workers (98 %) as part of the risk assessment again provides evidence against the hypothesis mentioned above that (small) Bulgarian firms may conduct “superficial” assessments.

## ***Consultation of workers***

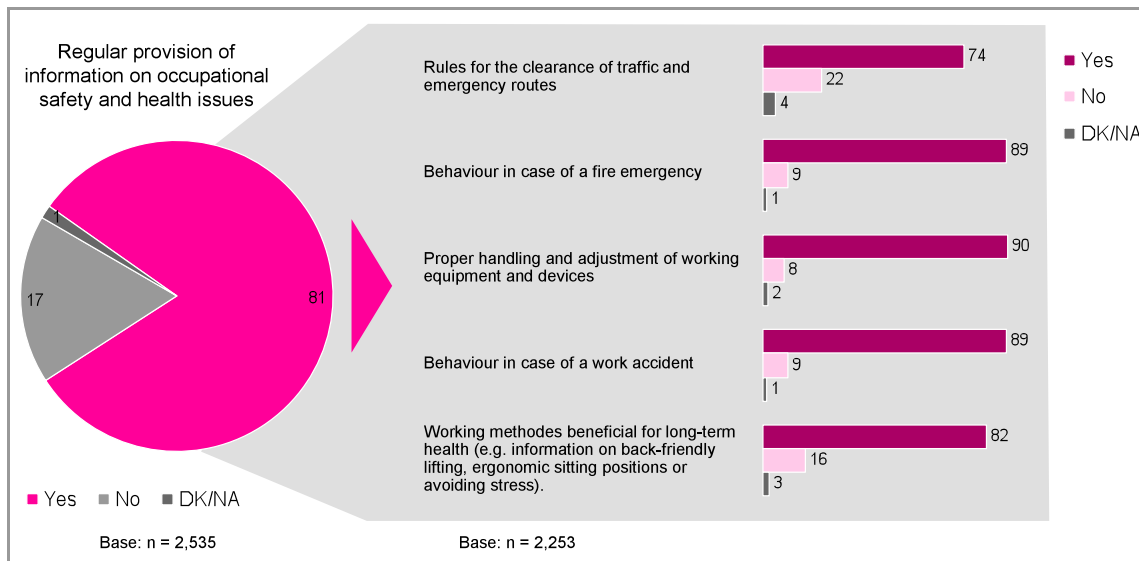
Overall, 52 % of all establishments have regular staff or team meetings in which health and safety issues are discussed. Across countries, Germany (63 %) and Bulgaria (73 %) have the highest quotas, whereas Finland (37 %) and Portugal report the lowest meeting rates. Based on the worker proportional weights, the employer data indicates the following: 68 % of all workers work at firms which report to regularly conduct team or staff meetings on health and safety issues.

## ***Information***

To investigate the employers’ view on the implementation of information and training measures, employers were asked with a simple “Yes” or “No” question whether they regularly provide their workers with information on OSH issues. 17 % of the employers responded negatively to this question, which reveals non-information to be an exception rather than the norm. Poland and Bulgaria—both relatively young members of the EU (2004 and 2007)—show the highest agreement rates (87 % and 89 %). In Germany (23 %) and Finland (28 %) about a quarter of all establishments report that their workers do not receive information on a regular basis.

All establishments which regularly provide their workers with information were additionally asked on which topics their workers receive information. Across all items the share of positive answers is similar to the question above: Between 74 % (rules for the clearance of traffic and emergency routes) and 90 % (proper handling of working equipment and devices) of all establishments regularly inform their workers about the selected issues regulated in the WPD. The item with the highest share of disagreement is related to traffic and emergency routes—about 22 % of all firms report that they do not provide information on how to keep traffic and emergency routes clear.

**Figure 3 Implementation - information and training (in %), all countries**



Source: Own calculations; each observation is weighted relative to the universe of all establishments; multiple answers per respondent. Deviations from 100 % are due to rounding errors.

Data: N = 2,535 establishments from five countries (Bulgaria, Finland, Germany, Poland, and Portugal); N = 2,253 establishments who regularly provide their workers with information on OSH issues (E401 = 1), Employer Survey, TNS Infratest, 2010

### ***Building an information indicator***

As a means of comparing the implementation of information and training across different countries, firm sizes and sectors, a composite indicator was constructed. Since each of the five items related to areas of OSH information can either take a positive or negative value (“Yes” vs. “No”), all positive answers were summed up. Accordingly, e.g. a firm with a score of five has implemented all measures, whereas a firm with a score of zero does not inform its workers on any of the given topics.) Those 17% of employers who responded “No” to the question on whether they regularly provide their workers with any information on OSH issues are also included in this index with a value of “0”.

As stated above, the information indicator allows for comparisons to be made in the level of information about OSH topics between different countries, sectors, and firm sizes. Overall, the level of the indicator is 3.4, i.e. an average firm from our country sample provides its workers with information on about 3.4 of the five categories of issues.

Comparing the composite indicator across countries reveals that Poland and Bulgaria display the highest level of information (3.9 and 3.8). Portugal and Germany are in the medium range, with Portugal having a score of 3.5 and Germany of 3.2. Finland has the lowest information indicator from the employers’ perspective, with information provided on just 2,7 of the issues – a value that is strongly influenced by the relatively high share of 28% of Finnish firms claiming not to provide any regular OSH information. There are also considerable size and sectorial differences. As expected, we see a positive correlation between firm size and the provision of information: larger firms inform their workers about more topics, with the highest indicator level at establishments with more than 249 workers (4.4) and the lowest at firms with less than 10 workers (3.4). In terms of sectorial differences, we find that workers in production industries and in public and social services receive more information (3.9

respectively 3.7) than those in market-oriented services (3.2). This result is probably due to the fact that state run companies are more dedicated to the OSH legislation, and that establishments having production facilities are generally more aware of safety and health hazards. Companies in market-oriented services, on the other hand, whose workers mainly work in offices, may not consider health and safety issues as an important problem, so they may not see the necessity to inform their workers on all of the given topics.

**Table 24 Implementation, information, and training—information indicator**

<b>Countries</b>	<b>BG</b>	<b>FI</b>	<b>DE</b>	<b>PL</b>	<b>PT</b>
	3.8	2.7	3.2	3.9	3.5
<b>Firm size</b>	<b>1–9</b>	<b>10–49</b>	<b>50–249</b>	<b>250 +</b>	
	3.4	3.9	4.2	4.4	
<b>Sector</b>	<b>Prod. Ind.</b>	<b>Market-orient. serv.</b>	<b>Public &amp; social serv.</b>		
	3.9	3.2	3.7		

Source: Own calculations; each observation is weighted relative to the universe of all establishments. Deviations from 100 % are due to rounding errors. Data: N = 2,535 observations from five countries (Bulgaria: N = 503; Finland N = 501; Germany; N = 500; Poland N = 500; Portugal: N = 531), Employer Survey, TNS Infratest, 2010.

### ***Ways to provide information***

To get some further more in-depth results, we additionally included a specific question concerning the ways workers receive OSH information. By far the most important way to provide information is being given verbal instructions by senior or more experienced staff (90%), followed by training courses (56%) and notices posted on bill-boards or at workstations (49%). At the other end of the spectrum, the provision of leaflets (31%) and information provided on the intranet (16%) are the least important items. Across firm sizes we see the following differences: Larger firms make more use of the intranet, whereas smaller firms—if anything—more strongly rely on verbal instructions. Across countries our results show varying national patterns. For example, in Poland training courses are almost as important as verbal instructions (91% vs. 94%). On the contrary, 30% (97%) of the Bulgarian firms report training courses (verbal instructions) as a means to provide their workers with information. Another exception worth mentioning is Germany with a relatively high share of leaflets (72%) and notices on bill-boards or workstations (65%).

**Table 25 Implementation, ways to provide information (in %), by country**

Share of positive answers (in %) on the following measures	BG	FI	GE	PL	PT	Total
Information on the intranet	8	21	14	18	20	<b>16</b>
Notices posted on bill-boards or at workstations	28	42	65	58	51	<b>49</b>
Provision of leaflets	11	9	72	30	35	<b>31</b>
Training courses	30	51	52	91	56	<b>56</b>
Practical exercises	38	35	46	51	43	<b>43</b>
Verbal instructions by senior or more experienced staff	97	88	87	94	84	<b>90</b>
Any other way of information or training	33	56	30	24	43	<b>37</b>

Source: Own calculations; each observation is weighted relative to the universe of all establishments.

Data: N = 2,253 establishments who regularly provide their workers with information on OSH issues (E401 = 1) from five countries (Bulgaria: N = 481; Finland N = 424; Germany; N = 420; Poland N = 474; Portugal: N = 454), Employer Survey, TNS Infratest, 2010.

17% of all establishments report that they do not regularly provide their workers with information on occupational safety and health issues. The smaller the firm the less likely it is that workers are given any information. In production industries 11% of the firms do not regularly provide information, followed by 17% in the public and social sector, and 20% in market-oriented services. Both Bulgaria and Poland report the highest information shares (89% and 87%). In Germany (23%) and Finland (28%) about a quarter of all establishments admit that their workers do not receive information on a regular basis.

By far the most important reason for not providing information is that firms do not consider it necessary in view of the existing safety and health hazards (65%), followed by concerns about the usefulness of the regular provision of information (42%), and the deficiency in necessary expertise (39%). Least important are the lack of time and financial resources (28% and 20%).

At the national level, we find varying patterns. For example, in Germany and Finland many firms (49% and 45%) claim a lack of necessary expertise as a reason for not providing regular information, whereas in Bulgaria (24%), Poland (35%), and Portugal (28%) this seems to be less important. In Bulgaria almost all firms (98%), which do not regularly inform their workers, find it unnecessary in view of the existing health and safety hazards. Another point worth mentioning is that 83% of the Polish firms voice concerns about the usefulness of providing information.

**Table 26 Implementation, information, and training (in %), all countries**

<b>Reasons for not providing workers with information</b>	<b>BG</b>	<b>FI</b>	<b>GE</b>	<b>PL</b>	<b>PT</b>	<b>TOTAL</b>
The necessary expertise is lacking	24	45	49	35	28	<b>39</b>
There is not enough time available for this	37	23	21	35	38	<b>28</b>
There are not enough financial resources provided for this	12	16	8	25	43	<b>20</b>
There are concerns about the usefulness of providing information	23	38	30	83	53	<b>42</b>
It is considered as unnecessary in view of the existing safety and health hazards	98	69	63	49	50	<b>65</b>
Other reasons	11	36	37	13	38	<b>31</b>

Source: Own calculations; each observation is weighted relative to the universe of all establishments; multiple answers per respondent. Data: N = 259 establishments who do not regularly provide their workers with information on OSH issues (E401 = 2) from five countries (Bulgaria: N = 19, Finland: N = 74, Germany N = 72, Poland N = 22, and Portugal = 72), Employer Survey, TNS Infratest, 2010.

### ***Information on clearance of traffic and emergency routes***

As it has already been indicated, firms report the highest disagreement rates (22%) when asked whether they inform their workers on how to keep traffic and emergency routes clear. A reason for this could be that most firms consider traffic and emergency routes as a “matter of course”, so, they may not find it necessary to inform their workers because of the (supposedly) non-existence of any safety and health hazards.

The information rate increases with the firm size. About 73% of the organisations with less than 10 workers provide their workers with information on the clearance of traffic and emergency routes, whereas workers in 86% of the establishments with more than 250 workers receive the corresponding information.

In terms of sector differences, considerable differences exist with respect to the information of workers. While producing industries (81%) and public and social services (79%) have high information rates, only 70% of all establishments active in market-oriented services provide their workers with information on the clearance of traffic and emergency routes.<sup>41</sup> Companies in market-oriented services, on the other hand, may not consider the clearance of traffic and emergency exits as an important problem in their offices. Therefore, they probably do not see the necessity to inform their workers about the topic.

On traffic and emergency routes, across most countries information rates hardly differ from the cross-national average of 74%. Bulgaria is an exception to this pattern: there, only 65% of all respondents confirm that they regularly inform their workers about this topic. These results are mainly coming from firms with less than 10 workers and those who are active in market-oriented services. Therefore,—since being a new Member State could be a possible

<sup>41</sup> The finding is backed up when looking at the differences between the public and private sector (question E701). 77 % of all public enterprises argue that they regularly provide their workers with information on the clearance of traffic and emergency routes, whereas 73 % of all privately owned firms agree with this statement.

explanation for lower OSH standards—it seems that mainly small and service-oriented firms still do not fully comply with the prescriptions of the WPD.

**Table 27 Employers' information on traffic and emergency routes (in %), by country**

Rules for the clearance of traffic and emergency routes	Yes	No	DK/NA
Bulgaria	65	26	9
Finland	75	25	0
Germany	77	20	3
Poland	78	18	4
Portugal	76	20	4
<b>Total</b>	<b>74</b>	<b>22</b>	<b>4</b>

Source: Own calculations; each observation is weighted relative to the universe of all establishments. Deviations from 100 % are due to rounding errors.

Data: N = 2,253 establishments who regularly provide their workers with information on OSH issues (E401 = 1) from five countries (Bulgaria: N = 481; Finland N = 424; Germany; N = 420; Poland N = 474; Portugal: N = 454), Employer Survey, TNS Infratest, 2010

### **Role of enforcement**

For the performance of risk assessments, the control by the Labour Inspectorate or other relevant authorities appears to play a large role, in particular at small workplaces: As the next table shows, establishments that were visited by the Labour Inspectorate in the last three years applied the instrument considerably more often than establishments where such a visit did not take place. With more than 30 percentage points, the difference is particularly large in the smallest size-class (95% vs. 64% in establishments with 1 to 9 workers). The high share of establishments that were visited in Bulgaria in the past 3 years (71% according to the information from the employer survey) might be one explanation for the high share of Bulgarian employers reporting to carry out risk assessments.

**Table 28 Risk assessments (in %)**

Size-class	Risk assessments (in %)	
	Visited by Labour Inspectorate in last 3 years	Not visited by Labour inspectorate in last 3 years
1-9 workers	95	64
10-49 workers	95	84
50-249 workers	97	94
250+ workers	99	93
<b>Total</b>	<b>95</b>	<b>66</b>

Asking workers about safety and health complaints which they attribute to the situation at their workstation is not very common, with just 39% of the workers reporting such a measure. In Bulgaria and Germany, this way of consultation is more common than in the other three countries (with 50% respectively 48%).

In Germany, in turn, employers consult their workers considerably less often about their OSH information and training needs than employers in the other four countries: While on average

about three fourths of employers (76%) claim to consult their workforce on this, in Germany it is only half of them.

Established structures of general worker representation tend to exist especially in larger workplaces. One of the major tasks of bodies of general worker representatives is the representation of workers in terms of health and safety issues. Close to half (47%) of the interviewed workers are from establishments where an elected general worker representation in form of a works council or a shop floor trade union representation exists. This share varies between countries – from a mere 24% in Portugal to around 60% in Bulgaria and Germany. Among employers, only 17% stated to have such a general worker representation body, with huge country differences, ranging from just 4% in Portugal and 8% in Poland to an astonishingly high value of 47% in Bulgaria. These very large country differences are partly due to different thresholds from which onwards such bodies can be formed. In an worker-proportional perspective, results vary much less between countries because the situation in larger workplaces influences the figures much more since a large share of workers is employed in these (few) large organisations.

**Table 29 Existence of a works council or shop floor trade union representation**

Country	Existence of a works council or shop floor trade union representation (in %)		
	Worker survey, worker prop. weighted	Employer survey, worker prop. weighted	Employer survey, establishment prop. weighted
Bulgaria	61	77	47
Finland	53	54	10
Germany	60	51	13
Poland	37	41	8
Portugal	24	14	4
<b>Total</b>	<b>47</b>	<b>47</b>	<b>16</b>

Source: Own calculations; each observation is weighted relative to the universe of all establishments respectively workers (see column headings).

Data: N = 2,535 establishments from five countries (Bulgaria, Finland, Germany, Poland, Portugal: N = 454), Employer Survey, TNS Infratest, 2010,

In many establishments, in absence of a general worker representation body or in addition to it, specific health and safety representatives exist which have the task to represent workers specifically (and only) in the area of safety and health at the workplace and to discuss, jointly with the employer, OSH decisions that are relevant for the workers. In the survey, two types of specific OSH representation were depicted: OSH representatives and OSH committees. While there are many establishments who have an OSH representative, but no OSH committee, it is rather rare to have an OSH committee but no OSH representative in place.

### III.3.3.3 Workers

The WPD respectively its national transpositions are basically directed towards the employer. It therefore does not make much sense to generally ask workers about their awareness and knowledge of the law. Most workers will be aware that some legal requirements with regard to OSH provisions do exist for the employer, but will not be able to attribute these to any particular law as long as they have not made use of the legislation, e.g. in an OSH request to the employer. A general question on the awareness of workers of the WPD was therefore not



asked about in the worker survey. Instead, those workers who stated to have made OSH claims on any issue related to the WPD were asked whether they had made use of the legislation for that aim. If so, this can be interpreted as awareness of the legislation. If not, they were asked for the reasons why they did not recur to the legislation for their request. The lack of awareness was one of the reasons offered.

The survey shows that even among the workers who have ever brought forward an OSH claim related to the WPD, only a small proportion of less than a fifth (18%) referred to the law for this purpose. Among those who did not refer to it, ignorance of legal aspects was the second reason why workers did not refer to legislation when they express complaints (30%), the first reason being that reference to legal regulation was not necessary (60%). These findings indicate that the awareness of workers regarding the WPD respectively its national transpositions appears to be relatively low.

To get a complete picture of the state of implementation of the (general) requirements of the Workplace Directive (and its Annexes), it is necessary to take into account the workers' view and contrast it to the statements of the employers. Therefore, the worker survey included some factual questions on the implementation of the Directive. The table below gives an overview of the topics of these questions. Just as in the employer survey, the questions do not explicitly mention the word "implementation". Nevertheless, if the respondents reply with "Yes" this can be considered as an approximation for the fact that the requirements of the Directive are fulfilled at their firm. It should be noted that questions about the WPD implementation asked to the workers partly deviate from those asked to the employers. The reason is that questions to workers focused on aspects which are clearly visible to them and which are easy to understand for everybody.

Overall, the worker survey clearly confirms the results of the employer survey, meaning that the vast majority (77 %–94 %) of workers positively reply to the questions concerning the general OSH situation at their workplace. As an exception to this result, we find that about 19 % of all workers are not happy with the room climate—as opposed to a range of 3 % to 9 % of the workers who negatively respond to the other questions.

**Table 30 Implementation, general requirements (%), all countries**

	Yes	No	DK/NA
Familiar with emergency exits and escape routes	94	5	2
Establishment equipped with fire extinguishers	93	3	3
Generally happy with the room climate	77	19	4
Enough light to work without risks to safety and health	91	7	2
Room dimensions large enough to work without risks to safety and health	90	7	3
Traffic routes, loading bays and ramps free of trip hazards and obstacles	82	9	8
Know where to find first aid installations and first aid equipment	89	9	3
Toilets and wash rooms maintain an adequate level of hygiene	91	8	2

Source: Own calculations; each observation is weighted relative to the population of all workers. Deviations from 100 % are due to rounding errors.

Data: N = 2,515 observations from five countries (Bulgaria, Finland, Germany, Poland, and Portugal), Worker Survey, TNS Infratest, 2010.

The table below takes a closer look at the room temperature. Annex I, 7. of the Directive defines that “during working hours, the temperature in rooms containing workstations must be adequate for human beings”. When asked for their satisfaction with the room climate about 82 % of the workers in small (1–9 workers) establishments and 72 %–77 % of the workers in larger firms answer that they are happy with the climate at their workstation. Although the differences between the two groups are relatively small, statistical tests show that they are significant.<sup>42</sup>

A reason for this finding may be that in smaller firms workers can probably adjust the room temperature themselves, whereas in larger establishments automatic ventilation and air conditioning systems are probably installed more often so that the room climate cannot be individually adjusted. For those respondents who are generally unhappy with the room climate we additionally asked why they are dissatisfied with the climate. Across all size groups the vast majority (71 %) holds the “lack of possibility to adjust room climate” responsible for their unhappiness. Another 14 % argues that there is a lack of consensus between themselves and their colleagues about the ideal room climate and about 6 % say that both reasons apply to their workplace.

<sup>42</sup> The hypothesis of the equality of means between the two groups can be significantly rejected on the basis of a standard t-test (t = 113; p-value = 0).

**Table 31 Implementation, room temperature (%), all countries, by firm size**

Are you generally happy with the room climate at your workstation?	Yes	No	DK/NA
1 – 9 workers	82	12	6
10 – 49	72	24	4
50 – 249	77	19	5
250 +	77	20	3
<b>Total</b>	<b>77</b>	<b>19</b>	<b>4</b>

Source: Own calculations; each observation is weighted relative to the population of all workers. Deviations from 100 % are due to rounding errors.

Data: N = 2,515 observations from five countries (Bulgaria: N = 504; Finland N = 505; Germany; N = 506; Poland N = 500; Portugal: N = 500), Worker Survey, TNS Infratest, 2010.

The next table reveals country differences in the implementation of the Directive (here: room temperature) to be of hardly any importance — with the exception of Finland that has a sizable proportion of workers who are not happy with the room climate at their establishment. When asked why they are dissatisfied with the room climate, 79 % of all Finnish workers reply that they lack the opportunity to change the room climate at their workstations. Again, in larger firms unhappiness with the climate is more important (65 %) than in firms with less than 10 workers (74 %).

**Table 32 Implementation, room temperature (agreement in %), by country**

Are you generally happy with the room climate at your workstation?	Yes	No	DK/NA
Bulgaria	82	9	9
Finland	68	30	2
Germany	79	19	2
Poland	77	19	4
Portugal	77	20	4
<b>Total</b>	<b>77</b>	<b>19</b>	<b>4</b>

Source: Own calculations; each observation is weighted relative to the population of all workers. Deviations from 100 % are due to rounding errors.

Data: N = 2,515 observations from five countries (Bulgaria: N = 504; Finland N = 505; Germany; N = 506; Poland N = 500; Portugal: N = 500), Worker Survey, TNS Infratest, 2010.

Therefore, the above result is probably due to the fact that in many large firms automatic ventilation and air conditioning systems are installed which cannot be individually adjusted. Interestingly, the employers' view confirms this finding. In the category 250 + only 72 % of all Finish employers agree with the statement that indoor workstations can be adequately ventilated. In contrast, the agreement share of small firms with less than 10 workers lies at 89 %.

**Table 33 Implementation, room temperature (%), by firm size**

Are you generally happy with the room climate at your workstation? <b>Finland</b>	<b>Yes</b>	<b>No</b>	<b>DK/NA</b>
1–9 workers	74	23	3
10–49	65	32	3
50–249	65	33	2
250 +	65	33	2
<b>Total</b>	<b>68</b>	<b>30</b>	<b>2</b>

Source: Own calculations; each observation is weighted relative to the population of all workers. Deviations from 100 % are due to rounding errors.

Data: Finland: N = 505 observations, Worker Survey, TNS Infratest, 2010.

To sum up all the above items in a nutshell, it was examined how satisfied workers are (overall) with the health and safety situation at their establishment. The results show that the majority of workers is satisfied with the implementation of the health and safety measures at their workplace, about 30 % of all workers are even very satisfied, and only 10 % (2 %) are not very satisfied (not at all satisfied).

Nevertheless, this picture in the past has obviously not always been that positive. A considerable share of 45% of workers has noted deficiencies in their establishment with regard to at least one of the elementary areas regulated by the WPD:

**Table 34 Deficiencies in their establishments noticed by workers (%)<sup>43</sup>**

<sup>43</sup> Question W512\_A to W512\_H: Since you work here: Have you ever noticed safety and health relevant deficiencies with respect to any of the following topics?

In %		Total	Country				
			Bulgaria	Finland	Germany	Poland	Portugal
<b>Basis (unweighted)</b>		<b>2515</b>	<b>504</b>	<b>505</b>	<b>506</b>	<b>500</b>	<b>500</b>
Safety and health related deficiencies noticed with respect to...	Escape routes or emergency exits	10	3	17	5	9	17
	Fire alarm systems or fire fighting facil.	9	5	16	9	7	11
	Room climate	25	12	45	23	23	22
	Room lightning	13	7	21	8	12	16
	Room size	9	4	14	8	10	10
	Traffic routes, loading bays or ramps	10	6	20	5	7	14
	First aid installations and first aid equip.	14	9	19	14	13	14
	Toilets and washrooms	12	14	15	6	11	17

Question W512\_A to W512\_H: Since you have been working here: Have you ever noticed safety and health relevant deficiencies with respect to any of the following topics?

Source: Own Calculations, each observation is weighted relative to the universe of all establishments.

Data: N = 2515 workers from five countries (Bulgaria, Finland, Germany, Poland, and Portugal).

Just over half (52%) of all workers who noted any deficiencies, reported them to the employer and asked for an adjustment. Mostly, such adjustments were at least partially granted by the employer. Around a quarter of the workers (24%) reported however that their claims were not granted at all. It cannot be assessed based on the data whether these claims were justified or not. But this result shows in any case that there is still a need for regulation in these areas and that the overall positive current situation is not only due to employers' attention, but also relies on workers who are alert regarding OSH risks and report them to their employer. Here, in terms of country differences it is noteworthy that workers in Finland noted more deficiencies than their "colleagues" in the other countries and reported them to their employer, asking for a remedy. Hereby, Finnish employers proved to be more responsive to the concerns of their workers than employers in other countries, with 84% of them having granted their wishes at least partly.

### **Risk assessment**

When asking workers, the highest share of workers whose workstations have ever been assessed with regard to safety and health is found in Germany (58%), followed by Bulgaria (55%), Poland and Portugal (both 50%), and Finland (47%). Other than in the employer data differences across countries are negligible.

**Table 35 Risk assessment, by country (in %)**

In %	Yes	No	DK/NA
Bulgaria	55	26	19
Finland	57	43	10
Germany	48	37	5
Poland	50	43	7
Portugal	50	45	6
<b>Total</b>	<b>52</b>	<b>39</b>	<b>10</b>

Source: Own calculations; each observation is weighted relative to the population of all workers.

Data: N = 2,515 workers from five countries (Bulgaria: N = 504; Finland N = 505; Germany; N = 506; Poland N = 500; Portugal: N = 500), Worker Survey, TNS Infratest, 2010.

Bulgarian workers report the highest level of presence during risk assessments (85%) as well as the highest share of direct communication between employers and workers on these occasions (80%).

### ***Information and consultation of workers***

Unlike the employer survey, the worker questionnaire does not include a simple “Yes” or “No” question on whether the establishments regularly provide their workers with information and training on OSH issues. Instead, the workers were asked if they have received information since they work at their current job. As for the employer survey, the share of positive answers on the different items is quite high: Between 74% (rules for the clearance of traffic and emergency routes) and 83% (proper handling of working equipment and devices) of all workers are regularly provided with information on OSH issues.

From the workers’ point of view (worker survey), we get a slightly different and less positive picture on consultation. About 50% of all workers describe their workplace as having no meetings related to health and safety issues. There is also no distinct country ranking in the worker survey; across all countries workers report about the same proportion of meetings (50%). These results could be traced back to two reasons: Firstly, employers may describe their health and safety culture overly positive. Secondly, workers may not be aware of all relevant meetings or may work in departments (e.g. accounting) where less or even no such meetings are held. The latter can be investigated in more detail by looking at different sectors. Meetings on health and safety issues are more important for workers in producing industries and in the social/public sector (54%, 51%) than in market-oriented services (40%).

Across the different countries, we find Bulgaria (and Germany) to exhibit the highest agreement shares (50% and 48%). To the contrary, Portuguese (26%), Polish (32%), and Finish (38%) workers are less often asked whether they have complaints. With respect to sector and size differences the data reveal the typical pattern: The consultation gap between small (1–9) and large (250 +) firms lies around 24 percentage points, and the difference between establishments from the production and market-oriented service (public/social) sector is 12 (5) percentage points.

### ***Information indicator***

In order to compare the implementation of information and training across different countries, firm sizes and sectors, we again construct a composite indicator which simply sums up all

positive answers. For example, a worker with a score of five receives all relevant information, whereas a worker with a score of zero is not provided with any information.

**Table 36 Implementation, information provided (in %), all countries**

Countries	BG	FI	DE	PL	PT
	4.3	3.9	4.3	4.5	4.1
Firm-size	1–9	10–49	50–249	250 +	
	4.2	4.4	4.6	4.7	
Sector	Prod. Ind.	Market orient. serv.	Public & social serv.		
	4.5	4.1	4.4		

Source: Own calculations; each observation is weighted relative to the population of all workers; multiple answers per respondent. Differences from 100 % are due to rounding errors.

Data: N = 2,515 workers from five countries (Bulgaria, Finland, Germany, Poland, and Portugal), Worker Survey, TNS Infratest, 2010.

Overall, the level of the information indicator is 3.8, i.e. an average worker receives information on almost four of the five categories. Comparing the indicator across countries shows that Poland has the highest level of informed workers (4.4), Bulgaria, Finland, and Germany have about the same (medium) score (3.9, 3.7, and 3.9), and Portugal has the lowest score (3.3). It is noteworthy that from the perspective of workers, Finnish, German and Polish firms rate considerably better in terms of OSH information than from the perspective of employers, while the values for the Bulgarian and Portuguese firms do not differ much between the two perspectives. In terms of firm size differences, we find an almost linear trend—workers in larger firms, on average, receive more information.



There are also considerable sector differences, with production industries (4.0) and public and social services (3.9) having the highest score, and workers in market-oriented services receiving information on 3.6 of the five topics on average. This trend exactly replicates the pattern in the employer survey. Therefore, we can use the same possible explanation: State run companies are probably more dedicated to the OSH legislation, and establishments having production facilities are generally more aware of safety and health hazards. Companies in market-oriented services, on the other hand, may not see the necessity to inform their workers on all of the given topics.

### ***Results according to the sector, the size of establishment, gender and type of contract***

In both the employer and the worker survey there are a number of background variables that allow us to analyse whether the WPD had different effects on different groups of establishments and workers.

As shown in the chapter dealing with the fulfilment of the legal obligations by employers (mandatory question 9), there are indeed some significant differences regarding the degree of fulfilment, in particular differences induced by the size of the establishment (number of workers) and by the sector of activity. These will be summarized here and for the results of the workers' survey, analysis on additional characteristics such as gender and contract type will be added.

#### ***Size of the establishment***

The size of the establishment has a significant influence on some, though not all of the obligations regulated in the WPD. There are also some apparent differences in this respect when comparing the employer data with the data from the workers' survey. In particular, the following observations can be made with regard to particular effects of the WPD on establishments of different size-classes:

- Small establishments do more often not carry out risk assessments. According to the workers survey, a difference clearly exists, but however only a small one: Whereas around 45% of the workers from smaller workplaces with less than 50 workers have had some kind of risk assessment at their workplace, it is about 60% for the larger workplaces with 50 or more workers. This is also reflected in the employers' self-assessment, where 77% of the small-sized firms (less than 10 workers) carry out risk assessments, but more than 90% of all firms with 10 or more workers.
- The share of establishments that do not provide their workers with information on OSH issues regulated in the WPD (e.g. traffic routes, emergency exists etc.) is also higher among the smaller size-classes, according to results from both the employers' and the workers' survey. But the share of workers indicating that they would need more information on any of the OSH topics is almost the same across all size-classes. Workers in smaller workplaces thus seem to be as happy with the information they receive on basic OSH issues as those in larger units. Interestingly, among the

workers that did not receive any information, those in smaller establishments less often believe that they would need any information.

- In terms of consultation of workers on OSH issues the picture is mixed: Staff or team meetings in which OSH issues are discussed are more prevalent in large firms (according to both the employers' and the workers' view) and large firms are much more likely to have an institutionalised OSH representation (OSH representatives or OSH committees) in place. But regarding the consultation of workers on their OSH information and training needs, there is no clear difference amongst size-classes. And where risk assessments are carried out, workers from small firms claim more often to be consulted on this occasion than workers in large firms (– an issue which from the employers' view is just the opposite).

But in spite of these differences in the application of basic OSH measures prescribed in the WPD, with regard to the fulfilment of the WPD obligations regulated in its annex smaller firms do in general not considerably differ from the larger ones. There are areas where smaller firms have a few more deficiencies than larger ones (Fire fighting facilities, escape routes), but there are also aspects on which the smaller firms rate better than the larger ones (room climate/ventilation, room dimensions) and aspects where no real differences are encountered (room lighting, traffic routes, toilets and washrooms).

It is noteworthy that when asking the employer for adjustments to OSH deficiencies discovered at the workplace, workers from very small establishments (1 to 9 workers) refer more often to the legal regulations based on the WPD than those of larger workplaces (27% of workers from small firms bringing forward any OSH queries, as compared to 13% up to 19% of those from larger firms). The reason for this might be that these workers usually do not have any OSH representative or specialist whom they could ask about these issues. For these workers in small workplaces, an easy intelligibility and adequate level of detail of the regulations is thus particularly important. Less than half of the workers from small firms who used the regulations for such a purpose however thought them to be of any help in these occasions.

### ***Sector of activity of the establishment***

Another firm characteristic that influences the implementation of the WPD is the sector of activity the firm belongs to. In the analysis of the survey results, we differentiate between just three sectors since the number of interviews per country is too small to allow for a considerably finer distinction. The differentiation is made between producing industries, market-oriented services and public or social services. The latter group is made up by the subsequent sectors of public administration, education and health/social work, it thus comprises not only publicly owned organisations, but also private ones. The following observations in terms of sectors can be made on the base of the survey data:

- (1) Regarding the information of workers, the workers' survey shows that workers in the market-oriented services receive less OSH information than those of the producing industries and the public and social services. Differences are however relatively small and workers in the market-oriented services seem to be about as happy with the information they receive than those in the other sectors.

- (2) Risk assessments are also slightly less often carried out in market-oriented services.
- (3) Market-oriented services are less likely to consult their workers on most of the aspects asked about in the surveys than the other sectors. This holds particularly for the discussion of OSH issues in staff or team meetings and for the consultation of workers on safety and health complaints they attribute to their workstations.

In terms of the fulfilment of the regulations in the annex of the WPD, there is not a lot of difference amongst the sectors.

### **Gender**

The worker survey data can be analysed separately for male and female workers. The most important outcome indicators used in the worker survey are the answers to the questions on emergency exits, on the existence of fire extinguishers and the knowledge about their position, the satisfaction with the room climate, the availability of enough light, the dimensions of the workplace and the state of toilets and washrooms. Looking at these issues separately for men and women, no major differences can be found. The workplaces used by women are thus neither better nor worse with regard to these issues than those of their male colleagues.

### **Contract type**

In the workers' survey, a background question on the type of contract held by the person was included. A distinction was made between:

- (4) regular, indefinite contracts (n = 1.999 cases in the sample)
- (5) temporary agency contract (n = 64 cases in the sample)
- (6) other types of temporary or fixed-term contracts (n = 425 cases in the sample)

The intention of this background question was to test the hypothesis whether workers on non-regular contracts have a less favourable OSH situation than those with a regular work contract. A look at the results shows several indications that tend to confirm this hypothesis. Especially temporary agency workers seem to be in a less favourable position in this regard, e.g. as far as information, risk assessments or several aspects of the regulations in the WPD Annex are concerned. But the number of interviews with temporary agency workers is finally too low as to draw any representative conclusions from them. It is however an issue worth pursuing in further evaluation studies with larger sample sizes.

Workers on any other type of temporary or fixed-term contract also show some differences to those in regular employment. But these differences are generally smaller than for the temporary agency workers and concern mainly 'OSH actions' like risk assessments and the provision of information, but not the basic shape of the workstation with regard to issues such as emergency exits, room climate, lighting etc. Since many of the workers employed on a temporary basis will have joined the workforce only relatively recently, it is to a certain degree normal that they have often not (yet) been included in risk assessments or information activities.

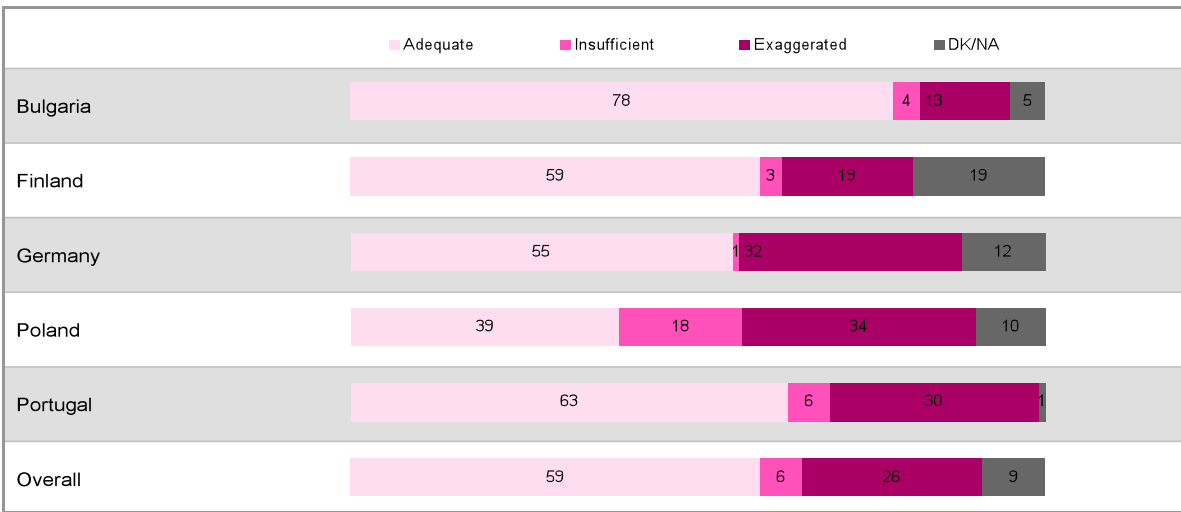
A further distinction made in the workers survey with regard to contractual arrangements is between full-time and part-time workers. Part-time workers are also less likely to receive

OSH information so that they are e.g. more often not familiar with the position of the closest fire extinguisher or the first aid equipment. Likewise, their workstations are less likely to be assessed (or the assessment is done, but the worker does not know about that because s/he is only temporarily present). But differences to the full-time workers in these aspects are again not very large (mostly in a range of between 5 and 10 percentage points) and the overall satisfaction of part-time workers with their OSH situation is at the same level as that of full-time workers.

Summarizing the results of the employers’ and workers’ survey on potentially different effects of the WPD on different groups of workers or establishments, it can be concluded that differences exist in particular with regard to risk assessments and the provision of information. These differences are most accentuated by the factor “size” – small establishments apply less of these OSH measures. Differences by sectors of activity also exist, but tend to be smaller – at least in the rough distinction among just 3 sectors of activity. Different types of workers have all in all a quite comparable OSH situation as regards the provisions of the WPD, though working part-time or working on a temporary contractual basis tend to imply a slightly lower information and risk assessment rate. Interestingly, in spite of these ‘deficiencies’, the provisions of the Annex of the WPD are fulfilled to a very similar degree in workplaces of all sizes and rough sectors (in single sectors with specific working conditions, the situation might again be different). Also, workers with ‘non-standard’ working forms such as part-time workers or workers on temporary contracts show a similar degree of satisfaction with their OSH situation as those with ‘standard’ working forms.

There is a similar broad consent concerning the usefulness<sup>44</sup> of the national transposition of the WPD. **59% of the employers see the level of detail** of their national legislation including the existing supporting legislation as “adequate“. This is in line with the stakeholders’ statements, i.e. two thirds of the stakeholders see no unnecessary aspects in the WPD.

**Figure 4 Level of detail of the legislation (in %), employers’ view, by country (E 504)**



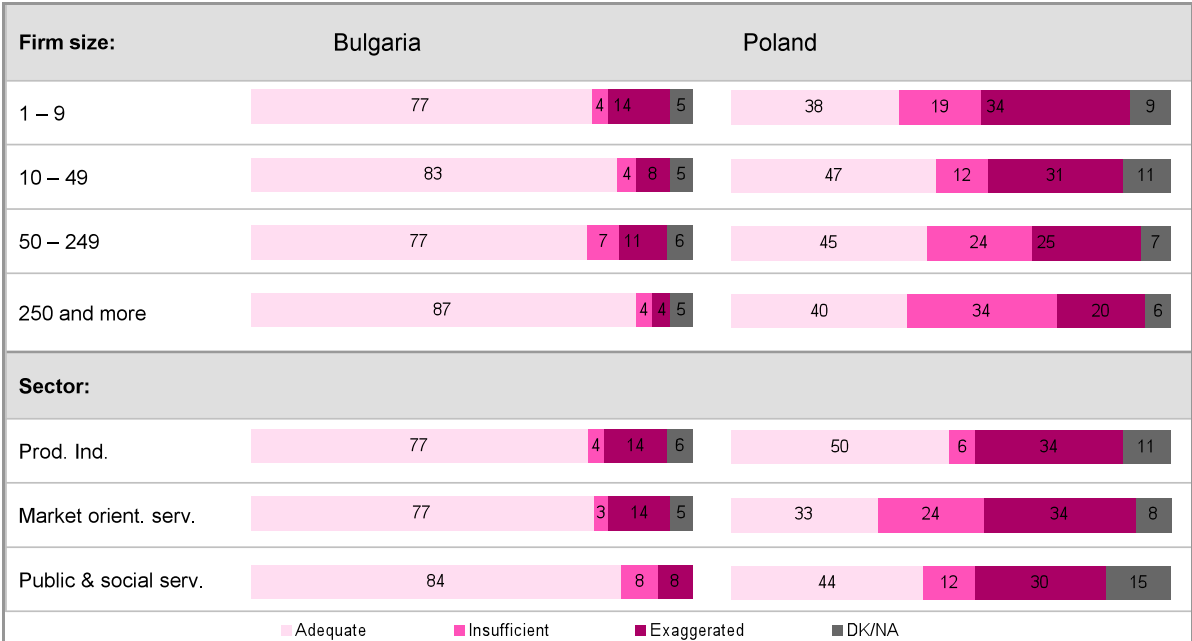
Source: Own calculations; each observation is weighted relative to the universe of all establishments. Deviations from 100 % are due to rounding errors.  
 Data: N = 2,535 establishments from five countries (Bulgaria: N = 503, Finland: N = 501, Germany N = 500, Poland N = 500, and Portugal = 531), Employer Survey, TNS Infratest, 2010.

<sup>44</sup> The term “Usefulness” was used to avoid more specialist terms as relevance and effectiveness.

The variation between countries is rather large; one can distinguish between two groups of employers. In three countries - Germany, Poland and Portugal - one third of employers considers the requirements as 'exaggerated'. In Finland and Bulgaria, this share is considerably lower (19% respectively 13%). Except from Poland only a minority states that the regulations are insufficient, ranging from 1% in Germany to 6% in Portugal.

When looking into sectors and countries, market-oriented service industries in Poland see the level of detail as least adequate and regard the legislation often as exaggerated, but at the same time also more often than other sectors as insufficient (24%). Production-oriented enterprises seem to have less problems.

**Figure 5 Level of detail of the legislation (in %), employers' view, Bulgaria and Poland, by firm size and sector**



Source: Own calculations; each observation is weighted relative to the universe of all establishments. Deviations from 100 % are due to rounding errors. Data: N = 1,003 establishments from two countries (Bulgaria: N = 503 and Poland N = 500), Employer Survey, TNS Infratest, 2010.

Not unexpectedly the number of enterprises, who see too much 'exaggerate' regulation is much higher than at the stakeholders and specialist survey. Specialists tend to see the deficits of a regulation and not the burden of knowledge and practical application of a regulation for non-specialists.

Workers were not directly asked for an assessment of the WPD regulations because most of them will not be familiar with the WPD and would not be able to attribute particular OSH rules to the WPD. But workers stating that they comply with general OSH rules only sometimes or practically never were asked about the reasons for this. The assessment of the rules as too exaggerated was one possible answer option.

In Bulgaria and Finland the percentage of workers who consider the rules as exaggerate is higher than the percentage of employers who do the same. These are the two countries where employers show the lowest expression of exaggeration. In Poland and Portugal it is the other way round, approximately one third of the employers complain about exaggerated rules, the percentage of the workers is a little lower.

#### III.3.4 COMPARISON WORKERS' / EMPLOYERS' / EXPERTS' ESTIMATIONS OF FULFILMENT OF LEGAL OBLIGATIONS

The view of stakeholders – which are in many cases also OSH-specialists – on situations at workplaces is generally more critical than the results of the phone surveys where a vast majority of workers and employers stated quite unanimously that legal requirements are largely met by their company. Experts often insist on the fact that the level of fulfilment of legal obligations may very much vary from one workplace to another. Especially if the workplace is a very small company, the level of fulfilment can be far below the average standard, it is often argued.

The workers' survey shows however that workers are largely satisfied with their workplace OSH practices. 30% of the workers declare being **very satisfied** with the OSH situation of their workplace, 58% said they are **satisfied**. Only 2% clearly stated they are **not satisfied** at all. The same positive results are observed from the workers' survey when looking at specific requirements. With the exception of the "room climate", all other issues show a proportion of more than 80% of satisfied workers.

The stakeholder survey shows that a majority of stakeholders indicate the escape routes and emergency exits and the air, ventilation and room temperature as being the issues that caused the most frequent difficulties to comply with (see answer to question 14).

The issue of room temperature is to a certain extent confirmed by the workers survey as it is clearly the problem, which is the most noticed by workers (25% of them as compared to 13% for daylight, 14% for first aid equipment, 12% for sanitary facilities and 10% for traffic routes, loading bays or ramps).

As far as the escape routes and emergency exits are concerned, it is not possible to draw the same conclusions as only 10% of the surveyed workers declare they noticed deficiencies in this field at their workplace. However, it may be difficult for workers to estimate deficiencies in that domain as it is not an issue that can be perceived on an every day basis and it does not have a direct impact on every day working conditions.

It is noteworthy that the overall satisfaction with the OSH practices at the establishment as well as the shape of the workplace with regard to specific WPD requirements such as emergency exits, traffic routes, room dimensions, availability of light, knowledge about first aid installations and the hygiene level of toilets and washrooms is at about the same level in small enterprises as in the larger ones. The only exception is the existence of fire extinguishers; where very small enterprises are slightly less well equipped. On the other hand, satisfaction with the room climate is even higher in smaller firms than in the middle-sized or large ones.

There is no easy explanation available for the discrepancy between the views of stakeholders and workers with regard to the OSH situation in small companies. Smaller workplaces indeed seem to comply less often with central legal obligations such as risk assessments or information and training of workers. But these deficiencies might at least partly be compensated by the more direct everyday contact between workers and employers in small firms. An attentive employer with OSH knowledge and sensitisation might often recognise OSH deficits on the spot at such a small workplace and without a formal risk assessment.

On the other hand, in cases where the employer does not recognise the OSH deficits on his or her own, but is confronted with an OSH query from some of the workers, small firms indeed seem to be somewhat less responsive to such requests than larger ones:

**Table 37 Reactions on the request for adjustment of OSH deficiencies, by firm size**

Firm size In %	Request(s) for the adjustment of OSH deficiencies fully or partly granted	Request(s) for the adjustment of OSH deficiencies not granted at all	DK/NA
1-9 workers	64	34	2
10-49 workers	75	24	1
50-249 workers	82	17	1
250 or more workers	77	22	3

It is important to point out that the understanding of OSH issues may be limited for some workers, especially concerning compliance to legal requirements. Workers may not be aware of some obligations. The survey shows that ignorance of legal aspects is the second reason why workers do not refer to legislation when they express complaints (30%).

Some questions of the employers' and workers' surveys were asked in an identical or almost identical way to both workers and employers. The aim of this was to validate the employers' statements by comparing them to the workers' data. Several of the single results have already been shown and discussed in other chapters, but are summarized here once more in two tables, one showing the results by size-class and the other one by country. It is important to note that the employer survey data used for the comparison in these tables are worker-proportionally weighted in order to be able to properly compare them to the workers' data. The employers' data in these tables thus deviate from those cited in other parts of the report – there only establishment-proportionally weighted data were used (see methodological remarks on the weighting types in the methodology sector).

All in all, the results show that employers and workers views are not too far apart, with some exceptions:

- 0 Regarding the risk assessments, differences are the largest. This was to be expected, since not each single workstation has to be assessed because of the existence of similar workstations at an establishment. Also, it can well be that a risk assessment has taken place, but without the worker noticing it. It is interesting to see, that in this perspective (with worker-proportionally weighted employer data) there is hardly any



country difference in both the workers' and the employers' assessment – the discrepancy between employer and worker data is thus very similar for all countries.

- 1 Regarding the information in general and on the single topics, there is little difference between the statements of employers and workers. Similarly, if a country is a bit weaker than others with regard to a certain issue, this is often reflected in the views of both parties (e.g. Portugal on the general provision of information). An exception on this is Finland however, where from the workers' view the situation is sometimes above the average of the five countries while it is below average from the employers' view (e.g. the provision of any information or the information on long-term health information).
- 2 The assessment of the practical implementation of the provisions from the Annex of the WPD is also very similar for all countries. For these aspects, it has to be taken into account that questions to employers were formulated as statements (e.g. "All indoor workplaces can be ventilated" – Agree, partly agree, disagree) and in the table, only the full agreements are included, not the "partly agree" answers. In firms that partly agree some of the workplaces will fulfil the aspects and some will not.
- 3 The question whether OSH issues are raised in management meetings, causes some larger discrepancies between workers' and employers' data, particularly for Bulgaria, Germany and Finland where workers report considerably less often the existence of such meetings than the employers. But this does not necessarily mean that many employers gave wrong answers: In some firms, such meetings might take place at some workplaces (e.g. in the production units), but not in others (e.g. in the departments with mainly office work).

**Table 38 Comparison between the employers' and the workers' survey results, by country**

White = employers (worker-proportionally weighted) Grey = workers In %	BG	FI	DE	PL	PT	Total
Regular risk assessment carried out? (yes)	96	83	90	92	90	<b>90</b>
Own workstation assessed since working with the employer? (yes)	55	47	58	50	50	<b>52</b>
Provided workers with information on any of the issues? (yes)	96	82	85	93	84	<b>88</b>
Received information on any of the issues? (yes)	95	95	94	96	85	<b>93</b>
Info on rules for clearance of traffic and emergency routes provided?	74	64	73	77	66	<b>71</b>
Info on rules for clearance of traffic and emergency routes received?	67	72	79	87	63	<b>74</b>
Info on behaviour in case of fire emergency provided?	94	70	79	89	76	<b>82</b>
Info on behaviour in case of fire emergency provided?	92	72	83	90	70	<b>81</b>
Info on proper handling & adjustment of equipment provided?	89	76	78	92	79	<b>83</b>
Info on proper handling & adjustment of equipment received?	84	82	80	92	75	<b>83</b>
Info on behaviour in case of work accidents provided?	91	71	81	91	77	<b>82</b>
Info on behaviour in case of work accidents received?	82	66	78	92	65	<b>77</b>
Info on working methods beneficial for long-term health provided?	85	75	74	86	64	<b>76</b>
Info on working methods beneficial for long-term health provided?	68	74	76	80	55	<b>69</b>
OSH issues raised in team or staff meetings? (yes)	88	70	75	58	50	<b>68</b>
OSH issues raised in team or staff meetings? (yes)	51	47	47	50	55	<b>47</b>
All indoor workplaces can be adequately ventilated (agree)	95	76	94	82	88	<b>87</b>
Happy with room climate (only workers at indoor workplaces)	87	67	79	82	78	<b>79</b>
Enough daylight or light by and artificial lightning system? (agree)	95	86	97	90	89	<b>91</b>
Enough light available for safe working? (yes)	95	89	95	90	88	<b>91</b>
Room dimensions sufficient for safe & pain-free working? (agree)	93	85	84	88	90	<b>88</b>
Room dimensions sufficient for safe & pain-free working? (yes)	90	87	95	91	89	<b>90</b>
Traffic routes well surfaced & kept free from obstacles? (agree)	82	78	88	82	86	<b>83</b>
Traffic routes kept free from trip hazards & obstacles? (yes)	75	86	85	84	82	<b>82</b>
Toilets and washrooms kept at adequate level of hygiene? (agree)	90	94	97	93	95	<b>94</b>
Toilets and washrooms kept at adequate level of hygiene? (yes)	85	91	95	92	89	<b>91</b>

Source for data in white lines: Own calculations; each observation is weighted proportional to the universe of workers in establishments.

Data: N = 2,535 establishments, Employer Survey, TNS Infratest, 2010.

Source for data in grey lines: Own calculations; each observation is weighted relative to the population of all workers.

Data: N = 2,515 workers from five countries, Worker Survey, TNS Infratest, 2010.

The comparison by size-class shows a similar picture – here too, data from both sources fit astonishingly well. Major differences are again to be seen just for the risk assessments and for the team or staff meetings with discussion of OSH topics. The data by size-class support the assumption that OSH meetings might take place only in selected departments: The larger the firm is, the bigger is the discrepancy between the statements of the workers and the employers.

**Table 39 Comparison between the employers' and the workers' survey results, by firm size**

White = employers (worker-proportionally weighted) Grey = workers In %	1-9	10-49	50-249	250 or more	Total
Regular risk assessment carried out? (yes)	78	91	96	97	<b>90</b>
Own workstation assessed since working with the employer? (yes)	43	47	58	62	<b>52</b>
Provided workers with information on any of the issues? (yes)	81	89	93	93	<b>88</b>
Received information on any of the issues? (yes)	86	93	96	96	<b>93</b>
Info on rules for clearance of traffic and emergency routes provided?	59	68	79	80	<b>71</b>
Info on rules for clearance of traffic and emergency routes received?	63	70	82	83	<b>74</b>
Info on behaviour in case of fire emergency provided?	71	80	88	89	<b>82</b>
Info on behaviour in case of fire emergency provided?	69	78	90	90	<b>81</b>
Info on proper handling & adjustment of equipment provided?	73	81	88	91	<b>83</b>
Info on proper handling & adjustment of equipment received?	76	82	88	87	<b>83</b>
Info on behaviour in case of work accidents provided?	71	80	88	90	<b>82</b>
Info on behaviour in case of work accidents received?	69	74	85	81	<b>77</b>
Info on working methods beneficial for long-term health provided?	65	74	82	87	<b>76</b>
Info on working methods beneficial for long-term health received?	61	65	70	81	<b>69</b>
OSH issues raised in team or staff meetings? (yes)	47	66	77	85	<b>68</b>
OSH issues raised in team or staff meetings? (yes)	36	47	51	56	<b>47</b>
All indoor workplaces can be adequately ventilated (agree)	91	88	85	84	<b>87</b>
Happy with room climate (only workers at indoor workplaces)	82	72	77	77	<b>79</b>
Enough daylight or light by and artificial lighting system? (agree)	92	93	91	89	<b>91</b>
Enough light available for safe working? (yes)	92	88	93	93	<b>91</b>
Room dimensions sufficient for safe & pain-free working? (agree)	93	91	87	80	<b>88</b>
Room dimensions sufficient for safe & pain-free working? (yes)	91	89	92	90	<b>90</b>
Traffic routes well surfaced & kept free from obstacles? (agree)	86	83	84	79	<b>83</b>
Traffic routes kept free from trip hazards & obstacles? (yes)	82	80	83	85	<b>82</b>
Toilets and washrooms kept at adequate level of hygiene? (agree)	95	94	93	92	<b>94</b>
Toilets and washrooms kept at adequate level of hygiene? (yes)	90	91	90	91	<b>91</b>

Source for data in white lines: Own calculations; each observation is weighted proportional to the universe of workers in establishments.

Data: N = 2,535 establishments, Employer Survey, TNS Infratest, 2010.

Source for data in grey lines: Own calculations; each observation is weighted relative to the population of all workers.

Data: N = 2,515 workers from five countries, Worker Survey, TNS Infratest, 2010.

All in all, the mirror questions asked identically in both types of surveys attest this survey approach a high validity and show that most employers obviously tell the truth in such surveys. It is also interesting that the somewhat lower values measured for Finland on some aspects and the mostly, relatively high values for Bulgaria from the employer survey are largely confirmed.

The data of both employer and worker survey provide a number of hints regarding the question of whether a level playing field between Member States exists with regard to those OSH areas which are regulated by the WPD. Due to the methodological problems of establishing clear causal relationships between the Directive and the current OSH situation, the surveys can however not provide waterproof evidence for the question in how far the current state of OSH in the countries is a direct result of the WPD.

The next table shows differences in the fulfilment of WPD provisions by country according to the employers' self-assessment. The following observations can be made:

- 1) All areas concerning basic aspects of the physical environment of the workplace are fulfilled to a comparable and large degree across all five countries.
- 2) Regarding the performance of regular risk assessments, the picture is somewhat less homogenous, with Germany and Finland showing lower values than Bulgaria, Poland and Portugal.
- 3) In terms of the provision of information, Bulgaria, Poland and Portugal are at an equally high level as regards both the share of employers providing information and the completeness of the information regarding aspects regulated in the WPD. Germany and especially Finland again show lower values according to employers' self-assessment.
- 4) For the WPD requirement to consult workers on OSH issues, the three chosen indicators "consultation on training needs", "consultation during risk assessments" and "discussion of OSH issues in meetings" (which are not literally prescribed by the WPD) suggest that the participation level is relatively high in all countries, although with some marked country differences for the three indicators. While Bulgaria rates high on all 3 indicators, Finland rates particularly high on the consultation about information and training needs, but comparatively very low on the discussion of OSH issues in meetings. In Germany, in turn, workers are often not consulted about OSH information and training needs, while in the other two indicators German rates are more or less in line with those of the remaining 4 countries. Poland and Portugal are situated in the middle range for all 3 consultation indicators.

**Table 40 Employers' perception of the fulfilment of regulations in %**

Aspect/Country	BG	DE	PL	PT	FI
<b>Physical aspects of the workstation</b>					
Escape routes and emergency exits clearly marked and well accessible	82	81	84	89	77
Fire alarm and fire fighting facilities regularly checked	84	87	86	85	76
Indoor workplaces adequately ventilated	93	97	86	91	87
Enough daylight or sufficient artificial light at all workstations	92	98	94	90	88
Room dimensions allowing for safe and pain-free working	91	90	92	94	91
Well surfaced and obstacle-free traffic routes	74	91	85	90	85
Toilets and washrooms with an adequate level of hygiene	93	96	93	96	95
<b>Risk assessment</b>					
Risk assessments carried out	88	74	84	88	64
<b>Information and training</b>					
Provision of OSH information (in general)	89	75	87	84	70
Information index (Number of WPD issues about which information is provided)	3,8	3,2	3,9	3,5	2,7
<b>Consultation of workers about OSH issues</b>					
Consultation of workers on OSH information and training needs	87	50	67	83	92
Consultation of workers about work habits and/or health problems during risk assessments*	98	72	73	85	71
Regular staff or team meetings with discussion of OSH issues	73	63	45	42	37

Source: Own calculations; each observation is weighted relative to universe of all establishments.

Data: , N = 2,535 establishments from five countries (Bulgaria: N = 503; Finland N = 501; Germany; N = 500; Portugal N = 500; Portugal: N = 531); \*N = 2.300 establishments (only those where risk assessments are being carried out), Employer Survey, TNS Infratest, 2010

The **workers' survey** largely confirms the overall positive picture drawn by the employers, but with some notable differences as regards the comparison of country results. The next table shows differences in the fulfilment of WPD provisions by country according to the workers' self assessment.

The following observations can be made:

**Table 41 Workers' perception of the fulfilment of regulations**

Aspect/Country	BG	DE	PL	PT	FI
<b>Physical aspects of the workstation</b>					
Establishment equipped with fire extinguishers	91	94	97	93	91
Generally happy with room climate at workstation (in brackets: only workers mainly working indoors)	82 (87)	79 (79)	77 (82)	77 (78)	68 (67)
Enough light available for risk free working	95	95	90	88	89
Room dimensions sufficient for safe working	90	95	91	89	87
Traffic routes and loading bays kept free from hazards and obstacles	75	85	84	82	86
Toilets and washrooms kept at adequate hygiene level	85	95	92	89	91
<b>Information and training</b>					
Infor. on rules for clearance of traffic and emergency routes	67	79	87	63	72
Information on behaviour in case of fire emergency	92	83	90	70	72
Information on proper handling and adjustment of working equipment and devices	84	80	92	75	82
Infor. on behaviour in case of a work accident	82	78	92	65	66
Infor. on working methods beneficial for long-term health	68	67	80	55	74
Information provided on none of the above aspects	5	5	3	13	4
No further information needed on any of these topics*	87	87	90	87	81
Frequency of provided OSH information considered sufficient*	81	88	85	74	79
Familiar with emergency exits and escape routes at the workplace	92	97	97	89	94
Knowledge where to find closest fire extinguisher (if existent)	98	94	95	96	88
Knowledge where to find first aid installations/equipment in case of accident	81	88	92	91	90
<b>Risk assessment</b>					
Current workstation assessed with regard to OSH issues, e.g. in the context of a risk assessment	55	58	50	50	47
<b>Consultation of workers about OSH issues</b>					
Present during last check-up of own workstation**	85	79	71	65	62
Consulted about work habits at workstation check-up***	80	65	52	72	77
Ever been asked about health and safety complaints attributed to the workstation situation	50	48	32	26	38
<b>Overall satisfaction with OSH at the workplace</b>					
Overall satisfaction with safety and health situation at the establishment (% very or fairly satisfied)	87	93	87	82	90

Source: Own calculations; each observation is weighted relative to the population of all workers.

Data: N = 2,515 observations from five countries (Bulgaria, Finland, Germany, Poland, and Finland); \*N = 2.362 workers who received information/training on any of these issues; \*\*N = 1.323 workers whose workstation was checked; \*\*\* N = 962 workers who were present when their workstation was checked, Worker-Survey TNS Infratest, 2010.

5) Regarding the investigated basic physical aspects of the workplace, assessments are very homogeneous concerning the five countries. The only aspects where somewhat bigger differences appear are the satisfaction with the room climate where Finnish workers are overall somewhat less satisfied, and the state of traffic routes and loading bays where Bulgarian workers show somewhat more dissatisfaction than

workers from the other countries.

- 6) Information levels are at a roughly comparable and, all in all, high levels in all five countries and there is relatively little demand for more comprehensive or more frequent OSH information. There are however overall slightly more deficits and a higher demand for additional information and training reported in Portugal, whereas Poland rates particularly well in most information indicators. It is noteworthy that information about the clearance of traffic routes is lacking more frequently in Bulgaria than elsewhere, which fits with the less positive assessment of the state of traffic routes by both employers and workers.
- 7) The picture workers provide with regard to risk assessments is also relatively even and differs from the picture given by employers, in so far as the more than proportionally good performance reported in this regard by Bulgarian, Polish and Portuguese employers is not confirmed by the worker perspective. From the workers' perspective, the picture is quite even, with roughly every second establishment performing risk assessments in all five countries.
- 8) In all five countries, a majority of workers reported to be consulted about OSH issues. The chances to participate in OSH matters appear to be highest in Bulgaria and somewhat lower in Poland, but overall the picture can still be considered as relatively homogenous.
- 9) Workers' overall satisfaction with the OSH situation is also high and quite homogeneous for the countries, with Germany rating slightly better and Portugal slightly worse than the rest.

Regarding the fulfilment of the basic requirements of the WPD, the results from the employer and worker survey indeed suggest that with regard to the WPD requirements currently no major differences exist within the EU. Many of the observed slight differences in the figures can be neglected since with the relatively small sample size of n=500 interviews per country, deviations of +/- 3 - 4% are still within the margin of error and do not necessarily reflect real differences.



**Table 42 Comparison of data concerning legal OSH obligations – risk assessment**

Desk research	Stakeholders	Employers	Workers
<p>Literature reveals less information as far as specific issues of WPD are concerned. Literature is very mixed on this issue.</p> <p>National surveys show variable results. These findings in general confirm some of the stakeholders' views.</p>	<p>The view is rather positive but with some restraints even among those who estimate that employers take the WPD requirements into account, when assessing the risks.</p> <p>Due to the practice of risk assessment and lack of clear view on what is done in the field, many relate their approval to contextual factors such as the size of the companies which refer to the level of expertise available and financial and technical means, the good knowledge of the legislation, the existence of external expertise, the availability of a social dialogue body within the enterprise, the existence of risk assessment tools, as well as aspects such as the issue of control by the authority.</p>	<p>The view is clearly positive as far as the general practice of risk assessment for Bulgaria, Portugal and Poland goes.</p> <p>It is more mixed for Germany and Finland.</p> <p>Safe use of work equipment and fire safety clearly remain important issues according to the employers.</p> <p>It can also be so because of the existence of other legislation specific for fire safety.</p>	<p>The view is slightly positive. Large differences are observed between the view of employers and workers, especially for Bulgaria, Portugal and Poland.</p> <p>The view is rather positive for Germany and slightly negative for Finland but smaller differences are observed between employers' and workers' views than for the three other countries.</p>

**Table 43 Comparison of data concerning legal OSH obligations – information and participation**

Desk research	Stakeholders	Employers	Workers
<p>Literature is showing that practice on consultation/participation /information is improving even if surveys show that strong weaknesses still remain.</p> <p>Some data show that equipment and working environment remain major issues, especially compared to issues such as psychosocial risks.</p>	<p>The view on consultation is rather positive but linked to the existence of consultation bodies and formal procedures. This means that the answer to the question is related to a threshold in terms of company size.</p> <p>Within consultation bodies, the issues covered by the WPD are of interest to workers' representatives as they are the basis of good working conditions even if the priorities may slightly differ in enterprises already showing good OSH standards.</p>	<p>The view on consultation is much more mitigated. Consultation would only concern half of the companies.</p> <p>These results refer to the remarks of the stakeholders who insisted on the importance of formal consultation bodies within the companies.</p> <p>In the survey a very large portion of the companies were very small enterprises.</p> <p>However employers are more likely to provide their workers with information. This is the case of three out of four employers in Germany and Finland and even more so in other countries. This information concerns mostly the handling of work equipment and fire safety, which represent most "visible" risks.</p>	<p>The view of the workers is much mitigated.</p> <p>A small proportion of workers are asked for possible OSH issues.</p> <p>As their employers, the workers are more likely to recognise when they receive information.</p>

## III.4 Findings on information campaigns and enforcement

### III.4.1 DESK RESEARCH

#### **Compliance and infringements**

In 2005, a study was performed on the request of the **Dutch** Trade Union Confederation, investigating the incidence of a number of risks on which little or no information is available from statistics on working conditions, but in respect of which the authorities had initially indicated that the relevant regulations could be dropped from the Working Conditions Act and which the Labour Inspectorate would no longer have to enforce. The so-called “low risks”, which are related to the Workplace Directive, cover the following risks:

- 4 daylight
- 5 floors, walls and ceilings of workplaces;
- 6 windows and overhead lights in work rooms;
- 7 changing rooms;
- 8 wash rooms and shower rooms;
- 9 (no) toilets, urinals or washbasins;
- 10 indoor and outdoor climate;
- 11 exclusion of sunlight.

This study reveals that one fifth or more of the working population in the **Netherlands** say that they are confronted with a number of ‘low risks’ at least once or several times a week. Three out of four risks are related to the Workplace Directive:

- working without a shower room/washroom at or in the vicinity of the workplace;
- little influence over temperature control, and working in an unpleasant indoor climate.

In **Austria** infringements on regulation concerning the workplace constitute by far the biggest group of all infringements registered by labour inspection over the last years:

#### **Table 44 Austria - infringements registered by labour inspection**

<b>Year</b>	<b>1999</b>	<b>2000</b>	<b>2008</b>	<b>2009</b>
Workplaces & construction sites	25.358	21.693	17.358	17.763
Working equipment	13.072	10.531	10.413	10.089
Electrical installations and operating facilities	5.486	4.713	5.101	4.993
General regulations (risk assessment, information, documentation, training, etc.)	6.858	11.672	13.870	14.314
Working operations and workplaces	5.874	4.443	6.884	6.402
Prevention services	4.545	11.888	5.202	6.124

1) Data from 1999/2000 is not comparable since different statistical methods were used for the data collection.

In detail, infringements concerning the workplace in 2000 were mostly related to storage, maintenance and cleaning (6.945), buildings (4.975), fire and explosion prevention (2.788) and first aid (2.660) and insufficient use of prevention services (6.305). Infringements in the area of electrical installations were mainly due to irregular inspections/maintenance of electrical installations (2.375) and working procedures/workplaces were mainly considered because of infringements in the area of personal protective equipment (2.250) and general requirements like workplace surveillance, handling of loads etc. (1.292, Bundesministerium für Wirtschaft und Arbeit, 2001).

In August 1999 the Labour Inspection conducted a nationwide inspection of emergency routes and exits in bars, clubs and discotheques. 70% of the premises (494 establishments) showed safety deficiencies (Bericht über die Praktische Anwendung der Richtlinie 89/654/EWG, 2003). A few months later, a second check-up took place in 408 establishments and two third of the premises had improved conditions according to the law. Most infringements were found with regard to emergency routes (49% of establishments showed failures), emergency lighting (39%), emergency exits (34%) and fire extinguishers (29%).

In 2001/2002 labour inspections controlled a number of hotel and catering establishments regarding their ventilation system. 80% of the kitchens were established with ventilation systems and 60% of the dining areas had a ventilation system<sup>45</sup>. Problems occurred with correctly turning on the ventilators and the correct dimensions of ventilation systems as well as with maintenance and temperature control. In general, premises were well equipped and the main problems occurred from a lack of instructions and training for workers to be able to handle the ventilation systems correctly. In the public sector inspection revealed mainly problems with lighting and provision of first-aiders.

The **Belgian** Inspection Administration started in 1996 with a new tool for measuring the compliance with legislation in the companies. The Inspection Index gives an indication of the level of compliance with regard to 13 articles, related to the most frequent accident causes. The data are available until 2002.

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<sup>45</sup> Bericht über die Praktische Anwendung der Richtlinie 89/654/EWG, 2003).

**Table 45 Belgium - Risk of falling, risks from falling objects**

In %		Number	0	1	2	3	4	Non compliance	Compliance
<b>0-49 workers</b>	1996-1999	11.126	7	18	49	19	7	26	74
	2000	3.321	6	20	49	16	10	25	75
	2001	3.181	8	17	46	20	9	25	75
	2002	3.343	6	17	50	20	6	23	77
<b>&gt;=50 workers</b>	1996-1999	8.131	5	16	53	20	7	20	80
	2000	2.399	3	15	51	23	8	18	82
	2001	2.293	4	16	49	23	8	20	80
	2002	2.010	3	16	50	24	7	19	81

Disorder with important risk for falls, or not protected higher levels, or unstable stored goods  
 Slippery floors, with dangerous bumps, holes or slopes  
 Overall compliance with legislation, except some minor violations  
 Doors and gates opening upwards must be fitted with a mechanism to secure them against falling back, dangerous zones must be protected  
 Routes must be located and dimensioned in accordance with the type of undertaking; availability of traffic plan.

**Table 46 Belgium - Safety signs**

In %		Number	0	1	2	3	4	Non compliance	Compliance
<b>0-49 workers</b>	1996-1999	11.409	18	25	44	12	2	43	57
	2000	3.381	13	24	48	12	2	37	63
	2001	3.217	15	23	44	14	3	38	62
	2002	3.442	12	24	46	16	2	36	64
<b>&gt;=50 workers</b>	1996-1999	8.474	9	20	47	20	4	29	71
	2000	2.512	5	21	49	19	7	26	74
	2001	2.471	7	20	48	22	5	26	74
	2002	2.207	5	18	49	24	4	23	77

- Not sufficient correct safety signs for signaling exits, emergency exits, fire fighting equipment, prohibition of fire, open flame and smoking
- Not sufficient correct safety signs for the obligatory use of PPE
- Overall compliance with legislation, except some minor violations
- Safety signs identify a permanent danger (falls, contact with objects, electrical power, lasers etc.)
- Recurrent safety training of personnel for whom safety signs are of importance.

In **Denmark**, although very little research has been done concerning the implementation of the WPD, a lot of research has been done on work environment questions, which provides also some proxy indicators on the WPD. Amongst other things, Denmark provides some comprehensive data sets such as the Danish Work Environment Cohort Study (DWECS - Danish: Nationale Arbejds miljøkohorte, abbreviated NAK). This data source is based on information and results from studies on the working environment and health among self-employed and employed workers done by the National Research Centre for the Working Environment (NWEREC) (Burr et al, 2005). The cohort study is a sample survey that used questionnaires and phone interviews to gain detailed information about the working

environment and health. It was conducted in 1990, 1995, 2000 and 2005 and 2010 (2010 data not yet available). In 2005, approximately 12,000 people participated in the survey.

These data can be combined with data on the prevention activities of companies mainly obtained from reports on this subject by the Danish Working Environment Authority and the National Research Centre for the Working Environment from 2001, 2004 and 2006 (the reports are called 'VOV' which stands for 'Virksomhedsovervågningen', 'Supervision of Companies'). More than 9,000 employers and workers answered questions about preventive activities at their workplaces. Some findings are presented here:

**Table 47 Denmark - Companies which have completed a workplace assessment<sup>46</sup>**

Number of workers	2005 (in %)	Total
1-9	78	3.380
10-19	88	799
20+	96	2.184
Weighted total	82	6.363

The next table shows that most of the companies have completed the APV after the WPD was transposed into the Danish law in 2004 and 2005 (WP04 and CWEA).<sup>47</sup> This underlines the impact of the WPD concerning this specific part.

**Table 48 Denmark - When have you recently completed a workplace assessment?**

Number of workers	2001 (in %)	2002 (in %)	2003 (in %)	2004 (in %)	2005 (in %)	2006 (in %)	Total
1-9	1	2	4	11	30	51 %	2.480
10-19	1	2	5	13	31	48	662
20+	1	1	5	14	30	49	2.023
Weighted total	1	2	5	12	30	50	5.165

Statistics compiled by the **Spanish** Workers' Compensation association (Mutuas de Accidentes de Trabajo – AMAT) showed the poor implementation of the Law on Prevention of Occupational Risks in SMEs. AMAT has made public the statistical results of the company visits to raise awareness, inform and advise companies with up to 50 workers in 21 sectors.

The study reports the results of 8.858 visits to Barcelona, Madrid, Murcia, Seville and Valencia and its findings confirm again the general failure of the Law on Prevention of Occupational Risks. Only one in four employers has, according to the Association, a satisfactory knowledge of the law (24.8%).

<sup>46</sup> See: <http://www.arbejdsmiljoforskning.dk/da/arbejdsmiljoedata/~media/Ubekendte/vov.pdf#>, accessed on 24.11.2011.

<sup>47</sup> See: <http://www.arbejdsmiljoforskning.dk/da/arbejdsmiljoedata/~media/Ubekendte/vov.pdf#>, accessed on 24.11.2011.



Almost half of those who are supposed to know the law have not organized the prevention activities in their company or have not trained their workers, which means that in general for each company with fewer than 50 workers that has put in place a system for prevention or has trained workers; there are seven or eight who have not done anything. The percentages of non-compliance on risk assessment and prevention plans are around 84% and 89%. Only 36% of companies routinely perform medical examinations for their workers. Prevention delegates have been elected only in 18% of companies with 6 to 50 workers.<sup>48</sup> The larger the company the better the compliance with the occupational health and safety rules. Another study by EMER-GFK in 800 companies in 1998 (2 years after the implementation of the Royal Decree) showed that in companies with 50 to 249 workers, 85,4% provides some form of training and information to the staff. However, only 32% declared to have a prevention plan in place.<sup>49</sup>

**Table 49 Spain - Implementation of the Law on Prevention of Occupational Risks**

Number of workers	Representative for OR prevention has been elected (in %)	Security committee has been put in place (in %)	Prevention model has been implemented (in %)	Educational activities on prevention have been carried out (in %)
< 6	--	--	6	17,9
6 -49	33,9	--	16,6	51,9
50-249	74	61	31,9	85,4
250-500	79	87	46,9	97,4
>500	96,4	96,4	66,2	100

To evaluate the effectiveness of the Law on Prevention of Occupational Risks, indirect indicators of the different editions of the National Survey of Working Conditions were prepared by the National Institute for Occupational Safety and Health at Work. The 4<sup>th</sup> and 5<sup>th</sup> Working Conditions Surveys were published in 1999 and 2003, and their results suggest that the percentage of workers surveyed in 2003 suffered from a work accident in the last two years prior to the survey and considered that these are due to the poor conditions of the workplace or an unsafe work area, was similar to the survey in 1999 (about 5%).

The highest percentage of sanctions per inspection activity were noted for the machinery and work equipment, which resulted in almost 65% of the cases in sanctions.

<sup>48</sup> Source: Instituto Sindical de Trabajo, Ambiente y Salud, 2000.

<sup>49</sup> Source: Instituto Sindical de Trabajo, Ambiente y Salud, 1998.

**Table 50 Spain - Reasons for infringement and sanctions**

Type of inspection	No. of inspections	Sanctions			Sanction per inspection
		Administrative offense	Full or partial laying	Warning	
Assignment of workers to incompatible positions	691	76	1	288	52,82
Denying workforce the right to strike / threat of firing	25	9	1	6	64,00
Electronic risks	5.918	347	67	3.092	59,24
Elevation and transportation	2.176	122	12	1.071	55,38
Emergency plans and evacuation	2.604	128	6	1.502	62,83
Ergonomic and psycho-social risks	2.820	194	0	1598	63,55
Fire and explosive risks	2.371	135	5	1.336	62,25
Integration of preventive action / prevention plan	2.277	188	0	986	51,56
Machines and technical equipment	19.681	3.057	92	9.625	64,91
Motherhood protection	1.019	34	1	578	60,16
Presence of preventive resources	1.839	218	0	719	50,95
Prohibited work for minors	108	15	0	38	50,00
Rights of the workers' representatives	1.860	142	0	965	59,52
Signalization of working places	3.355	150	2	1.974	63,37
Stairs, platforms and apertures	22.524	2.041	235	11.100	59,37
Toilets, washrooms and other services	4.084	320	5	2.333	59,21

National distribution of "type of inspection", the "number of inspections" and the results in terms of preventive sanctions for risks at the workplace – Year 2009, "Informe annual 2009 de la inspección de trabajo y seguridad social, General de la Inspección de Trabajo y Seguridad Social, Ministerio de Trabajo e Inmigración, NIPO: 790-10-097-9"

In **France**, inspection activities during the years following the transposition (1994-1997) show an increase in the number of simple observations made regarding workplaces (57,529 in 1994 and 65,867 in 1997), while the number of official reports and formal notices increased very slightly.

In **Hungary** some of the control campaigns of the Labour Inspection also covered WPD issues. Compliance with §7 of the national transposition of the WPD on low temperatures at the workplace has been controlled by the Labour Inspection in several consecutive years since 2005 in focussed campaigns. The control campaigns were carried out at the national level, in different branches like construction, road construction and maintenance, maintenance of public areas, forestry, troubleshooting, construction material trade, and closed workplaces considered as cold, as from 2005. In the same year, on 265 workplaces more than 4000 workers have been controlled in this respect. The controls revealed following

deficiencies: In 7.5% of the workplaces no protective clothes were provided to the workers, and in 8.7% no rest rooms, rooms for warming-up and social facilities were provided. 16% of the workers did not provide warming-up beverages required by the transposition of the WPD to their workers. (MSAE 2006, p. 40)

In 2006, control campaigns were focussed on workplaces with high temperatures, including open air as well as closed workplaces. Control actions were carried out in different branches like construction, construction material trade, road maintenance, gardening, agriculture, waste management, forestry and wood processing, as well as bakeries, restaurants, foundries, marvering, laundries, and heating plants. In total, 240 enterprises with open air workplaces and 495 companies with closed workplaces were controlled, involving 20 164 male and 14, 849 female workers. In 6 workplaces (0,9%), no adequate protective equipment was provided to the workers, and in 2% no occupational health services were provided. 90 employers (13%) did not carry out risk assessment, and 136 of those who did, have not considered the climatic aspects. Following organisational measures have been introduced by nearly half (331) of the companies to protect the workers from the negative impact of extreme temperatures: earlier starting hours, longer lunch break in cool rooms, night shift, etc.

The restrooms were deficient or lacked in only 2% (16) of the controlled companies. 5 - 10 minutes' breaks per hour were generally permitted to workers, unless the technology made this impossible. In 9 companies protective beverages were not provided in a necessary quantity and frequency, and the hygienic circumstances of providing beverages were deficient in 14 companies. (MSAE 2007, pp. 40-41)

In a similar campaign in the subsequent year among others the provision of protective beverages, the restrooms and rest periods as well as first aid facilities were controlled in 1523 companies, employing a total of 40 877 workers. In more than half of the companies some kind of deficiency was detected; most gaps were found in regard to the provision of protective beverages and the restrooms and rest periods. However, due to regular controls of the Labour Inspection the compliance has improved over time. (MSAE pp. 32-33)

Regarding the conditions of the facilities, the report of the Labour Inspection describes the situation as varying. Especially, leased facilities display deficiencies, as neither the owner nor the hirer of the facility is likely to invest in the maintenance of the respective facility. The most common deficiencies include deficiencies in doors and windows, roof structure, and insufficient lightening. In some of the older facilities that were not built for the purpose of actual working processes, the design of the working place often does not fit to the sequences of the working process. Obstruction of the traffic ways is a deficiency that was observed not only in older but also in newly built facilities. (MSAE 2008, pp. 33-34)

The study includes analysis of the statistical data of the State Labour Inspectorate, the Occupational Medicine Center and the Department of Statistics for the last 3 years (Although the study is dedicated to WPD implementation, the information below is on general OSH aspects, not specifically related to WPD):

- More than 90% of all accidents occur in private companies. This indicates that state-owned enterprises address occupational safety and health issues more seriously; that

they have less hazardous working conditions and the transposition of WPD costs will be lower in comparison to private institutions.

- About half of the accidents are due to companies' failure to comply with current legislation.
- 6.5 infringements are reported per enterprise.
- Less than half of all workplaces inspected do not meet requirements listed in General Workplace Equipping Guidelines.
- About 60-70% of all companies do not perform workplace risk assessment.

In 2000 State Labour Inspectorate inspected 10 400 enterprises and reported 51 300 infringements of health and safety regulations. 0.6% of all workers worked in very hazardous conditions, 7.4% generally under hazardous conditions, and 13.5% performed dangerous work tasks (SRL, 2002).

There has been no systematic evaluation of the implementation of the Requirements No.359 in **Latvia**. However, in 2002 the Latvian Labour Inspectorate (Valsts Darba Inspekcija, VDI) received answers on a survey from 38 companies on implementation of a new Labour Protection law, out of which only 5 stated to have sufficient resources to implement the law requirements (VDI, 2002, p. 19.). In 2003 the State Labour Inspectorate made a small survey of 35 employers, from which only 5 knew that there had been a new Labour Protection Law coming into force in 2002 (VDI, 2002, p. 23.).

Data registration of violations of specific regulations according to the No. of regulations started to be registered in 2007. The data are summarised in the next table. The Table shows that since 2007 there has been a steady increase in registered violations, which can also be related to the increasing economy and quality of work of VDI.

**Table 51 Latvia - Registered violations of Regulations - number of punishments**

Regulation	2007	2008	2009	2010	2011 (1Q)
Regulation No.125, no of registered violations	874	1066	1380		
Regulation No.125, no of penalties	2	11	2		
Regulations No. 125, amount of LVL received from penalties	400	2430	450		
Regulation No. 359, no of registered violations				1245	397
Regulation No. 359, no of penalties				2	1
Regulation No. 359, amount of LVL received from penalties				0	100

Source: E-mail communication with Sandra Zariņa – Manager of the Labour Protection department of the State Labour Inspectorate, April 21, 2011

According to the **Dutch** Confederation of Trade Unions FNV, companies generally know the current legislation. However, because of its inevitable vagueness, there is a lack of clarity about when the rules are being complied with. As a result, there are differing interpretations and levels of protection in companies. According to the Labour Inspectorate, enforcement measures are still occasionally required with regard to emergency routes and emergency exits.

In 2005, a study was performed on the request of the Netherlands Trade Union Confederation, investigating the incidence of a number of risks on which little or no information is available from statistics on working conditions, but in respect of which the authorities had initially indicated that the relevant regulations could be dropped from the Working Conditions Act and which the Labour Inspectorate would no longer have to enforce. The so-called “low risks”, which are related to the Workplace Directive cover the following risks:

- daylight (no daylight without compensating factors, including the public);
- floors, walls and ceilings of workplaces;
- windows and overhead lights in work rooms;
- changing rooms;
- wash rooms and shower rooms;
- (no) toilets, urinals or washbasins;
- indoor and outdoor climate;
- exclusion of sunlight.

This study reveals that one fifth or more of the working population in the Netherlands say that they are confronted with a number of ‘low risks’. Three out of four risks are related to the Workplace Directive:

- working without a shower room/washroom at or in the vicinity of the workplace;
- little influence over temperature control, and
- working in an unpleasant indoor climate.

In the 2002 HSE survey (**UK**), 39% of the respondents claimed they had problems implementing the regulations in their workplace, the majority of the problems related to cost and management issues, thermal comfort (lack of a maximum working temperature), working space, ventilation and implementation in older buildings. Most problems are expected in the construction and manufacturing industries.<sup>50</sup>

In 2009/10 a survey undertaken by HSE, of almost 3000 health and safety representatives, union representatives, individuals and managers, found that the majority of respondents did not experience problems with high workplace temperatures. Reflecting these findings HSE recommended joint working between all parties in those sectors that are most affected – trades unions, employers and worker representatives. Since 2002 HSE had been publishing several publications offering clear and practical guidance to enable employers to identify possible heat stress issues and tackle these problems.

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<sup>50</sup> Ibidem

### III.3.2 OPINION OF THE STAKEHOLDERS

36% of the respondents have mentioned that one of the reasons why companies do not comply with the national regulation/transposition of the WPD is that infringements are not regularly controlled. Only 19% believe that one of the reasons is that infringements are not sanctioned.

#### **Contextual factors: Information and enforcement strategies**

Evidence-based findings on regulation culture and behaviour suggest that duty holders are more likely to comply when they perceive the regulatory regime as fair, trusted and co-operative, but fear of prosecution is a key driver of behaviour, with sanctions needed to back up more co-operative approaches. Sanctions, irrespective of the size of the penalty, can impact on duty holder behaviour, as can 'naming and shaming' non-compliant duty holders, particularly among those for whom reputation is important. Enforcement is recognised as a factor in compliant behaviours. It is however a political decision and a question of available resources whether more control should be applied to further enhance compliance with the WPD. And it is a matter of interpretation whether the current level of satisfaction with the OSH situation by the workers is sufficient or not.

The need for information and support for a company to comply with the OSH regulations is linked to the legislative model of a country. In the case of an objective-based regulation, the need for support will become more significant. SMEs often lack the management structures needed to enforce compliant behaviours, and may also have poorer documentation and policies.

The desk research revealed that in the majority of Member States – including EU 15 states as well as EU 12 –, following the transposition of the WPD in national legislation, a series of *actions* were run that were *especially dedicated to WPD* issues. (The issuing of an amended version of the Directive was again used as an occasion to set up a new information campaign in Germany in 2004, for example.) In some of the Member States (like e.g. in the UK, and typically, in the EU 12) the WPD was launched along with other Directives, and therefore, certain *actions* taken *cannot be solely attributed to the WPD* but to a whole complexity of legal acts in the domain of OSH.

The main types of actions carried out to raise public awareness for the issues regulated by the WPD include information campaigns and events (guidance, information leaflets, checklists, media spots, workshops, conferences, round table discussions, info lines<sup>51</sup>, etc.), consultation offered by the Labour Inspection – with special focus on the SMEs, combined with subsequent control campaigns. Risk assessment was frequently mentioned as a special topic in these actions.

**Originators** of awareness raising campaigns were in most cases the national labour inspections, but also other bodies and institutions. In **Austria**, the AUVA, the Austrian Social Insurance for Occupational Risks, the WKÖ (Austrian Chamber of Trade) and the BAK

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<sup>51</sup> Since 1<sup>st</sup> July 1996 the HSE-Infoline has been in operation: a confidential national telephone enquiry service. In 2001 it received 231.210 telephone calls. Since 2000 the Infoline also handles written questions, received by email, fax, letter of the world wide web. In 2001 they received such 20.213 enquiries. (Dunn, C. & Ludbrook, R., 2003.



(Austrian Chamber of Labour) collaborated. Campaigns were mostly targeted to SMEs or specific sectors. In **France**, awareness raising efforts related to the design of workplaces have also focussed on project managers through the circulation of a memo to the Order of Architects, design firms, etc. This has also been circulated to heads of companies. The INRS has also published a specific report on the design of workplaces.

In contrast, some of the countries reported *no specific actions* directly related to the transposition of the WPD. In **Belgium**, no general actions have been undertaken by the government to provide particular information to employers and workers about the Royal Decree of 18 June 1993 *“because the contents of the provisions transposing the Directive form a logical consequence of a consistent application of the prevention policy requirements that have existed in Belgium since 1975”*. The Decree received normal coverage through specialist publications for employers, workers and safety experts.

Measures specifically targeting small companies were not taken, because of the view that the provisions for the transposition of the Directive did not require any additional efforts worth speaking of on the part of employers who were already complying with the existing requirements of the Regulations, including those relating to the prevention policy.

The administration confined itself to answering several questions, relating among other things to the precise scope of some of the requirements. However, there was one exception to this: the provisions requiring that upward-opening gates should be equipped with a safety system to prevent them from falling back again. Here, the Administration reacted to misleading information put out by a manufacturer of gates claiming that upward-opening gates had to be equipped with an anti-fallback safety system.

In a **German** survey, commissioned by BAuA 1000 employers of small and micro-enterprises were asked for their knowledge about OSH. 18% of these employers could give the name of the overarching OSH regulation (Arbeitsschutzgesetz), only 3% answered that they know the name of the German transposition of the WPD (Arbeitsstättenverordnung), 52 % could not state the name of any OSH regulation<sup>52</sup>(p 33). This is surprising, because in Germany guidance documents about the WPD were issued by most of the 16 labour inspectorates, by many professional organisations and also by work accident insurances. Regular conferences and training seminars are part of the awareness raising activities.<sup>53</sup>

Most of the parts in the WPD were already described in the **Danish** work environment legislation when the Act was transposed to Danish legislation. Therefore the implementation caused little debate or action. The only exception forms an aspect of part 9, the assessment and documentation of risk and health at the workplace. The implementation of regulations regarding workplace assessment (Danish abbreviation: APV = arbejdspladsvurdering) caused a lot of action in 1993. The labour organisations had a positive attitude towards the initiative and decided to make campaigns and to distribute materials and guidance in order to inspire the workplaces<sup>54</sup>. The distribution and development of new methods has been going on since then. The common aim was to present the new requirement as a simple and non-

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<sup>52</sup> C. Sczesny, S. Keindorf, P. Droß (2011)

<sup>53</sup> See as one example the 2011 conference of BAuA on the future requirements for workplaces (Fachveranstaltung "Arbeitsstätten - Was gilt zukünftig für Arbeitsstätten" 09.05.2011)

<sup>54</sup> Between 1992-1993 it was work environment year in the EU and the labour organisations and the Danish Working Environment Authority had a good dialog at this point in time.



bureaucratic initiative. As well, The Danish Working Environment Authorities has continued to renew guidance and methods, and 62 trade oriented APV checklists.<sup>55</sup>

The debate on a particular related issue has been on-going since the implementation. That is, whether or not, the APV should be written (especially for small companies with less than 10 workers). The employers' organisation has fought a lot in order to repeal this element of the WPD. It has even been brought up before The Court of Justice of the European Union several times.

In the **Netherlands**, active information about the Directive's requirements was provided years ago. The publication of the Workplace Decree was coupled in 1993 with the dissemination of specific information sheets and policy rules of the Labour Inspectorate.

The Directive is fully integrated into Dutch legislation, and is no longer recognisable as a separate directive or implementing legislation for it. It was argued that no active policy is conducted any longer with regard to the topics in the Directive because they do not usually involve high risks, or in practice do not (no longer) represent any risk at all.

In the **Romania** of 2007, one year after its transposition, a national campaign to control the implementation of the legislation transposing European regulation<sup>56</sup> in the domain of OSH was carried out among SMEs by the Labour Inspection (Raport 2007, pp. 50-51). The campaign was aimed to

- Control the way of application and compliance with the national legislation harmonized with the Community Aquis by employers of SMEs.
- Inform employers on the respective legislation with the participation of a social partner, NGOs and mass media by organising thematic actions (meetings, seminars, round table discussions etc.)

To this end, 33,628 workplace inspections were carried out in the first half of the year 2007, 18.628 of which in small and 15,000 in medium-sized enterprises. Measures for non-compliance were applied in 25,697 cases, 3,471 economic units were sanctioned of which 2,400 by admonitions and 1,071 were surcharged with a total of 6,304 RON.

The monitoring of the implementation of HG 1091/2006 in SMEs was taken up again in 2009 (Raport 2009, pp. 80-82). The monitoring campaign envisaged two phases:

Phase I: Communication and information provision to the employers – consisted in the delivery of an information package (a letter including a questionnaire to evaluate conformity to HG 1048/2006, HG 1091/2006 and HG 1146/2006) to SMEs, the organization of information campaigns / sessions on the implementation of national secondary legislation provisions regarding workplace safety, working equipment and PPE, and promotion of best practice solutions by the regional LI.

Phase II: Prevention and control – consisted in the control of knowledge and practical implementation of national regulations in SMEs; organization of information campaigns for employers with the participation of the social partners, of NGOs and the mass media;

<sup>55</sup> See: <http://arbejdstilsynet.dk/da/arbejdspladsvurdering/apv-tjeklister/bar-tjeklister.aspx>, accessed on 24.11.2011.

<sup>56</sup> Law nr. 319/2006 transposing the framework directive, H.G. nr. 1091/2006 transposing EC D654/89, H.G. nr. 1146/2006 on minimum requirements regarding the utilization of working equipment, and H.g. nr. 1048/2006 on minimum requirements regarding the utilization of PPE.

realization of measures to remedy the deficiencies identified during former inspections; promoting best practices.

**Table 52 Phase I: Communication and information provision to the employers in Romania**

Indicators			
Number of employers who received the information package	4.566	small enterprises	3.088
		medium-sized enterprises	1.478
Number of actions to collect and analyze the evaluation sheets completed by the employers (on their own responsibility)		HG 1048/2006	2.921
		HG 1091/2006	2.974
		HG 1146/2006	2.928
Number of enterprises controlled by inspectors on the basis of the evaluation sheets completed by the employers (on their own responsibility)		HG 1048/2006	846
		HG 1091/2006	848
		HG 1146/2006	848
Number of thematic information campaigns for employers according to the plan "one thematic session per trimester" (seminars, information actions)			227
Local mass media actions		Press releases, articles	97
		TV / Radio communications	85

**Table 53 Phase II: Prevention and control in Romania**

Results regarding HG 1091/2006			
Number of enterprises controlled			6.032
Work places newly put into operation	Annex 1	Small enterprises	1.082
		Medium-sized enterprises	453
(Already) operating work places	Annex 2	Small enterprises	3.362
		Medium-sized enterprises	1.311
Suspension of operation in the enterprises not complying with the minimum requirements on S&H work places		Partial suspension	172
		Close-down	36
Measures	Applied as a consequence of control		6.258
	Realized and reported to the regional LI		5.589
	Controlled by inspectors on-site		3.506
Sanctions	No. of units concerned		1.280
	No. of admonitions		1.231
	No. of amendments		183
	Value (thousand RON)		1.022
Proposals for prosecution			1
No. of thematic information sessions of employers according to the plan "one thematic session per trimester" (seminars, information actions)			187
Local mass media actions	Press releases, articles		108
	TV / Radio communications		113

At the promotion of best practice solutions emphasis was put on:

- Organisation of seminars and information campaigns with the participation of workers, firemen, occupational physicians and representatives of the National Agency for Environmental Protection with the aim of awareness raising, regarding the minimum standards in OSH and for the utilization of protective equipment and PPE.

- Participation in national fairs and exhibitions and presentation of new protective equipment
- Provision of training and courses in OSH matters for OSH representatives and leading workers
- Participation of labour inspectors in meetings of the Association of Romanian SMEs at the monthly instruction of workers, sessions to analyse the OSH situation in the economic units they have had controlled
- Session for analysis and information exchange organized by the regional LI with the participation of inspectors and authorized service providers in the domain of OSH regarding the quality of their activities at the enterprises.

The impact of these actions is described in the report in following terms:

- 0 Raised awareness among employers regarding knowledge and appliance of national OSH legislation through information sessions and seminars
- 1 Willingness of employers and growing responsibility for improving working conditions for all persons involved in the working process
- 2 Abandoning technological processes causing noxae at workplaces through reorganizing the working process
- 3 Reapportionment of funds to finance necessary technologic changes and realization of OSH programmes
- 4 Assuring a safe and healthy working environment that prevents long term occupational accidents and diseases
- 5 Improvement of working conditions in enterprises

There are however no quantitative data on these issues available and especially, no details on the specific topics of the Directive.

In the **UK** the WPD was launched along with five other Directives – The Framework Directive, The Use of Work Equipment Directive, The Use of Personal Protective Equipment Directive, The Manual Handling Directive and The Display Screen Equipment Directive. Awareness campaigns were run to advertise the new legislation. This might have helped raising standards and had the possible effect of creating a “safety consultancy” culture.

### ***Influence of law enforcement on the implementation of WPD provisions***

At the end of the employer survey, respondents were asked whether their establishment had been inspected by the labour inspectorate in the past 3 years. This question was inserted in order to investigate the role legal enforcement plays in the implementation of the WPD requirements. At the same time, it also gives hints on the question whether the situation would be the same without legislation. Since the indicator “inspected by Labour Inspectorate” correlates with the size of the establishment, it is necessary to analyse this question separately for each size-class.

It turns out that the fact whether or not the establishment has been inspected by the Labour Inspectorate in the last 3 years has overall a large influence on whether basic WPD obligations for the employer, such as the performance of risk assessments or the provision of information on OSH (information on aspects regulated in the Annex of the WPD plus

information on “working methods beneficial for long-term health”), are being carried out. The influence is particularly strong in small establishments and rather weak in establishments with 50 or more workers.

This difference in implementation is not very surprising, but it clearly shows that workers would be a lot less informed and that their workplace would be less likely to be checked on OSH issues if there was no legislation (and/or no enforcement of it). Yet, interestingly, the visits of the Labour Inspectorates hardly have any influence on the state of the workplace with regard to the basic provisions regulated in the Annex of the WPD.

**Table 54 Differences in the implementation of WPD requirements, for all 5 countries**

Size-class	Risk assessments		Provision of information on WPD-related issues		Average number of implemented basic WPD provisions (max:	
	visited by Labour Inspectorate in last 3 years	not visited by Labour Inspectorate in last 3 years	visited by Labour Inspectorate in last 3 years	not visited by Labour Inspectorate in last 3 years	visited by Labour Inspectorate in last 3 years	not visited by Labour Inspectorate in last 3 years
1 to 9 workers	95%	64%	89%	73%	5,52	5,35
10 to 49 workers	95%	84%	92%	81%	5,22	5,22
50 to 249 workers	97%	94%	95%	86%	4,85	4,93
250 or more workers	99%	93%	94%	85%	5,11	4,71
<b>ALL</b>	<b>95%</b>	<b>66%</b>	<b>90%</b>	<b>74%</b>	<b>5,44</b>	<b>5,33</b>

Source: Own calculations; each observation is weighted relative to the universe of all establishments. Deviations from 100 % are due to rounding errors. Data: Employer Survey, TNS Infratest, 2010; N = 2,535 establishments from five countries (Bulgaria: N = 503, Finland: N = 501, Germany N = 500, Poland N = 500, and Portugal = 531).

Taking a closer look at Bulgaria as a country that joined the EU only recently, it can be noted that here, for information and risk assessment differences between the inspected establishments and those not inspected by the Labour Inspectorate in the last 3 years (i.e. between the end of 2007 to the end of 2010) are even considerably larger than for the average of the five countries. And in the case of Bulgaria, there is also quite a large difference with regard to the implementation of the basic workplace provisions regulated in the annex of the WPD, albeit mainly for the very small firms.

Among these, on average only 4,15 of the 7 basic provisions tested in the questionnaire were implemented if the Labour Inspectorate had not inspected the workplace, while it was 5,15 – i.e. on average one provision more – if the Labour Inspectorate had controlled the establishment. This shows that particularly for Bulgaria, the good state of workplaces in that respect is not a matter of course, but is at least to some degree a result of the Directive and its consequent enforcement. The very high rate of 71% of Bulgarian workplaces that were inspected show that the Labour Inspectorate was very active there and that this work has contributed considerably to the good performance of Bulgaria in these WPD evaluation surveys.

**Table 55 Differences in the implementation of WPD requirements, Bulgaria only**

Size-class	Risk assessments		Provision of information on WPD-related issues		Average number of implemented basic WPD provisions (max:7)	
	visited by Labour Inspectorate in last 3 years	not visited by Labour Inspectorate in last 3 years	visited by Labour Inspectorate in last 3 years	not visited by Labour Inspectorate in last 3 years	visited by Labour Inspectorate in last 3 years	not visited by Labour Inspectorate in last 3 years
1 to 9 workers	99%	60%	93%	71%	5,15	4,15
10 to 49 workers	99%	74%	98%	80%	5,47	5,71
50 to 249 workers	98%	96%	98%	91%	6,01	5,55
250 or more workers	100%	No data	99%	No data	5,91	No data
<b>ALL</b>	<b>99%</b>	<b>61%</b>	<b>94%</b>	<b>72%</b>	<b>5,24</b>	<b>4,28</b>

Source: Own calculations; each observation is weighted relative to the universe of all establishments. Deviations from 100 % are due to rounding errors. Data: Employer Survey, TNS Infratest, 2010; N = 503 establishments from Bulgaria.

### III.5 Summary on implementation

In a vast majority of the countries, the legal implementation has only brought limited changes. Only a few stakeholders have mentioned that the transposed regulation was not so relevant for the national legislative framework. A large majority believe that the transposition resulted in relevant provisions. In general, the transposed requirements have the same level or a higher degree of details and strictness than the Directive. Many Member States took additional measures to raise the level of implementation and understanding. In particular they issued further ordinances, regulations and guidance with a higher degree of detail. The overview of the various national situations shows that very few countries have stated that some specific aspects of the national legal text, resulting from the transposition of the WPD, were the subject of a debate among stakeholders.

Quantitative data from enforcement authorities or public statistical sources are dispersed, many of them only partly related to OSH issues and the quality of the data varies from Member State to Member State. There is **no Europe-wide harmonised monitoring instrument available** to estimate with precision and in detail the level of compliance. The monitoring of compliance is also complicated by the large range of requirements covered by this Directive and the fact that some requirements are formulated as general objectives, which can be subject to different interpretations by the various stakeholders.

Concerning the desk research data on general legal OSH obligations it seems that in the majority of Member States the rate of enterprises performing a satisfactory risk assessment is slightly above 50%. In some Member States the performance is much better and reaches 75% to 90%, but in a few member states much less than 50% of the enterprises conducted a risk assessment. The definition of 'satisfactory' and 'unsatisfactory' also varies and is not

harmonised amongst the countries. The figures also vary from sector to sector and depend on the size of the company.

A little more than half of the workers confirm that the enterprises comply with the general obligations of risk assessment or information and participation.

The assessment varies considerably between employers and workers concerning the general obligations from 89/391, i.e. conduction of risk assessment and participation of workers. 90% of the employers state that they conduct a risk assessment, 52% of the workers have noticed that a risk assessment was performed at their workplaces. A reason for this might be that risk assessments are not conducted at every workplace, if workplaces have similar features. Concerning information, 68% of the employers claim to inform their workers in staff meetings on OSH issues; however only 47% of the workers confirm this.

According to the results of the employers' and workers' surveys on WPD issues, the **level of practical implementation of the general legal OSH obligations can be considered as good**. The satisfaction of a large proportion of the workers with most of the issues regulated by the WPD, as well as the minimum differences between the employers and workers opinions seem to confirm this conclusion.

The assessment of the level of implementation is very consistent between employers and workers in cases of the assessment of the technical issues of the WPD; the confirmation of compliance varies in almost all cases between 80% and 90%.

The stakeholders and experts expressed a less optimistic opinion on the level of practical implementation. It is obvious that the level of implementation may vary between some categories of companies. Particularly, the results show that SME's may encounter difficulties complying with all requirements, mostly because of a lack of technical and financial means. Also companies (whatever their size) using old buildings may not comply with all requirements because of technical difficulties in adapting the existing structures and the cost it would imply. This last issue means that the situation should improve with the renewal of business infrastructures, e.g. more than 70% of the enterprises in France declare that they take into account the WPD prescription when they conceive new buildings.

## IV EVALUATION OF THE IMPACT (OSH RESULTS)

### IV.1 Introduction

The evaluation of the impact covers – according to our generic methodology - the description of concrete OSH results and of side effects at Member State level and in enterprises. This includes:

- evaluation of quantitative evidence, using indicators such as development of work accidents or occupational diseases and other specific indicators directly linked to the scope of the legislation;
- evaluation of perceptions at the national level: has there been any change in perceived safety/lack of safety?
- evaluation of different sectors, categories of workers, etc.;
- evaluation of side effects (not directly linked to the scope of the Directive).

In our evaluation we combined the most appropriate generic questions to describe the OSH results and possible side effects:

#### **Generic questions:**

Question 10: What are the objective and subjective results at the national level of the EU OSH Directive?

Question 11: Are there sector specific national results or diversified results for specific categories of workers?

Question 12: What are observable side effects at the national level related to the scope of the EU OSH Directive?

Question 13: Is there an observable level playing field between the Member States, after x years of implementation?

In the interviews and surveys with stakeholders or enterprises and workers these questions were split up into several, more specific, questions.

#### **Data collection questions:**

**Desk Research:** All generic questions

#### **Stakeholder survey questions:**

B13: Did the provisions of the WPD cause side effects (not directly linked to occupational safety and health issues, for example on employment, productivity, competitiveness)?

A10: Has the WPD reduced the differences between Member States regarding health and safety at work?

C07: Are there any sectors especially affected by the national law/transposition of the WPD, either positive or negative?

#### **Employers' Survey**

E703: Number of accidents registered in the establishment in 2009

E704: Development of the number of accidents in the last 3 years

E705: Factors to which reduction of work accidents is attributed

Comparison of E301 et seq., E401 et seq., E501 et seq. etc. between the five countries

Comparison of W301, W401, W501 et seq. of the different countries.



E501 et. seq. assessment of national provisions of the WPD.

### Workers survey

W603: Occurrence of a work accident since working for the same employer

W604: Main reasons for the accident

## IV.2 Findings on objective and subjective OSH results

### IV.2.1 DESK RESEARCH

There is a large number of publications available related to the development of work accidents and diseases on a national level and a European level. Only a few of them feature types of accidents, which can be clearly linked to the WPD and its practical implementation. No studies on work accidents and diseases have been conducted which only refer to aspects of the WPD. We quote here data from two countries to show the weak but still reasonable links between regular statistics and the impact of the Directive.

In the Netherlands the 'Monitor Arbeidsongevallen 2008' (published 2010) contains key statistics for the Netherlands regarding fatal and serious occupational accidents as well as occupational accidents resulting in injury and absence from work. Accidents of the type 'slips, trips and falls', which have the clearest relation to the WPD, account for 15% of all accidents.

In Iceland data from AOSH on accidents due to slippery floors as a proportion of total reported accidents at work, reveal a decrease in reported accidents just before and following the implementation of the WPD. The percentage in relation to all accidents varies between 2.1% and 4.5%. Incidents then increased in the years thereafter but in general accidents due to slippery floors are relatively rare compared to other causes.

From other Member States similar figures could be quoted, but as mentioned there is no direct correlation between such figures and the WPD, too many other factors influence these accidents statistics.

The **French** survey on working conditions (SUMER) provides information about developments in the physical work environment. The survey is carried out by occupational physicians. The results show that the proportion of workers claiming uncomfortable physical environment due to dirt, humidity or poor sanitary facilities is increasing, only inconveniences due to noise or the absence of a view to the outside seem to remain stable.

**Table 56 France - SUMER results: Perceived noise level**

Years	Workforce in thousands	Proportion of people who say that they can hear someone speaking at a distance of 2 or 3 metres <b>provided the person raises their voice (in %)</b>	Proportion of people who say that they can't hear someone speaking at a distance of 2 or 3 metres (in %)
1991	18 801	15.3	3.5
1998	19 517	14.0	3.5
2005	22 251	14.7	3.3

**Table 57 France - SUMER results: Reported inconveniences**

Proportion* of workers who say that their work involves the following inconveniences**:									
Year	Workforce (in thousands)	dirt	humidity	draughts	absence or poor condition of toilet facilities	absence of view to the outside	bad smells	high temperature	low temperature
1984	17 602	21.8	12.7	26.9	5.7	-	-	-	-
1991	18 801	24.7	15.0	30.7	9.4	18.2	-	-	-
1998	19 517	25.2	16.6	33.9	11.4	20.9	-	-	-
2005	22 251	26.4	19.1	33.4	12.7	18.4	29.3	35.6	31.7

**Table 58 France - SUMER results: Inconveniences at work per sector of activity**

Proportion of workers who say that their work involves the following inconveniences:										
ECONOMIC SECTOR OF ACTIVITY	Yr.	Workforce (in thousands)	dirt	Humidity	draughts	absence or poor condition of toilet facilities	absence of view to the outside	bad smells	high temp.	low temp.
Agriculture	1984	260	52.0	50.7	49.3	12.0	-	-	-	-
	1991	284	53.6	55.3	60.1	16.9	11.6	-	-	-
	1998	321	56.6	62.7	67.0	23.5	13.6	-	-	-
	2005	256	55.2	70.1	73.0	24.6	15.1	43.9	67.5	74.9
Industry	1984	4 705	31.3	13.0	29.5	6.0	-	-	-	-
	1991	4 464	32.9	15.5	34.5	9.3	33.5	-	-	-
	1998	3 990	31.9	16.4	35.5	10.0	37.7	-	-	-
	2005	3 973	33.0	19.4	38.1	11.2	32.2	34.8	42.6	34.7
Construction	1984	1 249	52.3	42.5	65.6	19.0	-	-	-	-
	1991	1 330	58.8	48.6	67.4	27.4	8.0	-	-	-
	1998	1 059	66.0	57.8	74.8	38.8	13.3	-	-	-
	2005	1 158	64.8	61.1	71.9	40.4	15.6	49.6	62.9	69.5
Tertiary	1984	11 323	13.7	8.4	21.0	3.9	-	-	-	-
	1991	12 694	17.5	10.4	24.8	7.4	14.1	-	-	-
	1998	14 142	19.5	12.5	29.6	9.4	17.0	-	-	-
	2005	16 790	21.8	15.4	29.1	10.9	15.4	26.5	31.6	27.8

In France, the percentage of accidents related to the workplace (apart from worksites) is estimated at 6%, which is overall relatively low. This makes it even more difficult to measure changes in the level of occupational accidents.

As a part of the transposition of WPD into **Lithuanian** legislation a study “Transposition Implications of the EU Directive’s 89/654 on Minimum Workplace Health and Safety” was completed by Vilnius Gediminas Technical University’s Safety Research Institute. 28 state and private companies participated in this survey. In addition, 76 workers were surveyed in order to determine the social effect of WPD implementation. Most companies reported

positive attitudes and expectations towards implementation of the Directive and believed that it would improve safety and health conditions at work, their performance and organizational culture. 60% of companies believed that the implementation of this Directive would improve working conditions, 30% believed that it would reduce the number of occupational diseases, 50% that it would reduce the number of accidents, 40% that it would improve overall performance, and 50% that it would improve organizational culture (Čyras, 2000).

In 2002, HSE in the **UK** produced a questionnaire in order to ascertain the effectiveness of the regulations. 235 responses were collected, from people who had duties for health and safety in the workplace. The analysis showed that 67% of all respondents believed there had been a reduction in accidents.<sup>57</sup>

#### IV.2.2. STAKEHOLDER SURVEY

40% of the stakeholders believe that the WPD had a positive impact on the number of occupational accidents. Logically, they are much more (59%) to point out that the most important positive result is to be recorded in terms of working conditions in general, as well as in terms of well-being at work (46%), but the positive impact on workers' satisfaction was mentioned by only 24% of the respondents and only 11% of them think that it may improve the absenteeism figures.

**Table 59 Has the WPD had a positive impact on one or more of the following issues?**

Has the WPD had a positive impact on one or more of the following issues:	Yes	No	Don't know / NA
C10a=The number of occupational accidents	40	49	12
C10b=Work related health problems	37	51	12
C10c=The absenteeism figures	11	77	12
C10d=The well-being of the workers	46	42	12
C10e=The working conditions	59	29	12
C10f=The satisfaction of the workers	24	64	12
C10g=The improvement of risk awareness	35	54	12
C10h=The improvement of productivity	15	73	12
C10i=The prevention of major hazards	23	65	12
C10j=Other	3	86	12
C10k=Don't know	5	83	12
C10l=no	6	82	12
C10m=no data	18	70	12

Source: Stakeholder survey

<sup>57</sup> Dunn, C. & Ludbrook, R., 2003.

### IV.2.3. *EMPLOYER and WORKER SURVEY*

In both the workers' and the employers' survey, questions on the occurrence of **work accidents** were included. Workers were asked whether they ever had a work accident at their current workplace and if so, what the reasons for this accident were. Employers were asked about the number of accidents they registered in 2009, on the development of work accidents in the past years and on factors determining decreasing accident rates.

The main aim of the question on the number of registered work accidents in the employer survey was not to establish any statistics on the number of accidents by country – to this end, the sample size of the survey is by far too small. The question instead was included as an outcome indicator that should allow conclusions on possible correlations between OSH measures taken in the establishment and the frequency of accidents.

Overall, we find that 84% of all establishments did not register any work accidents in 2009, 12% report between one and four accidents, and about 1% suffered from more than four accidents. Germany reports the lowest number of non-occurrence (73%) and in Bulgaria 94% of all firms do not report any accidents.

**Table 60 Number of registered accidents that occurred in 2009 (employer survey)**

<b>Number of accidents</b>	<b>BG</b>	<b>FI</b>	<b>DE</b>	<b>PL</b>	<b>PT</b>	<b>Total</b>
Establishments with no accidents in 2009 (in %)	94	82	73	87	82	<b>84</b>
Establishments with 1 to 4 accidents in 2009 (in %)	2	16	22	5	15	<b>12</b>
Establishment with 5 or more accidents in 2009 (in %)	0	1	4	3	2	<b>1</b>
Don't know / NA (in %)	4	1	0	5	0	<b>2</b>

Source: Own calculations; each observation is weighted relative to the universe of all establishments. Deviations from 100 % are due to rounding errors.

Data: N = 2,535 establishments from five countries (Bulgaria: N = 503; Finland N = 501; Germany; N = 500; Poland N = 500; Portugal: N = 531), Employer Survey, TNS Infratest, 2010.

There were hardly any establishments (just 1%) that reported a rise in their accident rates as compared to the situation 3 years ago (Bulgaria: between the year 2000 and 2007). In a broad majority of more than two thirds (77%) of establishments, the accident rates remained roughly at the same level. 10% of the establishments however reported decreasing accident rates. In larger establishments, this rate is even considerably higher. It is also particularly high in Portugal, where 15% of establishments reported decreasing accident rates. The answers to this question however have to be interpreted with caution since the rate of "Don't know" and "No answer" is very high for this question, with 4% "Don't know" and 7% "No answer", i.e. refusals to answer this question on average. In Bulgaria, even almost a third of employers did not answer the question (8% "Don't know" and 24% "No answer"). Data on accidents at work are generally a very sensitive issue and this puts some restrictions on the usage of these indicators in surveys. The willingness to report such data in a telephone interview might differ largely amongst countries. This and country differences in the definition of reportable accidents might explain also the not very plausible observation that accident rates in Bulgaria should be much lower than those in other countries.

**Table 61 Development of the number of work accidents as compared to 3 years ago (Bulgaria: as compared to the situation between 2000 and 2007); employers' survey**

Development of work accidents (in %)	BG	FI	DE	PL	PT	Total
Increased	0	1	2	1	2	1
Stayed about the same	61	88	81	76	80	77
Decreased	8	7	10	8	15	10
Don't know / NA (in %)	32	3	6	15	2	11

Source: Own calculations; each observation is weighted relative to the universe of all establishments. Deviations from 100 % are due to rounding errors.

Data: N = 2,535 establishments from five countries (Bulgaria: N = 503; Finland N = 501; Germany; N = 500; Poland N = 500; Portugal: N = 531), Employer Survey, TNS Infratest, 2010.

In the majority of those cases where the accident rate had decreased, the intensification of preventive safety and health work was considered to be a reason for this (70%, multiple answers possible). Modifications of the work building or the move to another building were named by 22% as the reason for the decrease. Since most general aspects of work buildings are regulated by the WPD, it can be supposed that this reason for the decrease is at least to a certain extent attributable to a full implementation of the WPD in the new respectively modified building. It is noteworthy that in Bulgaria that joined the EU only recently, modifications of the work building or a move to another building was a lot more often (44%) cited as reason for decreasing accident rates than in the other countries. In Germany, in turn, where the WPD is already in vigour for a very long time (and where, before that, a similar regulation existed), only 7% of establishments attributed decreasing accident rates to that reason.

## IV.3 Findings on side effects

### IV.3.1 DESK RESEARCH

In response to a HSE (UK) questionnaire conducted as part of a the second five year review of the WPD, 41% respondents believed efficiency and productivity had been improved, while only 13% disagreed. 40% believed there had been a reduction in injury claims, while just under a third believed absenteeism had been reduced, with 41% being uncertain. No reliable data on the impact on employment or competitiveness exist. However, 21% agreed that the regulations had improved competitiveness.

### IV.3.2 OPINION OF THE STAKEHOLDERS

Many stakeholders pointed to this gap when commenting the question B 13 *“Did the provisions of the WPD cause side effects (not directly linked to occupational safety and health issues, for example on employment, productivity, competitiveness)?”*

Typical comments included: *“No Data”, “No information on side effects”, “We have no relevant data”, “I have no information on such side effects”, “I don’t know”, “Not to my knowledge”, “It is difficult to measure the side effects and their connection with the WPD”, “No idea. It is probable that there were some positive side-effects, indeed”, “Impacts have not*

*been evaluated, but it is supposed that there are no side effects, or only small side effects on the productivity”, “No data available, as no research been done on this matter “, “In theory, productivity and competitiveness are positively affected. In fact, there are no data available”.*

Some more extensive comments why no side effects occurred or why no information on side effects is available have also been given:

*“Answering this question only with regard to the WPD is not possible and wouldn’t be based on reliable information. If there wouldn’t have been any regulation before, it might have been possible to answer this question. After implementing EU regulations in Austria, work accidents were reduced by 30%, however this aspect can’t be attributed to only one directive.” (AT, Gov).*

*“1) Not measurable, no criteria*

*2) No surveys available*

*3) Statistics show no direct link with the number of accidents” (AT, Expt).*

*“At the time of the implementation of the Directive, a lot of changes in the legislation have occurred. It is difficult to say whether the effects are related to the specific Directives.” (NL, Gov).*

The opinions expressed by the stakeholders show that there is no consensus to admit any side effects of importance. It seems especially difficult to express an opinion as far as competitiveness is concerned. Improvement on productivity and on employment is however sometimes mentioned due to the improvement of production equipment and better working conditions in general. Negative side effects are mainly of the kind that every additional OHS regulation is seen as a risk for the economy of an enterprise and can finally lead to less employment or to the exclusion of certain groups (e.g. women due to the regulation on rooms for pregnant women).

Many respond that they do not have any valuable / reliable information to express an opinion. Some however pointed out that the WPD should have had an impact on competitiveness and production processes. This is the case for the **Italian** government representative, the **Portuguese** trade union representative and the **German** representative of an occupational accident insurance organisation. The latter mentioned that the modernisation and the update on accompanying regulation according to the current state of the art, are positive side effects that were revealed with regard to the WPD for Germany; contrary to the governmental representative who estimated that Germany already had very high standards. A **French** representative of employers mentioned that the WPD probably had an effect on employment by the development of high standard safety products. The same idea is expressed by a **British** and a **Luxembourgish** employers’ representative who mentioned that the regulation developed a market for safety consultancy and products, but this phenomenon is not only the effect of the WPD but more generally of the European regulations.

Some stakeholders see **'No side effects'** for mainly two different reasons:

*"If you already have a high degree of protection, then this kind of Directive will not offer more protection."* (BE, Gov).

*"No, since in Germany almost everything was already regulated before."* (DE, Gov).

*"Not really. The vast majority are a pretty well accepted part of what you would do anyway when occupying a business place. Well standardised, everybody is complying with."* (IE, Empl).

*"Rather no. Overall there was pre-existing national legislation."* (EL, Gov).

*"As far as it is known, the WPD did not have side effects, as the minimal requirements for health and safety equipment in the workplace are common and the same and compulsory for the majority of workplaces with few exceptions, and cover a diverse range of issues including ventilation, temperature, traffic routes, falls, lighting and clean workplaces. The regulations of the WPD include the provisions of not only a safe working environment, but also the provision of sanitary and welfare facilities."* (LT, Work).

*"There were no side effects because the professional government did not lobby and did not put enough emphasis on OSH problems."* (HU, Expt).

*"No, because regulation was mainly not implemented until now."* (DE, Expt).

Most stakeholders state that there are no side effects because the pre-existing legislation was very similar; a few others discern no side effects because there are no real implementation activities.

Quite a few stakeholders mentioned **positive side effects** in their comments:

*"Some slight effect on productivity while the demanded alterations were made."* (FI, Work).

*"The modernisation and the update on accompanying regulation according to the current state of the art are positive side effects that were revealed with regard to the WPD for Germany."* (DE, Expt).

*"Yes, negative consequences on productivity and competitiveness, since complying with the regulation goes along with costs. Continuous realisation and state of the art have to be taken into account for adapting workplaces to the rules."* (DE, Empl.).

*"This is quite hard to evaluate but we believe that this can at least influence competitiveness, especially in times when there is a lack of workers. The same goes for productivity based on stability in the work force and low sickness absence."* (IS, Gov).



*“I believe that the introduction of WPD has improved in some cases also the productivity and competitiveness but this position is not supported by any hard evidence such as studies.” (CY, Gov.).*

*“The provisions of the WPD increase to some extent the productivity and competitiveness. At the same time, however, they increase the expenses of the enterprises, especially the micro-small ones which are lacking the necessary means to immediately adopt and implement all measures/requirements.” (CY, Empl).*

*“Yes positives effects: a better workplace really gives a better quality of products and more competitiveness.” (PT, Work).*

*“The WPD brought improvements to the competitiveness and the production processes of the companies.” (IT, Gov).*

A small number of stakeholders emphasised **negative side effects**:

*“Small and micro enterprises have become more careful before recruiting women.” (MT, Empl).*

*“Yes, negative effects: because many little employers refer to “chantage” (in French) and say that if they have to put more money on security they have to fire a part of their workers. And so the workers shut up this problem!” (PT, Work).*

## **IV.4 Findings on the level playing field between Member States with regard to OSH**

### **IV.4.1 DESK RESEARCH**

In the accompanying document to the Community Strategy 2007-2012 on health and safety at work, the European Commission states that the perpetuation of the differences in practical implementation of the minimum requirements set in the EU Directives across the European Union, would hinder the establishment of a level playing field for EU businesses and could be conducive to competition based on low standards for working conditions.

The Strategy document recommends better implementation and enforcement of the existing legislation. Implementation of the minimum requirements contained in the EU Directives across the European Union is expected to establish a level playing field and prevent competition based on low standards for working conditions.

Two important preconditions need to be fulfilled to achieve an observable level playing field:

- the quality of the transposition and application of the national provision on workplace safety;
- the level of enforcement of this legislation.

The questions on the practical application and the level of enforcement of the national provisions have been treated in different chapters of the WPD analysis (question 8 on the practical implementation, question 11 with regard to changes in the enforcement strategies of national authorities).

One of the questions when examining the level playing field for companies is to look at the changes in the pre-existing national legislation due to the transposition of the WPD. In countries that already had similar national OSH provisions, only minor changes were added. Such changes were made to include detailed requirements, e.g. in the case of Latvia for air temperatures, indoor and outdoor lightning, rest periods, including minimum values and thresholds.

#### IV.4.2 OPINION OF THE STAKEHOLDERS

The results of the stakeholder surveys show that 60% of the respondents agree or rather agree with the statement that the WPD reduced the differences between Member States regarding health and safety at work. 10% of the stakeholders rather disagree or disagree with this opinion. The other respondents do not know or do not answer the question.

**Table 62 The WPD has reduced the differences between Member States**

<b>STAKEHOLDER A 10</b>	<b>%</b>
Agree	37
Rather agree	23
Rather disagree	5
Disagree	5
Don't know / NA	30
<b>Total</b>	<b>100</b>

Source: Stakeholder survey

The stakeholders that agree, believe that as far as the requirements of the WPD have been transposed into the relevant legislation of the Member States, the differences between the Member States regarding health and safety at work have been reduced (BG, Empl). This is especially the case for new countries that joined in with very different levels of requirements for safety and health in the workplace (SI, Gov).

However, much depends on the application of the text in practice. One cannot be sure that countries applied the norms in the same way (FI, Exp). The WPD has reduced some differences among Member States, as the general requirements are the same for each state. It depends on the knowledge, experience, technical, scientific and financial basis, how each Member State develops the legal framework and how it is implemented at workplaces. There is no huge difference in legislation between countries, but there are some differences at the practical implementation (enterprise) level. (LV, Gov)

Stakeholders that rather disagree believe that (...) the requirements of the Directive do not cause problems, but rather do the (lack of) knowledge and understanding of the employers especially in small companies where more than half of the workers believe that occupational health and safety is not applicable to their company. Therefore, the OSH community should focus on the knowledge and implementation of the Directive, not on the improvement of the existing Directive. Those who already comply will also comply in the future, while those who do not comply will also not comply in the future. (LV, Exp)

Another stakeholder formulates a similar remark with regard to the impact of control and inspection activities. The Directive itself has less impact. It is the control and sanctions that make enterprises evolve. Especially, SMEs do not always make good choices in terms of OSH. Sanctions make them evolve to a more responsible attitude. (LU, Empl)

## **IV.5 Summary of the evaluation of the impact**

The impact of the WPD is very difficult to quantify. However, the findings of the stakeholders' and workers' and employers' survey can provide an overview of the perceived OSH results of the implementation of the WPD transposition.

In a broad majority of more than two thirds of establishments, the accident rates remained roughly at the same level. The literature findings show however that the level of accidents directly linked with the WPD provisions is relatively low in general. The opinion of a majority of stakeholders is that WPD contributes more globally to the working conditions and well-being seen as a whole, even if some of them perceived nevertheless an improvement in terms of occupational accidents.

As it is difficult to measure the impact of the WPD, it is also difficult to perceive its side effects. The opinions expressed by stakeholders show that there is no consensus to admit any side effects of importance. For the same reason that the impact of the WPD has not always been evaluated as being very large, the side effects (if any) are not estimated as being of importance. The pre-existing legislation and non-compliance have been mentioned as explanatory factors for this opinion.

The majority of the stakeholders also agrees to say that the WPD had an impact in terms of level playing fields but this is a perception since no measurable evidences is available.

## V. EVALUATION OF EFFECTIVENESS - CURRENT AND FUTURE RELEVANCE

### V.1 Introduction

The objective of an ex-post evaluation of existing legislation is to evaluate:

4. the current relevance: do the objectives still correspond to the needs and problems?
5. the effectiveness: have the objectives been achieved?<sup>58</sup>

As effectiveness refers to whether or not the desired results have been achieved, this part of the evaluation:

- considers all the outcomes (the impact) of the Directive: direct OSH results, OSH side effects;
- relates them to the contextual factors and new or emerging trends;
- and compares them with information on the initial risk that triggered the legislation, initial contextual factors, etc.

From the comparison of initial relevance and impact, one of three conclusions can be drawn: effectiveness can be high, questionable, low-questionable.

#### **Generic questions:**

Question 14: Have the objectives and expected impact been achieved x years after the adoption of the EU OSH legislation?

Question 15: What is the (actual and future) relevance of the EU OSH Directive?

#### **Data collection questions:**

##### **Desk research:**

All generic questions

##### **Stakeholder survey:**

##### **Basis = findings from previous questions, as for example:**

A03: Which provisions of the WPD are particularly relevant and why?

C05: In cases of infringement, what is the reason why companies do not comply with the national law/transposition of the WPD?

C06: Which aspects cause most problems when trying to comply with the national law/transposition of the WPD?

D2.3: Which would be your recommendations with regard to an up-date or revision of the WPD?

##### **Employers / Workers Survey:**

E301-E308, E402.

W301 et seq. -W501 et seq. and employer questionnaire series

<sup>58</sup> The Impact Assessment website of the Commission contains a definition of 'evaluation' and the related terms 'relevance', 'effectiveness' and 'efficiency/cost-effectiveness' (EU Commission, 2010).

Possible/suggested changes in  
a) the legal provisions (EU and/or national)  
b) the implementation at company level  
c) the enforcement strategies of national authorities  
d) other accompanying measures for improving OSH at workplaces

E302: Needs for changes in last 3 years (yes: indicates relevance)

E303: Occasions/causes of changes

E304: Types of changes

E305: Reason for changes: Adjustment to legal requirements

E501: Usage of WPD as guidance for certain occasions

E502: Usage of WPD at certain occasions

E503: Usefulness of the legal regulations

E505: Attention with or without legislation

**Workers' survey (W):**

W512: WPD-related deficiencies noted at workplace

W515: Reference to legal regulations for query

W516/517: Usefulness of legal regulations in this context

W701: Compliance with safety and health rules

## V.2 Findings on effectiveness

National evaluations of the effectiveness of the national transposition of the WPD are very rare. Only a few national evaluations (mainly national or European surveys, or inspection reports) are available, and most of them focussed on other priorities, e.g. on VDU – only casually covering aspects connected with the WPD. Consequently, the main sources for our study were a combination of the stakeholders' views on initial relevance and impact of the WPD as well as the employers' and workers' survey in five countries with regard to the changes at the workplace that are directly linked with the compliance to the national regulation concerning the issues of the WPD.

Neither the stakeholders or employers and workers were asked direct questions about the effectiveness of the WPD. The effectiveness is, in fact, evaluated with regard to the achievement of the objectives established by the WPD (impact) and its initial relevance. Therefore, it is also important to examine the reasons for successes and shortcomings. They will be presented at the end of this chapter.

### V.2.1 OPINION OF STAKEHOLDERS

The WPD has addressed - and still addresses - the minimum requirements, which are crucial for safety and health at every workplace in the EU. Therefore, a large majority of the stakeholders insisted on the initial relevance of the WPD. The impact of the WPD cannot be quantified but the perceived OSH impact is positive for the majority of the stakeholders. A majority of them estimate that the WPD had an impact on the working conditions in general.

The impact may be limited. The major reason for this is the fact that in many countries almost all the issues covered by the WPD were already regulated by national legislation. In consequence, the effectiveness may actually very much vary from one country to another according to the quality and scope of the pre-existing legislation.

Nevertheless the effectiveness can be considered as questionable. This result is mainly due to the fact that the Directive did not have much impact on a majority of the national legal frameworks. This means it has been most effective where the existing legal framework was the least developed or where the implementation has focussed on the important aspects and not on the details.

However, the Directive fulfills its goal by covering a common set of policy areas in terms of workplace health and safety. From this point of view, there is no reason why the Directive demonstrates its effectiveness in the case of potential accession of new countries in the European Union.

### V.2.2 EMPLOYERS' SURVEY

Overall approx. 80% of the employers state that they would pay the same attention to OSH issues (those which are mainly regulated in the WPD), even without a regulation. Employers mention that they would have kept to the regulations of the WPD anyway. Equally, in cases of complaints about the workplace situation, only 20% of the workers refer to the WPD-regulation when asking for improvements.

We can also approach an evaluation of the effectiveness of the WPD by asking the employers for needs, causes, types and reasons for changes at the workplaces in their enterprises. The aim of these questions was to better understand the background and reason for any type of workplace changes and to finally determine the impact of the WPD as promoter or reason for improvements at the workplace. There was no direct question about 'relevance' or 'effectiveness' as defined in the methodology, but only about the role of the legal requirements as a reason for changes or for guidance.

The answers to the questions regarding changes suggest that WPD-related OSH improvements are not necessarily a matter of course and would have happened anyway. Establishments were asked whether in the past 3 years there had been any need for changes in OSH for a set of seven selected areas regulated in the Annex of the WPD (Question E302).

As can be seen in the next table, most changes had to be implemented in respect to room lightening (16%) and changes with respect to room climate (16%) and fire-fighting facilities (14%).

**Table 63 Changes at the workplace, by size and sector (employers)**

In %		Total	Sector			Establishment size			
			Producing Industries	Market-oriented Services	Public & Social Services	1-9	10-49	50-249	250+
<b>Basis (unweighted)</b>		<b>2535</b>	<b>914</b>	<b>1021</b>	<b>600</b>	<b>591</b>	<b>703</b>	<b>710</b>	<b>531</b>
Share of positive answers (in %) with respect to	Escape routes or emergency exits	12	14	10	19	11	17	22	31
	Fire alarm system or fire fighting facilities	14	17	12	17	13	17	23	32
	Room climate	16	19	15	15	15	18	26	39
	Room lighting	16	23	13	22	15	21	24	33
	The dimensions of workstations	10	12	9	13	9	14	19	32
	Traffic routes, loading bays or ramps	7	11	5	8	5	12	15	29
	Toilets and washrooms	11	15	8	18	10	14	17	28

Question E302\_A to E302\_G: During the last three years: Has there been any need to implement changes in the context of safety and health issues with respect to...

Source: Own calculations: each observation is weighted relative to the universe of all establishments: multiple answers per respondent. Data: N = 2535 establishments from five countries (Bulgaria, Finland, Germany, Poland and Portugal).

Among the sectors, there are not many differences when looking at the producing industries and the public and social services: market-oriented services have a considerably lower frequency of changes. A clear trend towards a higher rate of changes was found in larger establishments, but this might simply be a pure consequence of the size and the larger number of workplaces.



**Table 64 Changes at the workplace, by country (employers)**

In %		Total	Country				
			Bulgaria	Finland	Germany	Poland	Portugal
<b>Basis (unweighted)</b>		<b>2535</b>	<b>503</b>	<b>501</b>	<b>500</b>	<b>500</b>	<b>531</b>
Share of positive answers (in %) with respect to	Escape routes or emergency exits	12	3	10	11	15	20
	Fire alarm systems or fire fighting facilities	14	5	14	14	11	26
	Room climate	16	7	25	9	21	20
	Room lighting	16	11	22	12	14	21
	The dimensions of workstations	10	7	14	7	10	14
	Traffic routes, loading bays or ramps	7	3	6	4	8	12
	Toilets and washrooms	11	6	15	8	19	17

Question E302\_A to E302\_G: During the last three years: Has there been any need to implement changes in the context of safety and health issues with respect to...

Source: Own calculations: each observation is weighted relative to the universe of all establishments: multiple answers per respondent.

Data: N = 2535 establishments from five countries (Bulgaria, Finland, Germany, Poland and Portugal).

In a country-wise comparison, Portugal scored significantly above average for changes related to escape routes and emergency exits as well as fire alarms. Room climate and room lighting again was, in most cases, the subject of changes in Finland. A possible explanation for this can be natural circumstances, viz. cold climate, darkness during winter and long daylight periods in summer. The high values for Poland would support this hypothesis. Outstandingly, Bulgaria features the lowest figures in every category.

All in all, in 37% of the participating establishments, changes in any of these areas were considered necessary. About half of these (47%)<sup>59</sup> were necessary for an adjustment of the workstations to the legal minimum safety and health requirements. This means that in roughly every fifth establishment adaptations still had to be made in order to fulfil the legal requirements of the WPD. The legislation can still be considered relevant in so far as at least part of the improvements made in the last 3 years would not have happened without the legal standards.

<sup>59</sup> The figure is composed of those who have made changes for an adjustment to the legal requirement plus those who had both changes going beyond these requirements and changes for an adjustment to these.

**Table 65 Aim of changes at the workplace, by country (employers)**

Aim of changes at the workplace (in %)	BG	FI	DE	PL	PT	Total
For an adjustment to minimum legal requirements	38	38	30	34	34	35
Changes going beyond the minimum requirements	31	45	50	46	56	48
Both changes mentioned above apply	28	10	10	18	5	12
Don't know / NA	3	7	10	1	4	5

Source: Own calculations; each observation is weighted relative to the universe of all establishments. Deviations from 100 % are due to rounding errors.

Data: N = 1,342 establishments from five countries (establishments that had indicated the need for the implementation of changes on areas regulated in the WPD Annex in the past 3 years), Employer Survey, TNS Infratest, 2010.

Of the possible choices, the rearrangement of the workstations was named most frequently (43% of 1342) as the reason for implementing changes: in 37% of the cases deficiencies discovered during risk assessments or other routine checks were the motive for the changes.

Among all types of changes, the repair or replacement of equipment was named most frequently (66%), followed by information and sensitisation of workers (55%) and rearrangements of workstations (43%), as an answer to the deficits discovered.

**Table 66 Types of changes or measures**

In %		Total	Sector			Establishment size			
			Producing Industries	Market-oriented Services	Public & Social Services	1-9	10-49	50-249	250 +
<b>Basis (unweighted)</b>		1342	504	485	353	211	336	428	367
Share of positive answers (in %) on the following types of changes	Structural modifications in the work building (%)	33	30	35	34	33	33	38	53
	Rearrangements of workstations (%)	43	46	42	41	41	46	51	67
	Repair or replacement of equipments (%)	66	62	69	56	65	66	68	70
	Information and sensitisation of workers (%)	55	56	54	55	54	59	64	75
	Intensified involvement (%)	39	48	36	33	38	41	40	57
	Other types of actions (%)	22	22	21	24	21	25	22	29

Question E304\_a to E304\_F: Which of the following types of changes or measures did you apply to improve the encountered deficits?

Source: Own calculations; each observation is weighted relative to the universe of all establishments; multiple answers per respondent.

Data: N = 1342 establishments with necessary changes in the context of safety and health (E302\_A to E302\_G = 1) from five countries (Bulgaria, Finland, Germany, Poland and Portugal).

A good part of the changes were necessary due to relocations or the rearrangement of workstations – reasons that are not necessarily related to the WPD. There are, however, also a considerable number of changes that became necessary due to the identification of deficiencies in risk assessments and on the basis of ‘recommendations’ by the labour inspectorates. These changes would, to a large degree, not have happened in the absence of any legal regulation on the issue. Requests or complaints from workers or their representatives were also named as occasions for changes in about a quarter of all establishments participating in the survey. The occurrence of work accidents was still the motive for implementing changes in 5% of the establishments.

**Table 67 Reasons and occasions for a change of measures**

In %		Total	Sector			Establishment size			
			Produ- cing Industries	Market- oriented Services	Public & Social Services	1-9	10- 49	50- 249	250 +
<b>Basis (unweighted)</b>		<b>1342</b>	<b>504</b>	<b>485</b>	<b>353</b>	<b>211</b>	<b>336</b>	<b>428</b>	<b>367</b>
Share of positive answers (in %) on the following statements	Requests or complaints from workers or their representatives	25	17	27	30	24	25	30	36
	Deficiencies discovered during risk assessments or other routine checks	37	44	32	47	33	51	53	62
	Recommendations of the Labour Inspectorate or other authorities	23	29	19	29	22	27	23	29
	A relocation of the establishment or single workstations	24	25	26	15	24	26	31	55
	A rearrangement of workstations	39	44	38	33	38	43	45	66
	The occurrence of work accidents	5	4	6	2	5	6	7	16
	Any other reason	37	35	38	39	40	28	34	35

Questions E303\_A to E303\_G: Why did changes in the mentioned areas become necessary? Was it because of...  
Source: Own calculations: each observation is weighted relative to the universe of all establishments; multiple answers per respondent.  
Data: N = 1342 establishments with necessary changes in the context of health (E302\_A to E302\_G-1) from five countries (Bulgaria, Finland, Germany, Poland and Portugal).

Looking at the country specific figures, one can clearly identify the impact of different national OSH infrastructures in enterprises. The Labour Inspectorate plays a large role in Portugal and Bulgaria. The complaints from workers account for 44% in Finland and 34% in Bulgaria; in Germany, Poland and Portugal the figures consist of less than half of the peak values (around 15%).

**Table 68 Reasons for necessary changes (in %), by country (employers)**

Reasons for necessary changes (in %)	Countries					
	BG	FI	DE	PL	PT	Total
Share of positive answers (in %) on the following measures						
Requests or complaints from workers or their representatives	34	44	14	16	15	<b>35</b>
Deficiencies discovered during risk assessment or other routine checks	22	35	48	27	44	<b>27</b>
Recommendations of the Labour Inspectorate or other authorities	36	11	19	18	36	<b>23</b>
A relocation or the establishment of a single workstation	30	31	16	19	26	<b>24</b>
A rearrangement of workstations	58	42	30	33	41	<b>39</b>
The occurrence of work accidents	8	3	1	7	7	<b>5</b>
Any other reason	15	41	30	45	41	<b>37</b>

Source: Own calculations; each observation is weighted relative to the universe of all establishments; multiple answers per respondent. Data: N = 1342 establishments who mentioned that there has been some need to implement changes within the context of safety and health issues (any E302\_A to E302G-1) from five countries (Bulgaria: N=122, Finland: N = 360, Germany: N = 234, Poland N= 298, and Portugal: N = 328).

The main reason for OSH-indicated workplace changes in Germany and Portugal were the risk assessments (48% in Germany, 44% in Portugal). Obviously, the prevention culture is, in the case of Bulgaria, based on direct complaints by the workers, and in Portugal and Bulgaria, on specialist advice from authorities. Internal OSH competences and activities play the largest role in Portugal and Germany and somewhat less in Finland. We assume that the German and Portuguese enterprises react to the proposals from the staff that performs the risk assessment (external prevention services, or internal staff with a basic OSH education); direct complaints are perhaps not part of the overall enterprise culture, or they are included in the risk assessment reports by the specialist staff.

Concerning the assessment of the usefulness, the vast majority in every country considers the legal regulations as useful. Finland (69%) and Germany (81%) score lowest, whereas the three other countries agree, at approx. 90% or even more, with the given statement.

**Table 69 Usefulness of legal regulations**

In %		Total	Country				
			Bulgaria	Finland	Germany	Poland	Portugal
<b>Basis (unweighted)</b>		<b>1855</b>	<b>352</b>	<b>322</b>	<b>420</b>	<b>401</b>	<b>350</b>
Usefulness of legal regulations in this/these occasion(s)	Very useful	27	43	16	12	28	33
	Rather useful	59	51	53	69	62	56
	Rather useless	11	3	24	16	10	6
	Totally useless	1	-	3	2	-	2
	Don't know	1	-	4	2	0	2
	No answer	1	4	-	0	0	2
<b>Total</b>		<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Question E503: How useful were the legal regulations in this/these occasion(s), all in all? Were they very useful, rather useful, rather useless or totally useless?

Source: Own calculations; each observation is weighted relative to the universe of all establishments; multiple answers per respondent. Data: N = 1855 establishments, which used the legal safety and health regulations as guidance in the last three years (E501 = 2) from five countries (Bulgaria, Finland, Germany, Poland and Portugal).

Another indicator that the current state of OSH would be inferior without the WPD regulations was delivered by a hypothetical question that was asked in the employers' survey: "If there were no legislation regulating the issue: Would your establishment pay the same, somewhat less or considerably less attention to the following areas." The answers indicate that, for each of the statements, only around three quarters of the establishments would pay the same attention without legislation. The others would pay somewhat, and some even considerably less, attention to the issue.

Since it can be assumed that a number of employers gave a "politically correct" answer, this can be considered as some kind of minimal deterioration one would have to count on when abolishing the legislation. Country differences in the answers to this question were relatively small, with about 70% to 90% in each country saying that they would pay the same attention. Just in Bulgaria, this rate is, for some issues, considerably lower, with 64% for the escape routes, 66% for the workstation dimensioning and just 54% for the state and clearance of traffic routes. The latter is an issue that, also according to other indicators from the surveys, seems to cause problems in Bulgaria.

**Table 70 Attention the establishment would pay to an aspect if there were no legislation regulating this issue (employers)**

Attention the establishment would pay to an aspect if there were no legislation regulating the issue (in %)	The same attention	Somewhat less attention	Considerably less attention	Don't know / NA
Indication and control of escape routes and emergency exits	71	21	5	3
Provision of ventilation or air conditioning facilities	9	14	3	
Regular checks of first aid installations and first aid equipm.	79	5	3	3
Regular checks of the room lighting	80	15	4	2
Dimensioning of workstations	79	16	3	2
State and clearance of traffic routes	77	13	4	5
Information of workers on health and safety issues	74	18	5	4

Employers were asked on whether they had used the legal safety and health regulations as guidance on a number of provisions from the Annex of the WPD. Well above half of the establishments (58%) had indeed used them for this purpose. On average, in the five countries a firm has used the legal regulations for 2.4<sup>60</sup> of the seven issues the survey asked about; Finland has the lowest 'guidance indicator'.

**Table 71 Usage of legal OSH regulations — guidance indicator (employers)**

Countries	BG	FI	GE	PL	PT
	2.4	1.2	3.7	2.3	2.5
Firm Size	1–9	10–49	50–249	250 +	
	2.2	3.6	4.0	4.6	
Sector	Prod. Ind.	Market orient. serv.	Public & social serv.		
	2.8	2.2	3.1		

Source: Own calculations; each observation is weighted relative to the universe of all establishments.  
Data: N = 2,535 establishments from five countries (Bulgaria, Finland, Germany, Poland, and Portugal); Employer Survey, TNS Infratest, 2010.

The areas in which the legal regulations are used most often are 'fire alarm systems or fire fighting facilities' (44%) and room lighting (39%). But for each of the seven selected aspects from the WPD Annex, at least a quarter of establishments consults the legal regulations. There are, however, considerable differences by firm size and by country in the number of issues for which the regulations were used. German firms made use of the regulations in

<sup>60</sup> In this calculation, the 42% of establishments that had not used the regulations are included with a value of "0" occasions each.

considerably more areas than the other countries, between 42% and 68%, varying from topic to topic. Bulgaria, Portugal and Poland show values between roughly 30% and 40%, whilst the Finnish figures are clearly the lowest, mostly below 20%.

**Table 72 Areas in which OSH regulations were used as guidance in the last 3 years (employers) – country distribution**

Areas in which legal OSH regulations were used as guidance in the last 3 years (in %)	BG	FI	DE	PL	PT	Total
Escape routes or emergency systems	31	19	60	32	38	<b>36</b>
Fire alarm systems or fire fighting facilities	47	27	68	42	37	<b>44</b>
Room climate	37	20	46	32	34	<b>34</b>
Room lighting	43	19	52	37	42	<b>39</b>
Dimensions of the workplace	28	8	48	31	35	<b>30</b>
Traffic routes, loading bays and ramps	25	14	42	28	28	<b>27</b>
Toilets and washrooms	32	14	58	29	40	<b>35</b>

If we look at the sector and size relation, there are few differences between producing industries and public and social services; the market-oriented services use the regulations less often. Regarding size, there is a clear parallel between usage and size. Between 24% and 41% of the micro-enterprises use the regulation as guidance for one of these issues; for the large enterprises, the use as guidance varies between 59% and 71%.



**Table 73 Areas in which OSH regulations were used as guidance in last 3 years (employers) – sector and size distribution**

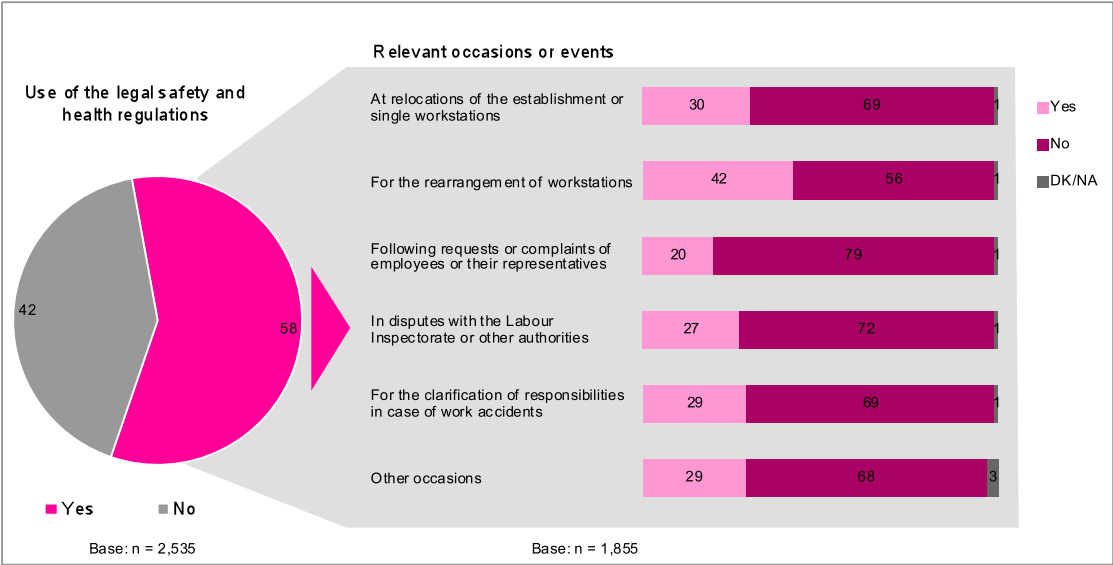
In %	Total	Sector			Establishment size			
		Producing Industries	Market-oriented Services	Public & Social Services	1-9	10-49	50-249	250 +
<b>Basis (unweighted)</b>	<b>2535</b>	<b>914</b>	<b>1021</b>	<b>600</b>	<b>591</b>	<b>703</b>	<b>710</b>	<b>531</b>
Share of positive answers (in %) on the following safety and health regulations								
Escape routes or emergency exits	36	41	32	48	32	55	65	69
Fire alarm systems or fire facilities	44	48	41	54	41	61	70	71
Room climate	34	38	31	45	31	48	52	69
Room lighting	39	44	36	45	36	54	59	69
Dimensions of the workplace	30	36	26	39	27	47	51	61
Traffic routes, loading bays or ramps	27	36	23	31	24	44	50	61
Toilets and wash-rooms	35	40	30	49	32	50	51	59

Question E501: In the last three years: Have you used the legal safety and health regulations on any of the following issues as guidance, be it for decisions on safety and health measures or for the clarifications of claims and rights?  
 Source: Own Calculations, each observation is weighted relative to the universe of all establishments.  
 Data N = 2535 establishment from five countries (Bulgaria, Finland, Germany, Poland, and Portugal).

Furthermore, looking at the occasions for change in detail, it becomes apparent that the rearrangement of workstations is the most prevalent one. But there are numerous further occasions when employers make use of legislation in order to clarify OSH claims or to make decisions.

The assessment of the usefulness of the regulations in these occasions is for all countries clearly positive, as either rather useful or as very useful. It is particularly positive in Bulgaria and in Portugal, where 44%, respectively 33%, considered the regulations as very useful. Just about every tenth user firm (11%) classified the regulations as “rather useless” and only 1% as “totally useless”, whereby the least positive assessments were made by Finnish firms. This is a very clear ‘vote’ for the relevance of the WPD on these issues.

**Figure 6 Usage of the legal safety and health regulations — relevant occasions or events (employers)<sup>1</sup>**



**V.2.3 WORKERS' SURVEY**

Workers were asked whether they had ever asked their employer for the adjustment of any OSH deficits related to the WPD.

The responses to the questions on “**WPD-related deficiencies noted at workplace**” show that those issues, that are mainly influenced by work practices (workplace culture?), like room climate or room lighting, often score highest. Where construction and building safety has a major role, the notion of deficiencies is much lower.

**Table 74 WPD-related deficiencies noted at the workplace**

In %		Total	Sector			Establishment size			
			Producing Industries	Market-oriented Services	Public & Social Services	1-9	10-49	50-249	250 +
<b>Basis (unweighted)</b>		<b>2515</b>	<b>707</b>	<b>926</b>	<b>882</b>	<b>570</b>	<b>802</b>	<b>613</b>	<b>530</b>
Safety and health relevant deficiencies noticed with respect to	Escape routes or emergency exits	10	11	9	11	10	13	10	9
	Fire alarm systems or fire facilities	9	10	8	12	10	8	10	10
	Room climate	25	22	22	34	15	29	24	31
	Room lighting	13	13	12	15	10	17	10	14
	Room size	9	8	7	15	7	9	9	11
	Traffic routes, loading bays or ramps	10	13	8	10	9	11	10	11
	First aid installations and first aid equipment	14	14	14	13	15	14	13	13
	Toilets and washrooms	12	15	9	15	10	13	11	16

Questions W512\_A to W512\_H: Since you work here: Have you ever noticed safety and health relevant deficiencies with respect to any of the following topics? Noticed deficiencies.

Source: Own Calculations, each observation is weighted relative to the universe of all establishments.

Data: N = 2515 workers from five countries (Bulgaria, Finland, Germany, Poland, and Portugal).

Workers were asked whether they had made use of the legal regulations on this occasion. Of the 18% of workers who used the regulations for this aim, slightly more than half (54%) found the regulations useful for this. Polish workers resorted to these regulations particularly often, and they also found them more useful than the workers of the other countries. But in view of the very small number of observations on this issue, country results have to be interpreted with great caution and are not displayed at this point.

**Table 75 Reference to legal regulations when asking for the adjustment of deficits**

Reference to legal regulations when asking for the adjustments of deficiencies (in %)	BG	FI	GE	PL	PT	Total
Yes	19	12	16	32	19	<b>18</b>
No	78	87	83	62	80	<b>80</b>
Partly	3	1	0	5	0	<b>1</b>
Don't know / NA	0	1	0	1	0	<b>1</b>

Among those workers who did not refer to the legal regulations for their claims towards the employer, only a few (7%) stated not to have done this because they do not consider these as helpful. In most cases, this was either not necessary (60%) or workers did not refer to the rules because they had no knowledge of them (31%).

Looking at the sector and size distribution, there were only a few significant differences. Enterprises from the Public and Social Services sector use the reference to legal regulation slightly more often than small enterprises below 10 workers do.

**Table 76 Reference to legal regulations – sector and size distribution**

In %		Total	Sector			Establishment size			
			Producing Industries	Market-oriented Services	Public & Social Services	1-9	10-49	50-249	250+
<b>Basis (unweighted)</b>		<b>598</b>	<b>166</b>	<b>172</b>	<b>260</b>	<b>96</b>	<b>201</b>	<b>154</b>	<b>147</b>
Reference to any legal regulations	Yes	18	18	15	23	27	13	16	19
	No	80	82	84	72	71	86	81	79
	Partly (for some of the issues only)	1	-	1	3	1	-	2	3
	Don't know	1	0	0	1	1	0	1	0
<b>Total</b>		<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Question W515: When you asked for these adjustments: Did you refer to any legal regulations for this query?

Source: Own Calculations, each observation is weighted relative to the universe of all establishments.

Data: N = 598 workers who asked for an adjustment of a deficiency (W513=1) from five countries (Bulgaria, Finland, Germany, Poland, and Portugal).

The usefulness of the reference to the legal regulations varies significantly from country to country. In Poland, Germany and Finland, this seems to be a successful strategy: more than 50% of the workers in these three countries see this legal ‘approach’ as useful, in Poland even more than 70%.

**Table 77 Reference to legal regulations – usefulness per country**

In %		Total	Country				
			Bulgaria	Finland	Germany	Poland	Portugal
<b>Basis (unweighted)</b>		<b>114</b>	<b>11</b>	<b>28</b>	<b>1</b>	<b>28</b>	<b>26</b>
Legal regulations helpful	Yes	54	36	57	55	72	31
	No	44	45	43	45	27	69
	Don't know	1	9	-	-	-	-
	NA	1	9	-	-	1	-
<b>Total</b>		<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Question W516: Were the legal regulations of any help in this context?

Source: Own Calculations, each observation is weighted relative to the universe of all establishments.

Data: N = 114 workers who asked for an adjustment of a deficiency (W513=1) from five countries (Bulgaria, Finland, Germany, Poland, and Portugal)

The sector and size distribution shows no significant differences for this question. The sector plays practically no role; size matters in the way that workers from medium and larger enterprises find the legal regulations more useful than workers from small and micro-enterprises.

## V.3 Findings on the reasons for successes and shortcomings

### V.3.1 OPINIONS OF THE STAKEHOLDERS

The lack of compliance can be a shortcoming in effectiveness. In our questionnaire, we asked the stakeholders which provisions might cause difficulties to comply with. Many stakeholders mentioned also a lack of information on specific issues with compliance difficulties. Quite a few insist on the fact that it is problematic to generalize the findings as compliance can very much vary from one company to another. Nevertheless, the following issues have been mentioned by the respondents as being major compliance shortcomings in their countries:

**Table 78 Issues causing compliance difficulties**

Provisions	Countries
Routes and emergency exits	AT, BE, EE, FI, IE, NL, PL
Workspace and room dimensions	ES, ICE, EL
Air, ventilation and room temperatures	CZ, ES, EE, FI, GR, HU, LV, SL
Floors (level, slippery)	FR, EL, SL
Daylight	FR, ICE, SL
Sanitary equipment, restrooms	CY
Maintenance of equipment or premises	AT, CZ, FR
Availability of resting spaces	FR
Access for handicapped	FR

Source: Stakeholder survey

To the question “*In cases of infringement, what is the reason why companies do not comply with the national law/transposition of the WPD?*”, the stakeholders pointed out the following reasons.

**Table 79 Reasons for non-compliance**

Reasons	%
Companies / responsible persons do not know the provisions	67
Companies/responsible persons do not have the necessary means to comply with the provisions	49
It is too cost intensive to comply with the provision	45
The infringement is not regularly controlled	39
Companies/responsible persons do not know how to implement the provisions	35
Companies/responsible persons do not find the provisions useful	28
The infringement is not sanctioned	20
Companies /responsible persons do know, but do not understand the provisions	20
Indifference	17
Lack of willingness to invest	4

Source: Stakeholder survey

As major reasons of shortcomings or successes, the stakeholders stressed the lack of internal, external means and the intrinsic quality of the Directive and its transposition into the national regulation.

The knowledge of the legislation within companies has an impact on the level of compliance. The lack of knowledge can be due to the lack of internal expertise but also to a lack of information from institutions and authorities.

However, with regard to the effort being made to inform employers on their obligations, many respondents recognize that some action has been taken going from general information to

comprehensive advice and practical tools even if not specifically related to the WPD (LU, Employers). In some countries, such as Malta, a campaign was organized for all stakeholders.

If there is a large consensus on the positive contribution effects of information material and campaigning, not all agree on the effectiveness of administrative fines or criminal penalties arguing that some companies prefer to pay fines than invest in prevention.

Some respondents go beyond the availability of information and make a claim for an adapted guidance.

*“The central issue is whether guidance is available or not. There is a lack of guidance which is adapted to the structure and the need of SMEs as specially regarding « low cost » solutions”.* (LU, Employers)

The cost issue is also one stressed by many stakeholders. The influence of the economical context, the financial pressure in many companies is deviating managers’ attention from OSH issues.

The fact that the Directive covers such a broad scope of issues does not facilitate its “visibility” but also its impact according to some comments. “WPD in Denmark is part of a comprehensive regulation and other parts may have a more profound effect on the working conditions”. (DK, Exp)

Also some provisions are expressed in vague terms, such as “sufficient daylight”. This type of prescription makes it difficult to apply, as it requests an interpretation of what «sufficient» means. (NL, Gov) Some respondents even comment that “for some provisions it is completely impractical to fully comply, depending on the circumstances (SMEs for example) or in the case of domestic work as an example” (IRL, Empl).

The complexity of the legislation induced by conflicts between the Directive and other legislation and objective circumstances (e.g. dimensions of workspaces - windows...) particularly when upgrading old premises, are pointed out as a disturbing factor for a full compliance.

### V.3.2 Employers’ and workers’ survey

There are no data to directly measure in how far the regulation has brought adaptations to health and safety provisions at the company level. However, when asking for any changes implemented during these last 3 years, about 60% of the employers answer that there has been no change at their workplace concerning issues such as escape routes, fire safety, room climate, lighting, workstation dimensions, traffic routes or sanitary equipment. The most important portion of employers declaring that they adapted the workplace are found in Finland and Portugal. However, it is important to clearly state that the most mentioned reasons for change were (by decreasing order of occurrence):

1. a rearrangement of workstations;
2. deficiencies discovered during risk assessments or other routine checks;
3. complaints from workers;
4. the relocation of the establishment or the workstation;



5. the recommendations of the labour inspectorate or other authorities;
6. the occurrence of a work accident.

### ***Nuances according to the type of company***

The view of experts on the situation at workplaces is mostly more critical than the results of the phone surveys, where a vast majority of workers and employers stated quite unambiguously that legal requirements are largely met in their company. Experts often insist on the fact that the level of fulfilment of legal obligations may very much vary from one workplace to another. Especially if the workplace is a very small company, the level of fulfilment can be far below the average standard, it is often argued.

The workers' survey shows however that workers are largely satisfied with their workplace OSH practices. 30% of the workers declare being very satisfied with the OSH situation of their workplace, 58% said they are satisfied. Only 2% clearly stated they are not satisfied at all. The same positive results are observed from the workers' survey when looking at specific requirements. With the exception of the "room climate", all other issues show a proportion of more than 80% of satisfied workers.

It is noteworthy that the overall satisfaction with the OSH practices at the establishment as well as the shape of the workplace with regard to specific WPD requirements – such as emergency exits, traffic routes, room dimensions, availability of light, knowledge about first aid installations and the hygiene level of toilets and washrooms – is at about the same level in small enterprises as in the larger ones. An exception is the existence of fire extinguishers, where very small enterprises are slightly less well equipped. On the other hand, satisfaction with the room climate is even higher in smaller firms than in the middle-sized or large ones.

There is no easy explanation available for this discrepancy between the views of experts and workers with regard to the OSH situation in small companies. Smaller workplaces indeed seem to comply less often with central legal obligations such as risk assessments or information and training of workers. But these deficiencies might at least partly be compensated by the more direct everyday contact between workers and employer in small firms. An attentive employer with OSH knowledge and sensitisation might often recognise OSH deficits on the spot at such a small workplace and without a formal risk assessment. On the other hand, in cases where the employer does not recognise the OSH deficits on his or her own but is confronted with an OSH query from part of the workers, small firms indeed seem to be somewhat less responsive to such requests than larger ones:

**Table 80 Requests for the adjustment of OSH deficits granted / not granted**

<b>Firm size</b>	<b>Request(s) for the adjustment of OSH deficiencies fully or partly granted</b>	<b>Request(s) for the adjustment of OSH deficiencies not granted at all</b>	<b>DK/NA</b>
1 to 9 workers	64%	34%	2%
10 to 49 workers	75%	24%	1%
50 to 249 workers	82%	17%	1%
250 or more workers	77%	22%	2%

It is important to point out that the understanding of OSH issues may be limited for some workers, especially concerning compliance to legal requirements. Workers may not be aware of some obligations. The survey shows that ignorance of legal aspects is the second reason why workers do not refer to legislation when they express complaints (30%).

### **Reason for non-information**

17 % of all establishments report that they do not regularly provide their workers with information on occupational safety and health issues. The smaller the firm, the less likely it is that workers are given any information. In production industries 11 % of the firms do not regularly provide information, followed by 17 % in the public and social sector, and 20 % in market-oriented services. Both Bulgaria and Poland report the lowest non-information shares (10 % and 11 %). In Germany (23 %) and Finland (28 %) about a quarter of all establishments admit that their workers do not receive information on a regular basis.

By far the most important reason for not providing information is that firms do not consider it necessary in view of the existing safety and health hazards (65 %), followed by concerns about the usefulness of the regular provision of information (42 %), and the lack of the necessary expertise (39 %, multiple answers possible). Least important are a lack of time and financial resources (28 % and 20 %). On the national level, we find varying patterns. For example, in Germany and Finland many of the 'non-informing' firms (49 % and 45 %) claim a lack of necessary expertise for not providing regular information, whereas in Bulgaria (24 %), Poland (35 %), and Portugal (28 %) this seems to be less important. In Bulgaria almost all firms (98 %) who do not regularly inform their workers find it unnecessary in view of the existing health and safety hazards, 83 % of the Polish firms have concerns about the usefulness of providing information.

**Table 81 Implementation - information (in %), all countries**

<b>Reasons for not providing workers with information</b>	<b>All</b>	<b>BG</b>	<b>FI</b>	<b>DE</b>	<b>PL</b>	<b>PT</b>
The necessary expertise is lacking	39	24	45	49	35	28
There is not enough time available for this	28	37	23	21	35	38
There are not enough financial resources provided for this	20	12	16	8	25	43
There are concerns about the usefulness	42	23	38	30	83	53
It is considered as unnecessary in view of the existing safety and health hazards	65	98	69	63	49	50
Other reasons	31	11	36	37	13	38

Source: Own calculations; each observation is weighted relative to the universe of all establishments; multiple answers per respondent. Data: Employer Survey, TNS Infratest, 2010, N = 259 establishments who do not regularly provide their workers with information on OSH issues (E401 = 2) from five countries (Bulgaria: N = 19, Finland: N = 74, Germany N = 72, Poland N = 22, and Portugal = 72).

## V.4 Findings on the current and future relevance

### V.4.1 DESK RESEARCH

The **German** Federal report on the implementation of the WPD from 1998 reports that some Federal Länder decided to implement a two step system that would help when planning and implementing workplaces. This system included, like the **Austrian** system, the consultation of labour inspectorates on OSH aspects before a construction licensing procedure is finalised. This way serious planning mistakes that would lead to the violation of OSH laws and especially of the Ordinance on Workplaces, can already be avoided during the planning phase and cost intensive modifications can be prevented. A similar procedure was implemented for the public sector on behest of the Federal Ministry of Interior.

In **Spain**, it was mentioned in the second national information bulletin that one of the negative aspects of the Directive is the lack of specificity in a number of matters that are regulated by the Directive such as environmental conditions (temperature and humidity) in the workplace. Therefore, in the bulletin greater accuracy was recommended.

There is a potential gap in the legislation with regard to the piling of materials in the workplace. Accidents often occur because of *improper disposal of materials* potentially leading to serious accidents. Other possible amendments to the Directive mentioned that priority should be given to:

- *concretise* as much as possible the *employers' obligations*, trying to develop in more detail certain obligations in the Annexes of the Directive. This could improve the clarity of the rather general clauses in the legislation.
- Study the *possibility of specific regulations* on the piles of materials in the workplace.
- Study the *possibility to widen the legislation* to some of the fields that are excluded from the scope of the Directive such as agricultural land (housing, etc.).

### V.4.2 OPINION OF THE STAKEHOLDERS

The majority of comments on the question “*Which provisions of the WPD are particularly relevant and why?*” (A03) was already presented under the answer MQ 4 ‘Relevance’ (consult this section for details). It shows a high acceptance of the WPD; most respondents emphasise that all aspects of the WPD are relevant for OSH.

Most stakeholders agreed (56%) or rather agreed (23%) that the Directive is still the best possible option to reach the objectives (**A09**). Only a minority of 8% disagreed or rather disagreed.

**Table 82 The Directive is still the best possible option to reach the objectives**

STAKEHOLDER A09	%
Agree	55
Rather agree	23
Rather disagree	6
Disagree	3
Don' know / NA	13
<b>Total</b>	<b>100%</b>

Source: Stakeholder survey

Some respondents additionally commented on the question. The comments were partly in support of positive statements like the following three quoted statements:

*“WPD is the best option for coming closer to reaching an equal OSH level in Europe, better than norms or other comparable solutions.” (DE, Gov)*

*“A directive is a proper option to reach the objectives of protection and prevention of workers in the workplace as it gives a certain freedom for every EU Member State to choose the ways and legal forms of transposition of the provisions of the Directive into national law but it is compulsory for the Member States to make the process of transposition.” (LT, Work)*

*“The Directive, as a type of legal framework, has a strong impact on the target group. The requirements must be fulfilled.” (LV, Gov)*

Others suggested alternatives with a perceived similar impact:

*“Experienced employers invest in the quality of workplaces to reach the sufficient level of protection without detailed regulations. General principles and stronger supervision of weaker employers is one of the alternatives.” (EE, Empl)*

*“Thus, a more proper option would be the combination of legislation and soft law materials.” (LT, Gov)*

*“More attention should be paid to the improvement in safety culture and safety behaviour, because in practice many employers comply, but the attitude of the workers creates additional risks (like smooth and even floors with left cables and hands tools).” (LT, Gov)*

*“If you need to impose the member countries to reach a certain level of OSH, you need to use a legislative instrument that is binding. Instruments that are based on intrinsic motivation, such as campaigns, can maybe provide better results but this is more difficult to impose.” (BE, Gov)*

*“From the UK perspective I believe that sensible non-regulatory guidance could have achieved the same end result.” (UK, Empl)*

Looking at the responses from stakeholders, we perceived the common opinion that the relevance of the WPD topics for OSH was beyond doubt, and that the WPD had contributed to a harmonised European approach. Most respondents emphasised that the Directive provides Europe-wide minimum standards at workplaces. One respondent summarised this in a concise response:

*“The importance of the WPD lies in the fact that it contains brief, generally valid provisions concerning OSH at various workplaces without entering into the particularities of individual European countries” (CZ, Empl)*

The majority of comments on the question *“Which provisions of the WPD are particularly relevant and why?”* (A03) shows a high acceptance of the WPD; most respondents see all aspects as relevant for OSH. The wording of these positive answers is very similar. *“All issues are relevant.” “All pretty relevant.” “All topics of the Directive are from an OSH point of view equally important.” “All the provisions of the Directive are significant.” “Every provision has relevance.” “All provisions of the WPD are important, because all of them may affect worker health and safety at work.” “The answer is that all aspects are relevant for OSH.”*

Some respondents commented extensively on the question of relevance and highlighted some aspects of the WPD as particularly relevant:

*“Safety regulations for traffic routes, escape routes, emergency exits and fire fighting contribute to reducing and impeding accidents. Regarding health and work performance, regulations targeting room dimensions, space for free movement, lighting and room climate are of special importance. Further regulations regarding social establishments like restrooms and first aid rooms are significant. The regulations on integration of disabled workers are of social importance. Provisions concerning non-work rooms’ (dressing rooms, washrooms etc) conditions, ventilation and outdoor working are quite important for the everyday work situation. (DE, Gov)*

*“The most frequent questions addressed to the workers’ organisations are related to the following articles:*

- Social and sanitary provisions: refectories, showers, dress rooms, ...*
- Comfort: air humidity, air speed*
- Free surfaces for workers*
- Pregnant workers” (BE, Work)”*

*“First aid rooms and restrooms were not included in the pre-existing national law. For Slovenia, the most important chapters which are usually dealt with are ventilation, temperature, lighting, pathways for the passengers, size of rooms and toilets.” (SL, Gov)*

*“Those concerning the handicapped workers insofar as the questions concerning accessibility of the workplaces are far from being regulated and become urgent to solve.” (FR, Exp)*

The reason for highlighting these very aspects might be that, in these cases, there is more space for interpretation of a regulation than in other areas. This might indicate a stronger demand for advice, a higher potential for conflicts or infringements.

The answers to question A03 of the stakeholder survey/interview, *“Which provisions of the*

WPD are particularly relevant and why?" revealed the general appraisal that certain or all provisions of the Directive are relevant, the rate of those not having answered this question being at 14.28% (N=11). 35% of the respondents (27 of 77) considered all provisions of the WPD (equally) relevant. Some of them substantiated their appraisal with the **relatedness to existent OSH risks**:

*"Every provision has relevance as it can relate to areas of risk to people in workplaces." (IE, Gov)*

*"Every prescription follows a certain objective; to skip any of them would have consequences of the same weight." (HU, Empl)*

*"All provisions of the WPD are important, because all of them may affect worker health and safety at work." (LV, Gov)*

Some respondents stressed the importance of a **holistic view** that they appreciate to be followed in the WPD:

*"The Directive has to be seen as a whole, everything has the same relevance." (AT, Gov)*

*"All chapters of the WPD are relevant. They are necessary to provide the minimum safety and health requirements for the workplace in a holistic way." (CY, Empl)*

*"Moreover, the fact that the Annexes include a very wide range of requirements contributes to the quality of the WPD." (GR, Gov)*

Some respondents again saw the relevance of the WPD in setting **minimum standards** for safety and health at workplaces:

*"In general, they are all important because they specify the minimum requirements for OSH and emergency of workplaces." (IT, Gov)*

*"It is very difficult to pinpoint one or several provisions of the WPD and consider them as particularly relevant. The importance of the WPD lies in the fact that it contains brief, generally valid, provisions concerning OSH at various workplaces without entering into the particularities of individual European countries." (CZ, Empl)*

*"It is a good list of general prescriptions (and for the majority of good sense) which need to be respected." (FR, Expt)*

*"All provisions are a minimum for ensuring OSH at workplace level." (FR, Work)*

*"It makes no sense to pick out particularly relevant provisions, since they are just general prescriptions – without any parameters. That's why mainly formulations like „it should be adequate“, „if it is technically possible“, „the safest possible way“, „if possible, it should be arranged in a certain manner“, „as far as possible“ etc. are applied. It remains the task of the Member States to specify the Directive." (HU, Gov)*

In two responses, the view was expressed that the provisions are to be considered equally relevant on a general level, while in particular cases there might be differences in the importance of certain provisions.



*“As regarding regulation, it is just time that discerns what is important and what is not. Every prescription follows a certain objective; to skip any of them would have consequences of the same weight.” (HU, Empl)*

*“All of them are relevant. If you start from scratch, then all articles are relevant. If you already have a situation in which the provisions are in place, as in Belgium, then the articles are less relevant. The only new provisions are those with regard to the transparent doors and walls and also the escalators and travelators, the loading bays and ramps.” (BE, Gov)*

Those respondents who have pointed out certain issues of the WPD as being of particular importance determined the relevance

- by the level of risk (provisions regulating circumstances with most fatal consequences)
- by insufficiency in implementation
- by frequency of occurrence among the requests in workers’ consultation
- newly introduced topics

The range of topics referred to in the responses covers all provisions of the Directive, as:

- Safety issues: provisions relating to immediate risks of injury
- Social and sanitary provisions
- Organizational issues: information, consultation and participation of workers

According to one respondent (BE, Work), the most frequent questions asked to the workers’ organisations are related to the following articles:

- Social and sanitary provisions: refectories, showers, dress rooms etc.
- Comfort: air humidity, air speed
- Free surfaces for workers
- Pregnant workers

To illustrate the range of input of the stakeholders, some answers are quoted below. However, due to the small number of answers, a statistics based hierarchy of the above issues or their correlation to certain respondent groups seems obsolete.

*“Especially those provisions that deal with safety issues, e.g. emergency exits and fire detection.” (SE, Gov)*

*“Emergency preparedness measures – these establish a backbone for the action that needs to be taken by the employer in this regard.” (MT, Gov)*

*“The content of the Annex, in particular paragraph 6 about **ventilation** of enclosed workplaces, paragraph 7 on the **temperature** in working areas, and paragraph 8 on **natural and artificial room lighting**, as these factors most affect the wellbeing of workers at the workplace.” (CZ, Gov)*

*“Safety regulation for **traffic routes, escape routes, emergency exits and fire fighting** contribute to reducing and impeding accidents. Regarding health and work performance, regulations targeting **room dimensions, space for free movement, lighting and room climate** are of special importance. Further regulations regarding **social establishments** like restrooms and first aid rooms are significant. **Socially important** are the regulations on integration of disabled workers.” (DE, Gov)*



*“In the point of view of trade unions, an important provision of WPD is the **obligation for the employer to inform, consult** and give opportunity to workers’ representatives to get information and **participate** in the process of introduction of health and safety measures in the workplace. This is an important aspect of the general information and consultation procedures of the workers’ representatives at company level.” (LT, Work)*

The relevance of **consultation** of workers and **workers’ participation** was also emphasized by the Austrian stakeholder (AT, Work) and, as for the time of the transposition, by the Spanish respondent (ES, Expt).

In the opinion of the Portuguese stakeholder, Art. 7 and 8 are especially relevant, *“because they are not totally implemented by the employers”*; and Art. 4 and 18, *“because they are the ones for which we find more failures”*. (PL, Work)

*“Most important are the obligations for new workplaces. They could even be stricter/more precise since doing things right from the start is cheaper than altering later.” (SF, Work)*

Some issues represent newly introduced items for some countries and are therefore regarded as relevant:

*“Those concerning the handicapped workers insofar as the questions concerning accessibility of the workplaces are far from being regulated and become urgent to solve.” (FR, Expt)*

*“First aid rooms and restrooms were not in the pre-existing national law.” (SK, Gov)*

Annex 1: 8.1. Natural and artificial lighting was considered especially relevant, as *“Iceland had more general wording on the provision concerning lighting in previous regulation.” (IS, Gov, Expt, Work, Empl)*

The paragraph on the amendments to the annexes required on technical progress and new knowledge of emerging risks is considered relevant *“because it aims at keeping legislation updated”*. (IT, Expt)

The suggestions from stakeholders tackle diverse issues. Many of these remarks have been made to former questions, but are again focussed here.

One quarter of the stakeholders provides no suggestion or writes a short comment denying the necessity of changes. Typical remarks were grouped starting with ‘no changes necessary’.

#### **‘No changes necessary’**

*“No suggestions”*

*“The WPD is sufficient and does not require further amendments. More emphasis should be placed on incentives to employers rather than imposing laws and amending them.”*

*“WPD is working effectively in general.”*

Some stakeholders address specific topics, which would require changes:

Another group of stakeholders proposed '**Practical improvements of certain topics**'.

*"WPD demands that one or more first aid rooms must be provided where the size of the premises, type of activity being carried out and frequency of accidents so dictate. It is not clear, should there always be one aid room or do the conditions also dictate this need? In lot of cases it is sufficient when workplaces must be fitted with first aid equipment."*

*"The general assumptions should be specified (e.g. safety signs), occasional reference is not sufficient."*

*"High risk areas should be regulated separately, not simply in connection with traffic routes. (There are noisy, explosive areas or areas containing dangerous chemical substances)"*

*"Yes, as soon as possible. Serious issue in respect of provisions that relate to emergency exits."*

*"Environmental tobacco smoke should be tackled directly and with stricter regulation, no smoking should be allowed indoors."*

*"Besides, also an indication for a minimum working space (this could also be integrated in other directives)."*

*"Requirements for places of work at height."*

*"Solving of the problem with the sliding doors."*

Some stakeholders address again '**the level of concreteness and detail**'. Only a few selected comments are presented here:

*"See above, concrete regulation, European-wide minimum requirements giving thresholds and numbers."*

*"As mentioned earlier, I would recommend clear limit values and (minimum) standards where possible."*

Some of the suggestions related to the introduction of new issues, mainly health related, '**health issues or better overall prevention**':

*"To include a more detailed and wider range of provisions with regard to health, security and welfare equipment for the workplaces."*

*"Violence at the workplace is an increasing problem in health care and social sectors and in retail trade."*

*"It is important to have extensive cooperation and consultation on the revised version of the WPD."*

*"Any up-date or revision of the WPD should promote the prevention and the relevant protection measures."*

Other suggestion cannot be clearly grouped:

*"Integration in the Framework Directive of 1989."*

*"Limitation of the very detailed prescriptions in the Annexes."*

*"Contact architect firms and see if they take into account the articles of the Directive."*

*"Due to the diverse nature of the Workplace Directive organise a review to see if it applies to all workplaces and assess if lighter provisions for low risk and SMEs would be helpful. A low risk business or workplace is one in which the hazards are more or less the same as you would find at home. Such workplaces might include many offices, shops, classrooms and similar venues which Lord Young mentions in his report."*

*"An inventory of the application of the WPD needs to be carried out in all European countries, if this has not been done already."*

A further question to stakeholders connected to the relevance was an open question (**D2.2** "Do you believe that the provisions of the WPD should cover other new or emerging OSH issues that are not mentioned now?"), which allowed for comments and statements.

A total of 19 stakeholders stated that the provisions should not cover any other new and emerging topics, 13 stakeholders made other comments. Two of these emphasize that there is no need to include new and emerging risks in the WPD, since the Framework Directive and the risk assessment required by the Framework Directive, as well as specific regulations, would assure that new and emerging risks are detected and addressed anyway.

However, many stakeholders agree that the provisions should in future cover other new and emerging topics (29). They list topics of interest for being included in the WPD. Well-being and psychosocial risks are again amongst the aspects scoring high compared to other issues mentioned; comments on this topic include health promotion on drug and alcohol prevention, the engagement of psychologists in companies, as well as bullying and harassment. In total 7 stakeholders commented on well-being and psychosocial aspects.

Musculoskeletal disorders and related ergonomic aspects, as well as psychosocial issues are also mentioned (5x):

*"WPD should cover more clearly new or emerging OSH issues, especially musculoskeletal risks and psychosocial risks such as stress."*

Other topics mentioned include non-smoker protection, prevention of explosions, carcinogenic risks, nanotechnology, electromagnetic radiation, background noise by radios, dangerous substances such as asbestos, radiation such as electromagnetic or ionizing waves, and health surveillance.

Several special types of workplaces are explicitly mentioned, such as workplaces at heights as well as workplaces in the agricultural and transportation sectors. A focus on ageing workers is required by one stakeholder. Some comments were made on the procedure of including new and emerging risks, such as the necessity to regularly check whether new and emerging risks have to be included, and whether new occupations or forms of occupations, like e.g. teleworking, may cause new risks.

### V.4.3 EMPLOYERS' AND WORKERS' SURVEY

A way to approach the relevance of the WPD regulations from the workers' view is a direct question of whether they had ever asked their employer for the adjustment of any OSH deficits related to the topics covered by the WPD. If so, they were asked whether they had made use of the legal regulations on this occasion. Of the 18% of workers who used the regulations for this aim, slightly more than half (54%) found the regulations useful for this. Especially, Polish workers refer to these regulations particularly often and they also found them more useful than the workers of the other countries. But in view of the very small number of observations on this issue, country results have to be interpreted with great care and are not displayed in percentages, but only in absolute figures.

**Table 83 Reference to any legal regulations – country**

W515 Reference to any legal regulations	Country					
	BG	FI	DE	PL	PT	Total
Yes	10	23	16	29	23	<b>101</b>
No	42	170	82	57	95	<b>446</b>
Partly (for some of the issues only)	1	2	0	4	0	<b>7</b>
Don't know	0	2	0	1	0	<b>3</b>
<b>Total</b>	<b>53</b>	<b>197</b>	<b>98</b>	<b>91</b>	<b>118</b>	<b>557</b>

Source : Worker survey

**Table 84 Legal regulations helpful? – country**

W516: Legal regulations helpful?	Country					
	BG	FI	DE	PL	PT	Total
Yes	4	14	9	24	7	<b>58</b>
No	5	10	7	9	16	<b>47</b>
Don't know / NA	2	0	0	0	0	<b>2</b>
<b>Total</b>	<b>11</b>	<b>24</b>	<b>16</b>	<b>33</b>	<b>23</b>	<b>107</b>

Source: Worker survey

Among those workers who did not refer to the legal regulations for their claims towards the employer, only few (7%) stated not to have done this because they do not consider these as helpful. In most cases, this was either not necessary (60%) or workers did not refer to the rules because they had no knowledge of them (31%).

Summarizing the indicators from the workers' side, it can be observed that the regulations of the WPD in general are sometimes considered as exaggerated and thus a hindrance for daily work. But in the case of OSH claims towards the employer, they are nevertheless considered as valuable by a (small) majority of workers. There are however not many workers who use the WPD for such claims, one important reason for this being that workers do not know the regulations or are not even aware of their existence. The WPD thus seems to have relevance for the workers, but their relevance could be much higher if the regulations would be more widely known among workers.

When comparing the results of the stakeholder interviews with the employers' and workers' survey, congruence seems to exist when looking at possible differences between Member States. In general the situation does not seem to vary very much between Member States, when assessing the current situation with regard to the question if other measures would have reached the same results.

However, when interpreting the results there seems to be a difference between the assessment from the stakeholder interviews and the employers' survey. While the relatively low indices from the employers' survey lead to the interpretation that employers would have put the same effort into OSH issues without the WPD and national transpositions forcing them, stakeholders and specialists generally argue that implementing a Directive was a good choice for assuring transposition and compliance in the Member States.

## **V.5 Summary of the evaluation of effectiveness, current and future relevance**

From the data collected via the different sources, it can be considered that there is a consensus on the current and future relevance of the WPD. The stakeholders' opinions tend to recognize an impact of the WPD on working conditions and the well-being of workers at the workplace without the possibility to quantify this impact. Also the degree of impact may largely vary from one country to another due the more or less WPD corresponding pre-existing legal framework in each country. Nevertheless, as the relevance is clearly high and the impact is evaluated as being positive or as leading to a status quo, it can be concluded that the effectiveness is globally questionable.

One quarter of the stakeholders provides no suggestions or writes a short comment denying the necessity of changes in the WPD for the future. Another group suggested some practical improvements on specific topics. Many suggestions are linked to the level of detail and concreteness of the provisions. In terms of addition of new aspects, the issues of psychosocial risks and musculoskeletal disorders have been raised by a number of stakeholders. In terms of types of workplaces, some specific work situations have also been mentioned (telework, transportation, agriculture, working at height,..)

As far as the results of the employers' survey go, it may be concluded that the answers to the questions regarding changes suggest that WPD-related to OSH improvements are not necessarily a matter of course and would have happened anyway. This finding can be somewhat nuanced by the fact that in almost 40% of the cases, the deficiencies were discovered by means of a risk assessment or a regular check-up which corresponds to a legal obligation.

The findings also show the influence of contextual factors, such as the intensity of the labour inspections (Portugal, Bulgaria) or the degree of involvement of workers in the improvement of the workplace (Finland, Germany).

Only a minority of workers use the regulation as a basis for their claims to improve their working environment. The most important reason for this is that the regulation is only known to a minority of them. However, this result varies among countries. In Poland, Germany and Finland the 'legal approach strategy' is successful.

Shortcomings to the effectiveness of the WPD have been found in the lack of knowledge of the provisions regarding the workplace and also in the lack of resources within companies (human, technical and financial) to comply with the regulation. But also, weaknesses in the intrinsic quality of the Directive and of its transposition into the national regulation (vague terms and broad scope of issues) have been mentioned by the stakeholders. The stakeholders therefore pointed out the positive contribution of information material and campaigning to the effectiveness.

## **VI. EVALUATION OF COST-BENEFIT ASPECTS**

### **VI.1 Introduction**

A cost-benefit assessment is one of the influential issues in current legislative decision-making. Simply said, the target is that compliance costs should not outweigh the compliance benefits. However, for evaluation purposes the challenge is to identify all costs, based on suitable financial monitoring systems of such costs, and – perhaps even more difficult – to define and quantify the benefits.

A specific methodology has been developed which is a complement to the generic methodology. This methodology aims to answer the generic questions 16 and 17. It has not been tested on the WPD. However, the test has provided the occasion to look into literature and ask the stakeholders about the cost-benefit issues regarding the WPD. The results are presented hereafter.

#### **Generic questions:**

Question 16: What means have been deployed and what are the corresponding costs induced by the EU OSH Directive?

Question 17: What is the cost-benefit of the chosen EU measures (provisions) and the EU Directive as instrument?

### Data collection questions:

#### **Desk research:**

All generic questions

#### **Stakeholder survey:**

C13: Which provisions of the transposition of the WPD do impose administrative costs on companies?

C14: Were administrative costs increased by the transposition of the WPD in comparison to the pre-existing legislation?

C15: Could you give an estimation of costs that companies have to calculate in order to comply with the requirements of the national implementation of the WPD?

C16: Could you give percentages on the distribution of the costs?

C17: Do you estimate a difference in costs per capita for SMEs and larger companies?

Findings also based on previously used questions, e.g. C10: Has the WPD had a positive impact on one or more of the following issues: the improvement of productivity etc.?

## **VI.2 Findings on cost-benefit aspects**

### *VI.2.1 DESK RESEARCH*

In **Germany** the WPD and its administrative burden for the enterprises was estimated with the Standard Cost Model SCM by the national statistical office. Concerning the administrative burden of the WPD it is not evident to what extent its transposition causes any costs, which are in line with the EU-SCM. The WPD does not require any additional information duties for the employer beside the ones included in the Framework Directive.

Consequently the German SCM database mentions the duty of informing workers about escape routes (§4 IV ArbStVO) as the only relevant cost factor in line with the SCM that results directly from the German Workplace Ordinance (transposing the WPD). Calculations according to the SCM rules resulted in 11,000 € of total annual administrative costs in 2006 for all German companies arising from the law transposing the WPD (Statistisches Bundesamt 2010<sup>61</sup>).

The WPD is connected to the Framework Directive concerning risk assessment and instruction of workers. On a national level the Standard Cost Model (EU-SCM) revealed annual documentation costs for risk assessments in German companies of roughly 290,000 EUR. The total information costs caused by the Arbeitsschutzgesetz (law transposing the Framework Directive) are summed up to some 62 million €, nearly 98% of them are due to the obligation to train and inform the workers (Statistisches Bundesamt, 2011).<sup>62</sup> It has to be emphasized that these costs are due to the Framework Directive and cannot be included directly in calculations for the costs of the WPD.

<sup>61</sup> See: Statistisches Bundesamt, 2011.

<sup>62</sup> Calculations for Germany are made with the SCM. Documentation of risk assessment does not include the risk assessment process itself. Further obligations taken into account are training (Unterweisung) of workers and different kind of information duties (Unterrichtungs-, Auskunft- und Mitteilungspflichten nach ArbSchG)



According to the **Danish** Working Environment Authority, there are no data on costs for the state regarding the compliance with the WPD. There are some data on the cost for the companies, not in monetary numbers but in time consumption. These data show that half (53%) of the companies use one work day or less for the risk assessment.

According to a study performed in **Estonia** all private companies spent in total 107 million € per year to fulfil main obligations of OSH regulations, public and non-private organisations spent about 30.6 million euro per year. As weighted average the costs for the implementation of all OSH-regulations for one employer is approximately 6,250 € per year (Ernst & Young, 2009). The report does not include more detailed information on the costs related only to the parts of occupational health and safety laws that were established because of the WPD.

The **Irish** Government assessed the additional costs of the updated 'General Application Regulations'. The updated regulations maintained the general thrust of the earlier provisions, while introducing a number of refinements to make them more coherent and relevant to the changed work environment. The additional cost for employers in complying with these updated regulations should be negligible in most cases where reasonable efforts are already made to comply with the existing legislation. The costs to the exchequer should be minimal as an enforcement system is already in place.

The expected costs of WPD transposition into **Lithuanian** legislation were listed in "Transposition Implications of the EU Directive's 89/654 on Minimum Workplace Health and Safety" (Čyras, 2000). In order to implement the WPD most of the surveyed companies predicted that they would need to be supported in the following ways: 40% of companies would need financial support and 60 % information related support.

According to the survey, companies allocate about 2% of the workplace value towards safety and health. The total value of all workplaces in 2000 was 46.3 billion Lt (13.4 billion €, based on the exchange rate: 1 € = 3.45 Lt). Hence, about 920 million Lt (267 m EUR) or 559 Lt (162 EUR) per worker will be allocated in order to insure safety and health at work. The costs will be distributed as follows – modernization of workplace: 80%, training and informing of workers: 10%, risk assessment: 5%, other expenses: 5%.

The total cost of WPD implementation is estimated at 429 million Lt (124 million €) per year. State Labour Inspectorate, according to this study, will require 8-10% of additional financing.

A position paper from the **Latvian** Ministry of Foreign Affairs in 2000 estimated the costs of the WPD transposition. "The provisions of the Regulations will apply to 850,000 workers, including 170,000 workers working in public institutions (as public and civil servants), and the cost estimates are about 8 million LVL (~15 million €)<sup>63</sup>. In the private sector, 40 million LVL (~ 74,7 million €) will be needed to transform 680,000 workplaces. The highest costs are involved where the existing workplaces have to be modified. When applying the requirements of the WPD to the local conditions of Latvia, it was found that the average cost of arranging one workplace in Latvia as required by the Cabinet Regulations will be 47 LVL (~87,8 €) (suitability of buildings, installation of electrical wiring, emergency exits and

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<sup>63</sup> 1 EURO = 0.535 lats (average exchange rate of November 2000). (MFA, 2000) Currently fixed exchange rate by Bank of Latvia is 1 EUR = 0,702804 LVL (LB, 2011)

passages, ventilation, windows for lighting, doors, gates, changing rooms, sanitation rooms, first aid rooms etc., the required work equipment and traffic roads).” (MFA, 2000)

Concerning the administrative burden of the WPD, it is not evident to what extent its transposition causes any costs. The Latvian regulation does not require any additional information duties for the employer beside the ones included in the Framework Directive and accordingly in the Labour Protection Law.

In the **UK** a cost/benefit assessment of the impact of the Workplace Directive shows that most of the regulations will have no economic impact because the requirements in the regulations are already required for many workplaces under the provisions of the Factories Act 1961 or the Offices, Shops and Railway Premises Act 1963. For other workplaces the Workplace (Health, Safety and Welfare) Regulations 1992 set out in more detail what is already required by the more general Health and Safety at Work etc. Act 1974. However, there are a few requirements in the regulations that are expected to result in increased costs, for example the provision of thermometers required by regulation 7(3) and on sanitary conveniences (regulation 20).

Analysis of a questionnaire produced by HSE in 2002 from people who had duties for health and safety in the workplace showed that 43% had found there to be (almost) no costs regarding the compliance to the new regulations. 46% had found costs to be significant but not enough to effect business decisions. Only 11% claimed costs had been high enough to have an impact on business decisions. 68% believed the benefits of the regulations had outweighed the costs, with 15% believing this was to a large degree the case. Only 4% believed there had been no benefit from the regulations. In assessing the nature of these benefits, 90% felt that there was greater awareness of OSH and 54% found the behaviour of workers to have improved.<sup>64</sup>

The macroeconomic effects of OSH have been studied and evaluated in many national studies for more than 20 years. The WPD has not been evaluated in the same way in similar studies. It is therefore not possible to answer this question sufficiently, but only to present limited desk research results and stakeholder opinions. Stakeholders from a number of governments (e.g. BE, DK and NL) reported in the stakeholder survey, that no studies on the macroeconomic WPD impact were available for their countries.

In response to a HSE questionnaire conducted as part of the second five year review on the WPD, 41% respondents believed efficiency and productivity had been improved, while only 13% disagreed. 40% believed there had been a reduction in injury claims, while just under a third believed absenteeism had been reduced, with 41% being uncertain. No reliable data on the impact on employment or competitiveness exists. However, 21% agreed that the regulations had improved competitiveness.

The French Adige survey conducted by the Ministry of Labour in 2000 on the occasion of the evaluation of the WPD Directive shows that most companies believe that the new regulations have had a beneficial effect in terms of accidents at work, number of days off sick, and working conditions in general. However, with regard to the number of days off sick, small businesses believe that the effects are difficult to measure. In general, companies feel the

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<sup>64</sup> Dunn, C. & Ludbrook, R., 2003.

measures to be beneficial in terms of productivity. As far as workers are concerned, 56% feel that the improvements to the workplaces have not slowed down their work, and 89% say that in fact they can now work better. The favourable effects are less clear as far as competitiveness is concerned, with only large metal and timber processing companies feeling that improving the workplace has had a beneficial effect on the competitiveness of the company.

## VI.2.2 OPINION OF THE STAKEHOLDERS

To the question: *Could you give an estimate of costs that companies have to calculate in order to comply with the requirements of the national implementation of the WPD? (Please add data and sources, if available)*(C15), 83% of the respondents answered with 'No', stated that no data are available or did not answer at all. Only 17% gave some comments, but also in these comments most of the respondents pointed out that data are not available or that it is almost impossible to estimate costs.

**Table 85 Could you give a cost estimation in order to comply with the WPD transposition?**

Estimation	%
No	22
Don't know/no data/answer not possible	42
Other, see comment	17
No answer	19

Source: Stakeholder survey

Some few comments involved cost details, be it for building expenses or for acquiring new OSH expertise to cope with the new regulations:

*"There are a few new prescriptions, such as a room for pregnant workers, adaptations for handicapped workers, transparent walls, doors of emergency exits, escalators and travelators, loading bays and ramps, which probably cause costs to companies." (BE, Gov)*

The German governmental representative added that costs significantly depend on workplace and production place. It is necessary to differ between the implementation of a new workplace (construction regulation) and the establishment of a new workplace in an existing production place (workplace regulation).

However, a representative of the **Swedish** Working Environment Authority mentioned that the estimated administrative cost a year (in 2007) for the documentation of inspection and maintenance of ventilation systems (including written instructions concerning operation and maintenance) were 126 million SEK (14 million €) and the posting of evacuation plan (including signs for escape routes and fire-fighting equipment) reached 91 million SEK (10 million €).

The representative of a **French** OSH research institute mentioned that in the field of design of logistic warehouses, one could estimate that the cost of integration of the preventive measures did not exceed 2% of the building value.

The **Estonian** governmental representative mentioned that Estonian employers spend on average 6,250 € per year on OHS main obligations (not only the implementation of the WPD directive!), which forms on average 0.2 % of enterprises' total costs. Average financial cost per worker is 210 €. <sup>65</sup>

The representative of the Free Trade Union Confederation of **Latvia** stated that during the transposition process it was estimated that approximately 40 million Ls (~75 million €) would be necessary for the companies in private and public sectors in order to adjust the working places according to the WPD requirements. It was estimated that approximately 47 Ls (~88 €) would be necessary to adjust one working station.

The representative of a **Maltese** employers' association indicated especially that the statutory requirement of appointing a member of management accountable for OSH matters has resulted in the recruitment and/or accessing of OSH expertise from OSH specialists. Other compliance costs were related to the modification of machinery, with its attendant machinery stops, and commitment of technical resources to identify, design, source materials, and install such modifications, evaluations of such modifications, together it impacted productivity. A rough estimate would be between 5 to 10% of a company's wages bill.

Concerning the distribution of the costs among organisational, technical and administrative dimensions, only three answers could be collected. Even if the proportions vary largely between the three answers, the ranking of the most costly aspects is the same. Technological aspects play the most important role followed by organisational aspects.

**Table 86 Could you give percentages on the distribution of the costs?**

Respondent	EE, Gov (in %)	FR, Academic (in %)	MT, Empl rep. (in %)
Organisational aspects	41	20	10
Technical aspects	56	75	87
Administrative aspects	3	5	3

Source: Stakeholder survey

The question about the burden of the WPD on SMEs (*“Do you estimate a difference in costs per capita for SMEs and larger companies?”* - C17) has not brought on tangible responses. Many respondents do not have data to rely on and therefore do not want to express an answer that would be only an opinion. But some assumptions and remarks have been made by some of them. Three respondents estimate that the costs will be more important in SMEs but admit that there are no evidences to confirm this assertion.

The representative of the **Luxembourg** Craftsmen Federation estimated that it is not so much the level of cost that differs between small and large enterprises, but the structure of the costs. This means that for an SME the lack of internal knowledge to implement the legislation creates additional costs because they often make bad choices. A larger company usually has internal experts but this expertise also has a cost. This necessity to rely on

<sup>65</sup> “Analysis of the cost of occupational health and safety regulation in Estonia” Ernst & Young 2009 (in Estonian).

external knowledge was also expressed by the chairman of the working conditions committee of the German insurance organisation of the trade and distribution of goods sector.

The relevance of the size of an enterprise is also pointed out by the director of the Hungarian OSH Education Institute, who estimates that the size is not as relevant as the attitude of the company management.

Asked for the reasons for non-compliance and infringements the stakeholders blame lack of knowledge, capacities of the enterprises and cost factors.

**Table 87 In cases of infringement, what is the reason why companies do not comply with the national law/transposition of the WPD?**

C 05 (in %)	Yes	No	Don't Know / NA
C05a = Companies / responsible persons do not know the provisions	62,8	29,5	7,7
C05b = Companies / responsible persons do know, but do not understand the provisions	17,9	74,4	7,7
C05c = Companies / responsible persons do not know how to implement the provisions	30,8	61,5	7,7
C05d = Companies / responsible persons do not have the necessary means to comply with the provisions	44,9	47,4	7,7
C05e = Companies / responsible persons do not find the provisions useful	25,6	66,7	7,7
C05f = The infringement is not regularly controlled	35,9	56,4	7,7
C05g = The infringement is not sanctioned	19,2	73,1	7,7
C05h = It is too cost intensive to comply with the provision	39,7	52,6	7,7
C05i = Other	16,7	75,6	7,7

Source: Stakeholder survey

It has to be noted that most of the Stakeholders foresee no problems to fulfil the obligations of the national legislation.

**Table 88 Which aspects cause most problems when trying to comply with the national law/transposition of the WPD?**

Three highest ranking results	Yes	No	Don't know / NA
The costs	18,0	61,0	20,5
Ventilation of enclosed workplaces	14,1	65,4	20,5
Emergency routes and exits	11,5	67,9	20,5

Source: Stakeholder survey

Cost, ventilation and emergency routes rank highest.

To the question: *Which provisions of the transposition of the WPD do impose administrative costs on companies?*, 3 out of 78 respondents answered that all requirements may impose administrative costs on companies. Two respondents pointed out especially the costs related to risk assessment. 27% respondents think that the WPD does not bring on any administrative costs but it is impossible to say, as there are no data. The majority of the respondents (68%) however did not comment on this question. This shows clearly a lack of awareness on those issues.

**Table 89 Which provisions of the transposition of the WPD do impose administrative costs on companies?**

Provisions imposing costs	%
All	4
None / no administrative costs	27
Don't know / impossible to say / no data	17
Costs due to risk assessment	3
Other comments	32
No answer	17
<b>Total</b>	<b>100</b>

Source: Stakeholder survey

**Table 90 Were administrative costs increased by the transposition of the WPD in comparison to the pre-existing legislation?**

Increase of costs	%
Yes	18
No	39
Don't know	8
Other, see comment	5
No data	9
No answer	21

Source: Stakeholder survey

A little more than half of the respondents answered with "Yes" or "No", the other half obviously felt that necessary data are missing or not available. More than one third denies the administrative costs increased after the transposition of the WPD.

Among those answering that additional costs increased, some estimate that it is marginally (UK Exp) since one other declared it is to a great extent (CY Empl).

When asking which requirements brought with them additional administrative costs, very few provisions were mentioned with precision. However, “information and consultation of workers” was evoked by a **Portuguese** trade union representative.

The representative of the **Luxembourg** Federation of Craftsmen pointed out that it is now necessary for companies to have documents for all OSH provisions but that this formalization also provides legal security to the companies. Among those arguing the administrative costs did not increase, some pointed out that even if there were costs, they would not have been higher than before, because the transposition did not change the existing regulation to a great extent (Representative of the **Austrian** Chamber of Labour). The representative of the **Dutch** Confederation of Trade Unions even estimates that the administrative costs have decreased in the Netherlands, since the transposition of the Directive has brought with it an administrative simplification. The **Estonian** governmental representative estimates it is not possible to answer the question as there was nothing similar in terms of legal requirements in Estonia before. The comparison is then not possible.

Many respondents insist on the fact that reliable data would be necessary to properly answer the question and that those data are missing.

## 6. CONCLUSIONS

The WPD is a very comprehensive Directive covering many different issues, from the safety of buildings, doors, emergency exits and loading bays, over traffic routes and restrooms to the space of workplaces, air quality and room temperature. Our conclusions refer to the overall findings and survey results; they are not only limited to the few controversial areas that have been mentioned and addressed.

### Initial relevance

It is clear that the WPD, at the time of its publication, responded to basic **OSH needs**. The WPD has addressed - and still addresses - the minimum requirements, which are crucial for safety and health at every workplace in the EU. Initial relevance can thus be considered **high**.

The **policy need**, i.e. the need to have the OSH aspects regulated by a legislative act, however, appeared to be less high, since most of the countries seem to have had, at the time of the transposition of the **WPD, already similar OSH requirements** in place. Thus, when assessing the implementation of the Directive and its impact, we have to take this initial level of implementation as a starting point. However, this was not the case for all countries; obviously the WPD was also a response to the political need to create a level playing field in the Member States of 1989, and also for all future Member States.



The desk research showed – and stakeholders from some Member States also stated – that in many Member States **most of the provisions of the WPD had already existed beforehand** in national regulations in one way or another. In cases of high coincidence between these national regulations and the WPD, only a few minor amendments to the national legislation were undertaken, and the WPD brought on no significant changes in legislative terms. Thus it is difficult to identify a particular impact of the WPD in these Member States. The level of compliance with the already existing regulations might have been high, and an effective implementation of the WPD easy to achieve.

### **Preparatory phase**

On a general level, the **quality of the preparation** of the WPD is widely accepted. With some small exceptions (mentioned by some respondents), there exist no irrelevant provisions in the WPD. The level of detail seems to be more of an issue. However, some countries compensate the lack of detail by completing the national regulation when transposing the Directive or providing support and guidance for the practical implementation.

### **Implementation**

The level of **implementation** of the Workplace Directive varies, depending on some factors:

- It differs between the different OSH issues set in the WPD;
- it differs among Member States;
- it differs also between sectors;
- and it differs between small, medium and large enterprises etc.

### ***Legal implementation***

As already mentioned, most of the provisions of the WPD had already existed beforehand in national regulations, and the WPD brought no significant changes in legislative terms where there was already a high congruence between the corresponding national regulations and the WPD. In these cases, only minor amendments to the national legislation were introduced.

The majority of legal amendments were induced by the rather low level of detail of the EU Directive. Policymakers at the national level decided to introduce more detailed regulations, or issue guidance documents and technical rules, so as to support companies in the operational implementation of the legal provisions.

A large majority of stakeholders stated in addition that the WPD positively influenced their national legislation, by updating, restructuring and providing clearer terminology for the existing legislation.

### ***Operational implementation***

Concerning the **Member State implementation**, in most cases, the quantitative data is missing from enforcement authorities to estimate with precision and in detail the **level of compliance**. The monitoring of compliance is also complicated by the large range of requirements covered by this Directive, and the fact that some requirements are formulated as general objectives, which can be subject of different interpretations by the various stakeholders.

According to the results of the employer and worker survey carried out in the context of this evaluation, the **level of practical implementation of the WPD-related OSH obligations can be considered as good**. The satisfaction of a large proportion of workers with most of the WPD requirements and the low discrepancy between the answers of employers and workers seems to confirm this conclusion. The assessment of the level of implementation is very consistent between employers and workers, particularly for the technical issues of the WPD; the reported compliance varies, in almost all cases, between 80% and 90%.

This is in line with the statement of a majority of employers in the employers' survey that they would apply the same OSH measures anyway, and without any kind of regulation (like e.g. rearrangement of workplaces, installation of effective ventilation, instruction, regular checks and control, etc.). Most employers also state that they would pay the same attention to OSH issues (those which are mainly regulated by the WPD), also without any regulation. A similar attitude can be seen on the workers' side. Only 20% of the workers refer to the regulation when asking for improvements. Findings from desk research show a low level of knowledge concerning the national legislation transposing the WPD: this again indicates that the Directive seems to be functioning like a background legislation, which mainly deals with matters of course.

This assumption also means that both the employers and the workers have a common sense and understanding of how a workplace should look like nowadays, and that this common sense is very much in line with the WPD. This would also explain why some specific aspects (room temperature, ventilation) are subject to more conflicts and discussions, because here the opinions can easily differ, even different representatives of employers and also workers might have diverging opinions about what is right and what is not.

Another positive factor that contributes a lot to compliance, might be that specialists (from architects to OSH professionals) during the design, building or renovation phase are trained to ensure that most workplaces are in line with the WPD. The fact that more than 40% of the employers use the legal regulation for the occasion of workplace rearrangements – in average twice as much as for other occasions, like e.g. complaints of workers – is also a proof that many requirements of the WPD are covered in the phase of construction and establishment of workplaces. Concerning buildings erected before 1992, these specialist professions made sure to be compliant with the already existing national regulation on workplace requirements. However, during a rearrangement process, many construction and design related OSH issues re-emerge, as the survey showed.

As literature research showed, reports from enforcement authorities and surveys from public sources revealed serious deficiencies in some cases, and led to fines and infringements for a significant percentage of the visited enterprises.

The assessments of employers and workers deviate much more where the **general OSH obligations** from Directive 89/391/EEC are concerned, i.e. with the conduction of risk assessment and participation and information of workers. 90% of the employers state that they conduct risk assessments, 52% of the workers have noticed that a risk assessment took place at their workplaces. A reason for this discrepancy might be that risk assessments are not conducted at every workplace when the workplaces have similar characteristics. Concerning the information of workers, 68% of the employers state that they raise OSH issues in staff meetings, while only 47% of the workers confirm this. A little more than half of

workers confirm that the enterprises comply with the general obligation of risk assessment or information and participation.

With regard to the less good compliance with the general OSH obligations in comparison to the WPD-related issues, the **level of practical implementation of the general legal OSH obligations can, in a global appraisal, be considered as medium.**

It is obvious that the level of implementation may vary among some categories of companies. Particularly, the results show that **SMEs may encounter difficulties in complying with all requirements**, mostly because of a lack of knowledge, and technical and financial means. Also, **companies (whatever their size) using old buildings** may not comply with all requirements because of technical difficulties in adapting the existing structures and the costs it would imply. The latter issue indicates that the situation should improve with the renewal of business infrastructures, e.g. more than 70% of the enterprises in France declare that they take into account the WPD precept when they conceive new buildings.

An essential political question related to the role of **EU OSH Directives**, in general, is **how detailed they should be** and how much space should be left for national regulation. The legislative alternative to a directive is the EU-wide regulation, which leaves very little room for any specific national deviations.

In nearly all countries, a particular regulatory problem of effective application of the WPD – respective to the national corresponding legislation – seems to be **the low level of detail** (or concreteness). Many **governments or governmental institutions, as well as professional organisations**, issued detailed regulatory or supportive documents; they issued ordinances, technical rules and standards, or at least they published guidance documents. The majority of the stakeholders advocated for a higher degree of detail. Noticeably, many comments were made on this aspect, irrespective of the specific question taken into consideration. This missing level of clarity and detail seems to be the reason for numerous detailed regulations, ordinances and guidance documents.

In the survey, the **majority of employers** expressed the opinion that **the level of detail of the national WPD legislation is adequate, and that it regulates** the basic and relevant OSH questions. A significant minority states that the regulations are sometimes exaggerated. Yet, more than every second employer has **used the legal safety and health regulations as guidance** on one or more of the issues regulated by the WPD (such as escape routes, room climate etc.) in the last 3 years. The legal precepts thus served as a point of orientation and hereby contributed to the current state of OSH standards. In all countries, the broad majority of employers, who used the regulations for this purpose, considered them as rather or very useful (with the usefulness being viewed somewhat more critically in Finland than in the other countries).

**Enforcement was also identified as one of the major reasons for changes** at workplaces aiming to achieve compliance. In Bulgaria and Portugal, more than one third of the employers mentioned labour inspection visits as a crucial starting point for measures.

### **Variations between different OSH issues set in the WPD**

As expected, and due to the involvement of specialist professions in the construction and workplace installation phase, we found that the fewest problems concern those paragraphs which deal with WPD issues related to the building and equipment, i.e. issues like safety of electrical installation, safety of lifts, floors, roofs and windows, loading bays and ramps, room size, traffic routes, fire installation, and similar.

In **some areas** covered by the WPD, the **daily workplace practice can cause OSH problems**, like blocked emergency exits, a too high or too low room temperature, insufficient lighting or lack of ventilation. These are areas where a good design functions as an important supporting factor for a high OSH level, but this is still not sufficient if the workplace practices in place fail in this regard.

Under these circumstances, the most relevant instruments for keeping or achieving a high prevention level seem to be a **regular risk assessment**, supported by a **permanent – even daily – check-up** of critical issues (as blocking of exits, room temperature and ventilation), by the employer and the effective instruction of the workers. Both issues are not covered in the WPD, but in other pieces of the OSH legislation, mainly the Framework Directive 89/391.

### **Variations between countries**

In many areas of the representative employers' and workers' survey we found a **large coherence** among the five countries, although these countries differ considerably concerning OSH infrastructure, the former legislation, the tradition of partnership between employers and workers and the time of implementation – depending on the accession to the EU.

One typical **example of high coherence** is the question asked to workers about risk assessments. When asking the workers, the highest share of workers whose workstations have ever been assessed with regard to safety and health is found in Germany (58%), followed by Bulgaria (55%), Poland and Portugal (both 50%), and Finland (47%). Differences across countries are negligible in this perspective. From the employers' view, differences are somewhat larger (between 64% for Finland and 88% for Bulgaria and Portugal), but still not huge. For the implementation of general WPD requirements (such as fire alarm systems, escape routes, lighting or ventilation), differences are even considerably smaller.

**Significant differences** exist, however, with regard to the usage of the legal regulations in practice, as regards both the occasions for which the regulations are used, and the assessment of the usefulness of the rules: While for Bulgarian and Portuguese employers, disputes with the Labour Inspectorate are among the most important occasions for their usage, they are hardly needed at all for this purpose in Finland or Poland. And while Bulgarian employers find the regulations particularly often as useful, and their level of detail as adequate, their usefulness is viewed much more sceptically in Finland, and the level of detail is often criticised as inadequate in Poland.

### **Variations between sizes**

It is a well-known fact that the level of implementation may vary between size-categories of companies. Interestingly, the **differences** between establishments of different sizes are, however, largely limited to the **implementation of OSH measures** like risk assessment or the **provision of information**. With one notable exception (the regular checks of fire alarm

systems and fire fighting installations), the WPD requirements on physical workplace aspects are, in turn, fulfilled to a very similar degree in small, medium-sized and large workplaces. Even some advantages for SMEs can be noticed, e.g. that there are less complaints from workers about the room temperature in smaller enterprises. If SMEs may encounter difficulties in complying with all of the requirements, it is mostly because of a lack of knowledge and of technical and financial means.

### **Variations among sectors**

Differences between sector groups (production, market-oriented services and public and social services) are generally very small. The production sector performs slightly better than the services' sectors in terms of consultation and participation of workers, as well as regards the responsiveness to workers' requests for OSH improvements at the workplace.

Within the services, the public and social services rate, on many aspects, somewhat better than establishments in the market-oriented services. Companies in market-oriented services, in particular, more often seem not to see the necessity to inform their workers about all of the given topics. And generally, it could be observed that state run companies tend to be more dedicated to the OSH legislation than privately owned companies.

### **Impact of the WPD**

The **impact** of the WPD, mainly on the working conditions and the well-being of workers, is considered as **slightly positive**, according to the findings of the evaluation.

The findings from all three sources - desk research, stakeholder opinions and the survey - corroborate the assumption that the WPD is contributing to a **level playing field**. All Member States more or less adapted their national legislation to comply with the regulation. It seems that all have approached this with different changes, depending on their pre-existing legal framework, to achieve a similar level. However, in many cases, the changes in national regulation were limited. Therefore, the impact on OSH results cannot be of a high level.

But the findings also show that, during the last three years, about every second establishment has made changes related to issues regulated in the WPD (such as escape routes, room climate etc.). About half of these changes (47%) were done in order to adjust the situation at the establishment to the legal minimum safety and health requirements. This suggests that this finding may have positively influenced the OSH results at the company level.

### **Effectiveness**

The WPD has been effective to a degree that is hardly measurable in all aspects in a quantitative way. If the effectiveness is globally low-questionable, it is mainly because many regulatory frameworks already covered most of the issues regulated by the WPD. But the objective of ensuring that the national regulations cover all of the WPD requirements has been encountered and the perceived impact of this objective on the improvement of working conditions at the workplace has been perceived as being positive.

## **Relevance**

On a general level, the **relevance** of the WPD is widely accepted by stakeholders, employers and workers. The majority of stakeholders agree that the WPD is relevant for general targets and basic OSH aspects at the workplaces, and that these aspects are important for efficiently reducing accidents and improving health and well-being at work in the EU. The majority of stakeholders expressed their high consent with the regulations of the WPD; and according to their responses, the vast majority of basic OSH requirements at workplaces seem to be covered by the WPD. They also agree that the aspects covered by the WPD are important for efficiently reducing accidents and improving health and well-being at work in the EU.

Furthermore, the majority of stakeholders in the surveys agreed that the WPD is still the best possible option to reach the objectives.

## **Future relevance and recommendations for changes and adaptations**

Concerning the **regulatory content** of the WPD, we found some developments which might support an update of certain WPD articles or paragraphs.

First of all, there have also been some developments in technology and construction, which might require changes.

The technological development since 1989, particularly the communication technology and the use of mobile communication equipment, lead to a significant increase of 'mobile workplaces' (perhaps better termed 'working situations'). **Mobile and temporary workplaces** are currently excluded from the WPD coverage. It remains an open question as to how to ensure the minimum standards for these workplaces too.

During the preparation phase of the WPD's inception, it could hardly be foreseen as to how much the **energy saving standards** would be tightened. Stricter standards have led to strongly enforced insulation of buildings, less ventilation at workplaces and the installation of air recovery systems. More indoor pollution is one of the possible consequences, but it is not tackled by the current WPD. Finnish enterprises and workers seem most confronted with this issue, probably due to their climate conditions and the early introduction of strong insulation for buildings.

The separation of **smokers and non-smokers** is a similar issue. Currently, it has been mostly regulated by other pieces of national legislation, but in principal, this would have been an issue for the WPD.

Also the option of **resting or seating facilities** for jobs which involve a high proportion of standing time is not regulated in the WPD.

**Many stakeholders participating** in the survey made **additional proposals and recommended** to incorporate important OSH issues, e.g. **long-term health aspects, ergonomics or noise in offices**.

**Psychosocial** issues were often mentioned by a number of stakeholders. Others argued in favour of a **separation of the legislation** into one for safety aspects and one for well-being and health.

Some of the respondents also took the opportunity to submit **particular and specific suggestions** and recommendations on different aspects for the enhancement and expansion of the WPD, e.g. provisions on wholesome drinking water, inclusion of electromagnetic fields, a better definition of climate or provisions for indoor pollution. Others advocate for user-friendly design and eco design.



## 7.METHODOLOGICAL EXPERIENCE AND RECOMMENDATIONS

One of the major tasks of the tender was to develop a generic evaluation methodology and to prove its suitability in a pilot study, in this case about the WPD. The experience should function as feedback to improve the generic methodology.

The generic evaluation methodology model is based on the chronology and dynamics of the process from the qualitative development of legislation and policy to the tangible OSH results in the field. The evaluation covers all consecutive steps of the process in a number of steps. In order to evaluate each of the consecutive steps, a set of corresponding questions and subquestions have been proposed. The replies to the questions and subquestions should provide for evaluating each of the process steps, to define the successes and shortcomings of each process step and to be able to formulate overall conclusions on effectiveness and relevance of a EU OSH Directive.

### ***Evaluation Design***

The design of the WPD analysis followed the consecutive steps of the generic evaluation methodology model:

- **initial relevance**
- **preparation,**
- **implementation, and**
- **impact (results and side effects)** have been a suitable structural principle.

Also, the substructures under each of these four headings (see figure 1) were useful to develop questions and to structure the evaluation.

Regarding the questions on the cost-benefit of the WPD, few references were found, and many stakeholders remarked that such a calculation is practically not feasible. Based on this finding, a cost-benefit model was developed in the generic methodology.

For future evaluations of OSH Directives, one can imagine an even more differentiated substructuring. These should partially be adapted to the specifics of the Directives to be analysed.

### ***Control groups***

The EU Directives are meant to cover all enterprises and all workers exposed to certain risks. Therefore, in general, it is not possible to introduce a control group from a Member State that was excluded from implementation. Such a control group, which can only be found outside of the EU, makes no sense because the overall OSH infrastructure is different.

In spite of the general difficulties that impede the creation of real control groups, there have been efforts in the WPD evaluation to establish some kind of control group by way of a retrospective question: Employers in Bulgaria were asked about the development of their

rate of work accidents in the last year, as compared to the situation before they joined the European Union in 2007. This question, however, could not be used as expected because of a very high rate of no response for the item.

**Data sources**

The four sources, ‘Desk research (literature), stakeholders (including government, employers’ association representatives, union representatives and some specialists), employers and workers’, facilitate a comprehensive assessment. This can be improved by a systematic involvement of relevant specialists from outside of these four categories. Although many stakeholders are also specialists, there are members of professional associations, architects, building technicians, academics and prevention specialists in and outside of the enterprises considered, which can provide important information.

**Table 91 Data sources in the WPD evaluation and in future evaluations**

<b>Design WPD – Data sources</b>	<b>Design Future Evaluations – Data sources</b>
Desk research	Desk research
Stakeholders	Stakeholders (Empl. Assoc., Unions, Gov.)
Employers	Employers
Workers	Workers
Some specialists in the stakeholders’ group	Specialists from related (non-OSH) areas (construction, design), internal and external prevention specialists, academics
	Internal and external prevention specialists
	Academics

**Data collection methods**

The evaluator needs several very different data collection methods; as every group requires a different type of questioning.

For a comprehensive evaluation taking into account all relevant actors, several different data collection methods are necessary. Basically, each group of actors – employers, workers, OSH specialists, specialists from related areas, academics, etc. – requires a different type of questioning, because each of these groups has experience with the Directive from a different angle and is familiar with different aspects.

Another important decision concerns the extent of the evaluation. Typical questions in such decision processes relate to the number of countries to be covered. Are some selected countries sufficient, or is it necessary to involve all Member States? Which contextual factors should be studied, and to what level of detail? One main criterion in such a decision process is the available budget (resources).

To get the best possible picture of all aspects related to a directive, for future evaluations we recommend to additionally carry out some case studies in selected countries (preferably the countries the researchers are familiar with). These case studies should take place before the development of the instruments for the respective employer and worker surveys, since this could help to focus the surveys towards the most relevant aspects. Preceding case studies would also provide a clearer idea about what can be asked from employers and workers, and what not, e.g. in terms of questions about costs and benefits of a directive.

**Table 92 Data collection in the WPD evaluation and in future evaluations**

<b>Design WPD</b>	<b>Design Future Evaluations</b>
Desk research	<b>Desk research</b>
Questionnaires to stakeholders, mostly in English (1h, large proportion of open questions), including government, employers' association representatives, union rep. and some specialists	<b>Questionnaires</b> (in national languages); including government, employers' association representatives, union representatives and some specialists
Employers' survey (Phone interviews, 15 to 20 min.)	<b>Employers</b> (Phone interviews or face-to-face interviews, for directives applicable only to sectors with a high degree of computer usage, possibly also online interviews)
Workers' survey (Phone interviews, 10 to 15 min.)	<b>Workers</b> (Phone interviews or face-to-face interviews, for directives applicable only to sectors with a high degree of computer usage, possibly also online interviews)
Questionnaires / Guided interviews (mainly open questions)	<b>Specialists</b> from related (non-OSH) areas (construction, design), internal and external prevention specialists, academics
	<b>Fieldwork</b> Case studies by national experts, visits of enterprises, participation in seminars and workshops

The participation of stakeholders, employers and workers in the respective surveys was not compulsory, but voluntary. Since the methodology foresees questionnaire surveys, the level of participation can be weak. It can lead to an imbalance in the representativeness, the EU countries or type of stakeholders. Moreover, the search for balance in answers among countries and type of respondents can lead to address the research questions to less relevant respondents, or respondents that do not possess adequate information.

### ***Design of the research tools***

With regard to budgetary constraints, it was decided to **use mainly English in the research tools**. This clearly limited the possibility of qualitative interviews. It surely led to misunderstandings of written questions in surveys and limited the possibilities of non-English

native speakers to express complex ideas. Concerning the desk research, useful information was not lost, as most data and information on national regulation was provided by national co-operators. In exceptional cases, translations of the questionnaire were made for specific types of stakeholders.

Irrespective of the mastering of the language, respondents to questionnaires may interpret the same notions differently. An example is the difference between a well-«detailed» regulation and a well-«defined» regulation. In written questionnaires, the used notions can lead to biased replies.

### ***Restrictions of the data interpretation***

Information about the situation in a Member State is basically provided by stakeholders that do not necessarily have a precise overview of the situation at company level. The knowledge may express mainly the «values» and «beliefs» of the respondents or those of the organisation he/she represents. The information provided by stakeholders is generally a combination of facts and opinions. It was sometimes not possible to clearly discern between the two and interpret the answer.

It was decided to address stakeholders, employers and workers; the stakeholders were partly also specialists. The reason for this multiple approach was that some of the articles of the WPD can be easily assessed by employers and workers without any OSH knowledge, while other aspects can only be assessed by specialists and OSH practitioners. A clear distinction between stakeholders and specialists was not made. The respondents were free to only answer the parts that best fit their knowledge and expertise. The quality of the responses would profit from a systematic involvement of additional specialists (from other fields).

### ***Data evaluation***

Data evaluation of the literature review follows the three elements: structural relevance, implementation and impact. The set of information collected is generally a combination of facts and opinions. It is sometimes not possible to take a clear position in the answer (yes or no, good or bad). It is not always possible to establish a scale of values that is able to summarize the situation across all of the countries, for example.

The evaluation of the WPD was made as follows:

#### Literature review / desk research data

- 1) Description of the outcome of related national studies and surveys
- 2) The interpretation of this data requires a certain knowledge about the basics of the Member States' OSH infrastructure
- 3) Comparison of already existing regulation and the newly introduced EU Directive

#### Stakeholders' and specialists' responses

- Application of basic statistics (percentages of stakeholders answering; differences between types of stakeholders, nationalities, etc.). The low number of total answers per stakeholder type did not permit cross analysis.
- Qualitative content analysis of the answers to open questions (content of the majority of answers, strong minorities, exceptional answers, trends)

### Workers' and employers' survey

- Application of basic descriptive statistics (percentages, differences between types of employers (size, sector, nationality etc.))
- Application of advanced statistics, building of composite indicators, aggregated from answers to more than one question, correlations between different answers.

### Special features for both employers' and workers' survey

- 1) Comparison of workers' and employers' opinions to the same or similar questions
- 2) Comparison of size-related responses
- 3) Comparison of sector-related responses, these can be more differentiated than in our analysis, e.g. more sectors
- 4) Comparison of Member States

Fieldwork was not performed, i.e. description of the observations made on enterprise visits or qualitative content analysis of the statements and opinions at meetings of groups of stakeholders, workers and employers.

### **Main challenges**

The evaluation of any EU OSH Directive has to cope with three major challenges:

- The often weak relations and connections between a certain EU OSH Directive and the situation at workplaces, or the overall OSH situation in a Member State,
- The identification of valuable indicators, the value and adequateness of these indicators, as well as insufficient monitoring systems,
- The consideration of all important, contextual factors.

We encountered all of these difficulties in the WPD evaluation. Due to the broad range of topics and the long period since its entry into force, the WPD might have been an extreme case, but it clearly demonstrated the challenges and the possible approaches to cope with them.

## 8. BIBLIOGRAPHY

- Andersson, P. (2008): *Survey on work environment of white-collar workers*, Oxford Research, article published on Eurofound website, on 22-05-2008, available at: <http://www.eurofound.europa.eu/ewco/2008/04/SE0804019I.htm>, accessed on 24.11.2011.
- Balogh, K. (2006): *Hazardous workplaces*, article published on Eurofound website, on 09.01.2006, available at: <http://www.eurofound.europa.eu/ewco/2006/01/HU0601NU03.htm>, accessed on 24.11.2011.
- Chamber of Commerce and Chamber of Crafts Luxemburg (1994): Dossier parlementaire N°3606, avis conjoint de la chambre de commerce et de la chambre des métiers concernant le projet de loi ainsi que ses huit règlements d'exécution, 5 avril 1994.
- Christiansen, R. H. and Nielsen, H. O. (2010): *EWCO comparative analytical report on Information, consultation and participation of workers concerning health and safety*, Oxford Research, available at <http://www.eurofound.europa.eu/ewco/studies/tn0911028s/dk0911029q.htm>, accessed on 24.11.2011.
- Communication from the commission COM (2004) 62 Final.
- Council of State (Luxembourg, 1994): Dossier parlementaire N°3950, Avis du conseil d'Etat, 22 février 1994.
- De Broeck, V. (2008): *Small less likely to offer continuing vocational training*, Prevent, article published on the Eurofound website on 15.05.2008, available at: [http://www.eurofound.europa.eu/ewco/surveyreports/LU0803019D/LU0803019D\\_3.htm](http://www.eurofound.europa.eu/ewco/surveyreports/LU0803019D/LU0803019D_3.htm), accessed on 24.11.2011.
- Dunn, C. & Ludbrook, R. (2003): *2<sup>nd</sup> 5 year review to the EU on the implementation on the Workplace Directive and the Personal Equipment at the workplace Directive, and an update on the Workplace (Health, Safety and Welfare) Regulations 1992 Review*, Health and Safety Commission, 2003C.
- EU Commission (2004): *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of Regions on the practical implementation of the provisions of the Health and Safety at Work Directives [89/391](#) (Framework), [89/654](#) (Workplaces), [89/655](#) (Work Equipment), [89/656](#) (Personal Protective Equipment), [90/269](#) (Manual Handling of Loads) and [90/270](#) (Display Screen Equipment)*, COM(2004)62, available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52004DC0062:EN:HTML>, accessed on 24.11.2011.
- European Agency for Safety and Health at work (2010): European Survey of Enterprises on New and Emerging Risks (ESENER).
- Gladicheva, R. (2005): "Breaches of working conditions regulations", article published on *Eurofound website* on 27-06-2005, <http://www.eurofound.europa.eu/ewco/2005/06/BG0506NU01.htm>, accessed on 24.11.2011.

- HSA (2007): Guide to the Safety, Health and Welfare at Work, General Application Regulations 2007.
- Instituto Sindical de Trabajo, Ambiente y Salud (1998): "Dossier: A vueltas con la ley: Impacto de la Ley de Prevención de Riesgos Laborales". In *Por experiencia Boletín de Salud Laboral para Delegadas y Delegados de Prevención de CC.OO.*, ISTAS, <http://www.istas.net/pe/articulo.asp?num=01&pag=12&titulo=Impacto-de-la-Ley-de-Prevencion-de-Riesgos-Laborales>, accessed on 24.11.2011.
- Instituto Sindical de Trabajo, Ambiente y Salud (2000): "Tablón", in *Por experiencia Boletín de Salud Laboral para Delegadas y Delegados de Prevención de CC.OO.*, ISTAS, N°10, Octubre 2000, Available at <http://www.istas.net/pe/articulo.asp?num=10&pag=02&titulo=Tablon>, accessed on 24.11.2011.
- Kraemer, B. (2010), *Impact of new management practices on working conditions*, Institute of Economic and Social Research (WSI), article published on *Eurofound website* on 08.03.2010, available at: <http://www.eurofound.europa.eu/ewco/2009/12/DE0912019I.htm>, accessed on 24.11.2011.
- Kretsos, L. (2007), *Health and safety at work in Greece*, INE/GSEE, article published on Eurofound website on 23.10.2007, available at: <http://www.eurofound.europa.eu/ewco/surveyreports/GR0611019D/GR0611019D.htm>, accessed on 24.11.2011.
- Kwantes, J. H.; Houtman I. & Hesselink, J. K. (2010): *The Netherlands: EWCO comparative analytical report on Information, consultation and participation of workers concerning health and safety in SMEs*, TNO Work & Employment, article published on Eurofound website, on 22.10.2010, <http://www.eurofound.europa.eu/ewco/studies/tn0911028s/nl0911029q.htm>, accessed on 24.11.2011.
- Matulová, S. (2007): *Inadequate protection against noise*, Institute for Labour and Family Research, Bratislava, article published on Eurofound website on 05.02.2007, available at: <http://www.eurofound.europa.eu/ewco/2007/02/SK0702029I.htm>, accessed on 24.11.2011.
- MFA (2000): Ministry of Foreign Affairs of the Republic of Latvia: POSITION PAPER OF THE REPUBLIC OF LATVIA, Chapter 13: "Social Policy and Employment"
- Ministerul Muncii, Familiei și Egalității de Șanse: *Raport de activitate a Inspecției Muncii 2007*. Conform convențiilor nr. 81 și 129 ale Organizației Internaționale a Muncii. (Romanian Ministry for Labour, Family and Social Protection: Activity report of the Labour Inspection 2007, conform with the ILO conventions no. 81. and 129), available at: <http://www.inspectmun.ro/RAPORT%20ANUAL/RAPORT%20IM%202007web.pdf>, accessed on 24.11.2011.
- Mulligan, H. (2006): *IRN Publishing*, article published on Eurofound website, on 20.11.2006, available at: <http://www.eurofound.europa.eu/ewco/2006/09/IE0609019I.htm>, accessed on 24.11.2011.
- Official Journal of the European Union (2008), "Consolidated Version of the Treaty on the Functioning of the European Union", C 11 5/47, 2008, available at: <http://eur->



- lex.europa.eu/LexUri Serv/LexUriServ.do?uri=OJ:C:2008:115:0047:0199:en:PDF, accessed on 24.11.2011.
- Perista, H. and Cabrita, J. (2005): *Weaknesses in safety, hygiene and health at work*, article published on Eurofound website, on 23.02.2005, available at: <http://www.eurofound.europa.eu/ewco/2005/02/PT0502NU03.htm>, accessed on 24.11.2011.
- Prosser, T. (2010): *EWCO comparative analytical report on Information, consultation and participation of workers concerning health and safety*, University of Warwick, UK, published on Eurofound website, on 22-10-2010, available at: <http://www.eurofound.europa.eu/ewco/studies/tn0911028s/uk0911029q.htm>, accessed on 24.11.2011.
- Rakennusten sisäilmasto ja ilmanvaihto, Määräykset ja ohjeet 2010*, D 2 Suomen rakentamismääräyskokoelma, Ympäristöministeriö, Helsinki, 2010, available at: [http://www.finlex.fi/data/normit/34164-D2-2010\\_suomi\\_22-12-2008.pdf](http://www.finlex.fi/data/normit/34164-D2-2010_suomi_22-12-2008.pdf), accessed on 24.11.2011.
- Real Decreto 486/1997, de 14 de abril, por el que se establecen las disposiciones mínimas de seguridad y salud en los lugares de trabajo. ANEXO III, Condiciones ambientales de los lugares de trabajo, available at: [http://noticias.juridicas.com/base\\_datos/Laboral/rd486-1997.html#anexo3](http://noticias.juridicas.com/base_datos/Laboral/rd486-1997.html#anexo3), accessed on 24.11.2011.
- Rune Holm Christiansen and Helle Ourø Nielsen (2010), *EWCO comparative analytical report on Information, consultation and participation of workers concerning health and safety*, Oxford Research, available at <http://www.eurofound.europa.eu/ewco/studies/tn0911028s/dk0911029q.htm>, accessed on 30.01.2012.
- Sczesny, C., Keindorf, S., Droß, P (2011): *Kenntnisstand von Unternehmen auf dem Gebiet des Arbeits- und Gesundheitsschutzes in KMU. Ergebnisse einer repräsentativen Befragung von Inhaber/innen / Geschäftsführer/innen in Klein- und Kleinstunternehmen* (English title), Bundesanstalt für Arbeitsschutz und Arbeitsmedizin, available at: [http://www.baua.de/de/Publikationen/Fachbeitraege/F1913.pdf;jsessionid=52532B205EB69D7C7AE4BCE909F488B3.1\\_cid253?\\_\\_blob=publicationFile&v=2](http://www.baua.de/de/Publikationen/Fachbeitraege/F1913.pdf;jsessionid=52532B205EB69D7C7AE4BCE909F488B3.1_cid253?__blob=publicationFile&v=2), accessed on 24.11.2011.
- Statistisches Bundesamt (2011): Informationspflichten (Wirtschaft): 901 bis 920 von 13402, available at [https://www-skm.destatis.de/webskm/online/online;jsessionid=803F2346A60FFD13BAD0F8D0545AC176.tomcat\\_SKM\\_1\\_2?operation=informationspflichten&verknuepfung=ArbSchG&sel\\_rs=&sel\\_rg=153&sel\\_pb=7&x=8&y=9](https://www-skm.destatis.de/webskm/online/online;jsessionid=803F2346A60FFD13BAD0F8D0545AC176.tomcat_SKM_1_2?operation=informationspflichten&verknuepfung=ArbSchG&sel_rs=&sel_rg=153&sel_pb=7&x=8&y=9) accessed on .02.04.2012.
- Teodor, H. (2008): *Health and safety inspections find lack of worker participation*, Institute for Labour and Family Research, article published on Eurofound website on 17.07.2008, available at: <http://www.eurofound.europa.eu/ewco/2008/07/SK0807019I.htm>, accessed on 24.11.2011.
- Työsuojeluhallinto: *Ilmanvaihto*, available at: <http://www.tyosuojelu.fi/fi/ilmanvaihto>, accessed on 24.11.2011.

Työsuojeluhallinto: *Lämpöolot*, Available at: <http://www.tyosuojelu.fi/fi/lampoolot>, accessed on 24.11.2011.

Työsuojeluhallinto: *Työ- ja henkilöstötilavaatimukset*, Available at: <http://www.tyosuojelu.fi/fi/tilavaatimukset>, accessed on 24.11.2011.

Voinea, L. (2011): *Working conditions, satisfaction and performance at work*, article published on Eurofound website by Constantin Ciutacu, Institute of National Economy, Romanian Academy, on 02.03.2011, available at: <http://www.eurofound.europa.eu/ewco/2010/12/RO1012029I.htm>, accessed on 24.11.2011.

### *Weblinks*

[http://www.arbejdsmiljoforskning.dk/da/arbejdsmiljoedata/~/\\_media/Ubekendte/vov.pdf#](http://www.arbejdsmiljoforskning.dk/da/arbejdsmiljoedata/~/_media/Ubekendte/vov.pdf#), accessed on 24.11.2011.

<http://arbejdstilsynet.dk/da/arbejdspladsvurdering/apv-tjeklister/bar-tjeklister.aspx>, accessed on 24.11.2011.

<http://www.hse.gov.uk/temperature/faq.htm>, accessed on 24.11.2011.

<http://www.tyosuojelu.fi/se/temperatur>, accessed on 24.11.2011.

<http://www.tyosuojelu.fi/fi/workingfinland/>, accessed on 24.11.2011.

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# SUMMARY

## English

**Evaluation of the Council Directive 89/654/EEC of 30 November 1989 concerning the minimum safety and health requirements for the workplace.**

**A pilot study for the application of a newly developed generic methodology for the systematic evaluation of Health and Safety at Work Directives.**

This document presents an evaluation of the impact of the Workplace Directive (89/654/EEC) (WPD). The evaluation is part of a broader study commissioned by the Directorate General for Employment, Social Affairs and Inclusion of the European Commission, the “Contract to further develop a methodology for the systematic evaluation of Health and Safety at Work Directives and to test the methodology in a pilot evaluation of Directive 89/654/EEC concerning the minimum safety and health requirements for the workplace”. The aim of this project was twofold: firstly, to develop a generic standard methodology for the evaluation of the Occupational Safety and Health (OSH) Directives issued by the EU and, secondly, to test this methodology in a pilot evaluation of the WPD.

The evaluation follows the chronological steps developed in the generic methodology:

1. The analysis of the existing situation and the initial relevance;
2. The quality of the preparation;
3. The implementation (legal, operational, enforcement), and
4. The analysis of the impact (OSH results, side effects and cost-benefit),

in order to conclude on the effectiveness and the current and future relevance of the minimum provisions as defined in the WPD.

Four sources of information were used for this test evaluation: the literature, a survey among stakeholders in 31 countries (government representatives, OSH experts, representatives of employers’ organisations, representatives of workers’ organisations) and a survey among a representative sample of employers and workers at company level in 5 selected countries: Bulgaria, Finland, Germany, Poland and Portugal.

## Results

### *Initial relevance*

Very few information is available on the OSH and legislative needs before 1989, the year when the WPD came into force. However, the goal of the Directive was clearly to progressively improve the level of occupational safety and health through the harmonisation of already existing national regulations. In a broader sense, the respondents agreed on the high initial relevance with regard to the importance of the requirements of the WPD. Those requirements provide a fundamental basis for guaranteeing occupational safety and health at the workplace.

### *Quality of the preparation*

On a general level, the good quality of the preparation of the WPD is widely accepted by the stakeholders. The majority of stakeholders agree that the WPD, in general, targets relevant and basic OSH aspects and that the requirements are clearly formulated. The level of detail is sometimes considered as not sufficient but some countries already had details in their national regulation or added details when transposing the WPD, or published practical guides and recommendations for the implementation at company level.

### *Implementation*

In many countries, the *legal implementation* did not change the national regulations to a large extent. Many pre-existing legislative frameworks already covered the legislative scope of the WPD. In some cases, the transposition made it possible to modernise the existing legislation and add some missing provisions. Most of the stakeholders mentioned that the transposed requirements were relevant for their national regulation. Overall, the transposition was not the subject of a controversial national debate.

The *practical implementation* (compliance with) of WPD-related OSH obligations can be considered as 'good'. According to the analysis of the collected data, the level of implementation of the specific WPD-related requirements was better than the level of implementation of the general provisions (such as risk assessment, information, workers' consultation and training). The global compliance seems therefore to lead to lesser results.

### *Impact*

OSH results are very difficult to measure in a quantitative way, but the perception of the results among stakeholders tends to indicate a slightly positive result. A number of stakeholders were convinced that the WPD generally contributed to the improvement of the working conditions.

### *Effectiveness*

If we compare the initial relevance with the overall impact, we can conclude that the Directive has proven its effectiveness. However, it may vary from one country to another as this is related to the corresponding pre-existing legal framework.

### *Current and future relevance*

There were few suggestions for changes to the WPD in the future. An important part of the stakeholders, employers and workers argued that no changes were needed. The practical improvements on specific topics were linked to the level of detail and concreteness of the provisions. Suggestions to include additional provisions relate to psychosocial risks, ergonomic design, indoor air quality or specific types of mobile workplaces (referring to specific work situations such as telework, transportation,...).

## **Lessons from the test case and recommendations**

The four steps approach of the generic model has proven its interest for the evaluation process. Also the four data sources – desk research (literature), stakeholders, employers and workers – facilitate a comprehensive assessment. This can be improved by a systematic involvement of relevant specialists outside of these four categories.

The obstacles are related to the use of the English language (due to budgetary constraints) and the imbalance in the representativeness of stakeholders due to the principle of voluntary participation in the survey. Furthermore, the information on the situation in a certain Member State is basically provided by stakeholders, who do not necessarily have a precise view on

the situation at company level. The knowledge may also express the «values» of the respondents or of the organisation he/she represents.

To get the best possible picture of all aspects related to a directive, we recommend that for future evaluations additional case studies be carried out in the selected countries. These case studies should take place before the development of the instruments for the representative employer and worker surveys, since this will help to focus on the most relevant aspects.

In conclusion, the evaluation of any EU OSH Directive has to cope with four major challenges:

- The link between a specific EU OSH Directive and the situation at the workplace level in a Member State is mediated by the national legislation. Measuring the overall effectiveness of a EU Directive is challenging since this is mostly related to the quality of the regulations of that Member State. The impact on the workplace level is thus measured against the national regulation, and not the EU Directive;
- The development of valuable and measurable indicators, which is currently difficult due to the lack of monitoring systems;
- The need to take into account all important contextual factors at the country level;
- The scope of the regulations is very broad and the practical implementation can vary according to the type of provisions. This is especially the case for the multitude of provisions in the WPD.

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## French

### **Evaluation de la Directive 89/654/CEE du Conseil du 30 novembre 1989 concernant les prescriptions minimales de sécurité et de santé pour les lieux de travail.**

#### **Une étude pilote pour l'application d'une méthodologie d'évaluation systématique des directives européennes en matière de sécurité et de santé au travail.**

Ce document présente une évaluation de l'impact de la Directive Lieux de travail (89/654/CEE) (DLT). L'évaluation fait partie d'une vaste étude commandée par la direction générale de l'emploi, des affaires sociales et de l'inclusion de la Commission européenne intitulée «contrat pour le développement d'une méthodologie d'évaluation systématique des directives européennes en matière de sécurité et de santé au travail et pour le test de la méthodologie sur la directive 89/654/CEE concernant les prescriptions minimales de sécurité et de santé pour les lieux de travail». L'objectif de ce projet était double: premièrement, il s'agissait de mettre au point une méthodologie générique standard pour l'évaluation des directives européennes sur la sécurité et la santé au travail (SST) et, deuxièmement, de tester cette méthodologie dans un projet pilote d'évaluation de la DTL.

L'évaluation test suit les étapes chronologiques développées dans la méthodologie générique, à savoir :

- 1.L'analyse de la pertinence initiale;
- 2.La qualité de la préparation;
- 3.La mise en œuvre (juridique, opérationnelle, contrôle de l'application);
- 4.L'analyse de l'impact (résultats en matière de SST, effets connexes et coûts-bénéfices),

pour conclure sur l'effectivité et la pertinence actuelle et future de la DTL.

Quatre sources d'information ont été utilisées pour tester la méthodologie: la littérature, une enquête auprès des parties prenantes dans 31 pays (des représentants du gouvernement,



des experts en matière de SST, des représentants des organisations d'employeurs, des représentants des organisations de travailleurs), une enquête auprès d'un échantillon représentatif d'employeurs dans des entreprises de 5 pays: Bulgarie, Finlande, Allemagne, Pologne et Portugal. Enfin une enquête auprès d'un échantillon représentatif de travailleurs issus d'entreprises de ces mêmes pays.

## Résultats

### *La pertinence initiale*

Très peu d'informations sont disponibles sur les besoins en matière de SST et en matière législative avant l'entrée en vigueur de DTL en 1989. Cependant, l'objectif de la directive était clairement d'améliorer progressivement le niveau de sécurité et de santé grâce à l'harmonisation des réglementations nationales déjà existantes. De manière générale, les répondants se sont accordés sur l'idée d'une pertinence initiale élevée, principalement, en raison de l'importance des prescriptions de la DTL. Elles constituent une base fondamentale pour garantir la sécurité et la santé au travail.

### *La qualité de la préparation*

La bonne qualité de la préparation de la DTL est reconnue par une large majorité des parties prenantes. La majorité des répondants s'entendent pour reconnaître que la DTL, dans sa globalité, cible les aspects pertinents et essentiels de SST des lieux de travail. Ils estiment, par ailleurs, que les exigences sont clairement formulées. Le niveau de détail est parfois considéré comme insuffisant, mais certains pays appliquent déjà une réglementation nationale dont les dispositions sont plus détaillées ou davantage spécifiées lors de la transposition de la directive. D'autres pays ont publié des guides pratiques et des recommandations pour la mise en œuvre des prescriptions générales au niveau de l'entreprise.

### *Mise en œuvre*

Dans de nombreux pays, la transposition juridique n'a pas transformé les réglementations nationales en profondeur. Les dispositions de la DTL étaient, dans de nombreux cas, déjà considérées par la réglementation nationale en vigueur. Dans certains cas, la transposition a permis de moderniser le cadre législatif existant et a complété celui-ci par certaines dispositions manquantes. La plupart des répondants ont mentionné que les dispositions transposées étaient pertinentes pour leur réglementation nationale. En général, la transposition n'a pas soulevé de controverses importantes à l'échelle nationale.

Le niveau de conformité et le respect des obligations de la DTL au niveau des entreprises peuvent être considérés comme «bons». Selon l'analyse des données recueillies, le niveau de mise en œuvre des exigences spécifiques de la DTL est meilleur que le niveau de respect des dispositions générales (telles que l'évaluation des risques, l'information, la consultation des travailleurs et la formation). La mise en œuvre vue dans son ensemble semble donc conduire à de moins bons résultats.

### *Impact*

Les résultats en matière de SST sont très difficiles à mesurer de manière quantitative, mais la perception des résultats par les parties prenantes tend à indiquer un impact légèrement positif. Un certain nombre de répondants sont en effet convaincus que la DTL a, d'une manière générale, contribué à l'amélioration des conditions de travail.

### *Effectivité*

Si l'on compare la pertinence initiale avec l'impact global, on peut conclure que la Directive a prouvé son effectivité. Cependant, celle-ci peut varier d'un pays à l'autre puisque l'effectivité est liée à l'existence préalable d'une législation nationale correspondante.

### *La pertinence actuelle et future*

Quelques suggestions d'adaptation de la DTL à l'avenir ont été recueillies. Mais une partie importante des répondants, les employeurs et les travailleurs ont fait valoir qu'aucune modification n'est nécessaire. Les améliorations concernent surtout le niveau de détail et l'aspect concret des dispositions. Quelques suggestions évoquent la nécessité de compléter la DTL par des dispositions relatives aux risques psychosociaux, à l'ergonomie de conception des lieux de travail ainsi que par des dispositions liées aux caractéristiques de lieux de travail mobiles (en référence à des situations de travail telles que le télétravail, le transport, ...).

### **Les enseignements du test et recommandations**

L'approche du modèle générique en quatre étapes a prouvé son intérêt pour le processus d'évaluation. Par ailleurs, les quatre sources d'information : la recherche documentaire (littérature), les parties prenantes, les employeurs et les travailleurs, ont facilité l'évaluation globale. Celle-ci peut être encore améliorée par une participation plus systématique de spécialistes compétents en complément à ces quatre catégories.

Les obstacles sont liés à l'utilisation exclusive de la langue anglaise (découlant des contraintes budgétaires) et du déséquilibre dans la représentativité des parties prenantes en raison du caractère volontaire de la participation à l'enquête. En outre, l'information à propos d'un Etat Membre particulier est essentiellement transmise par des répondants qui n'ont pas nécessairement une vue précise et intégrale de la situation des entreprises dans leur pays. Les réponses peuvent exprimer principalement les «valeurs» des répondants ou de l'organisation qu'il/elle représente.

Pour obtenir la meilleure image possible de tous les aspects liés à une directive, il est serait judicieux, dans les évaluations futures, d'effectuer des études de cas dans certains pays. Ces dernières devraient être réalisées avant l'élaboration des questionnaires destinés aux représentants des employeurs et des travailleurs, car cela permettrait de centrer la collecte d'informations sur les aspects les plus pertinents.

En conclusion, l'évaluation de toute directive de l'UE en matière de SST doit faire face à trois défis majeurs:

- Les connexions entre une directive de l'UE en matière de SST et la situation sur les lieux de travail sont assurées par la réglementation nationale. Mesurer l'effectivité globale d'une directive constitue un défi tant elle est dépendante de la qualité de chaque législation nationale. L'impact sur le terrain est mesuré à partir de la réglementation nationale et non de la Directive;
- Le développement d'indicateurs utiles est rendu difficile par le manque de systèmes de monitoring;
- La nécessité de prendre en compte tous les facteurs contextuels importants à l'échelle nationale;
- L'étendue des dispositions d'une directive peut être large et la mise en œuvre de la directive peut donc être variable selon le type de dispositions. C'est particulièrement le cas avec la multitude de dispositions de la DTL.

## German

### **Evaluation der Richtlinie 89/654/EWG des Rates vom 30. November 1989 über Mindestvorschriften für Sicherheit und Gesundheitsschutz in Arbeitsstätten.**

#### **Eine Pilotstudie unter Anwendung einer neuentwickelten Standardevaluationsmethode für EU-Arbeitsschutzrichtlinien.**

Dieses Dokument enthält die Evaluation der Wirksamkeit der europäischen „Richtlinie 89/654/EWG des Rates vom 30. November 1989 über Mindestvorschriften für Sicherheit und Gesundheitsschutz in Arbeitsstätten“ in den Mitgliedsstaaten. Diese Pilotevaluation wurde von der Generaldirektion für Beschäftigung, Soziales und Integration der Europäischen Kommission in Auftrag gegeben. Sie war Teil einer größeren Studie zur „Entwicklung einer Methodologie für die systematische Evaluation von Richtlinien zur Gesundheit und Sicherheit am Arbeitsplatz“. Diese neu entwickelte und übergreifende Methodik wurde in der Pilotevaluation der Richtlinie 89/654/EWG zum ersten Mal angewendet.

Der Auftrag der Generaldirektion verfolgte zwei Ziele: Erstens die Entwicklung einer Standardmethode für die Evaluation von EU-Arbeits- und Gesundheitsschutz-Richtlinien und zweitens, die Überprüfung der Anwendung dieser Standardmethode in einer Pilotevaluation der Richtlinie über Mindestvorschriften für Sicherheit und Gesundheitsschutz in Arbeitsstätten.

Die Evaluation folgt vier chronologischen Schritten, die in der allgemeinen Methodologie entwickelt wurden:

- 1) Analyse der Ausgangslage vor der Gesetzgebung und Begründungen für die Gesetzgebung;
- 2) die Qualität der Vorbereitung und Ausarbeitung der Gesetzgebung;
- 3) die Implementation (Gesetzgebung, Umsetzung, Durchsetzung) und;
- 4) die Analyse der Auswirkungen (Wirkungen im Arbeits- und Gesundheitsschutz und nichtbeabsichtigte Nebenwirkungen sowie Kosten und Nutzenberechnungen).

Das Ziel war es, die Wirksamkeit und die aktuelle sowie zukünftige Bedeutung der ‚Mindestvorschriften für Sicherheit und Gesundheitsschutz in Arbeitsstätten‘ zu analysieren.

Für die Pilotevaluation wurden vier Informationsquellen verwendet: vorhandene Studien, eine Umfrage unter ‚professionellen Akteuren‘ in 31 Ländern (Regierungsvertreter, OSH-Experten, Gewerkschafts- und Arbeitgebervertreter) und die telefonische Befragung einer repräsentativen Stichprobe von Arbeitnehmern auf der einen und von Arbeitgebern auf der anderen Seite. Diese Befragung wurde in den Ländern Bulgarien, Finnland, Deutschland, Polen und Portugal durchgeführt.

## **Ergebnisse**

### *Ausgangslage*

Für den Zeitraum der Vorbereitung der „Richtlinie über Mindestvorschriften für Sicherheit und Gesundheitsschutz in Arbeitsstätten“ vor dem Inkrafttreten im Jahre 1989 sind nur noch wenige Informationen über die Begründungen und den damals wahrgenommenen Bedarf an Regelungen verfügbar. Das eindeutige Ziel der Richtlinie war es jedoch, das europaweite Niveau des Arbeitsschutzes durch die Harmonisierung bereits bestehender nationaler Regelungen zu verbessern. Die interviewten professionellen Arbeitsschutzakteure haben in

ihrer Mehrheit die Notwendigkeit der eingeführten Regelungen bejaht. Die Anforderungen der Richtlinie bilden eine grundlegende Basis für den Arbeitsschutz am Arbeitsplatz.

### *Qualität der Vorbereitung*

Die gute Qualität der Vorbereitung der Richtlinie über Mindestvorschriften wird allgemein von den professionellen Akteuren bestätigt. Die Mehrheit ist sich einig, dass die Richtlinie über Mindestvorschriften allgemein auf relevante sowie grundlegende Arbeitsschutzaspekte abzielt und dass die Anforderungen deutlich formuliert sind.

Die Detailtiefe wird zuweilen als nicht ausreichend betrachtet, Einige Länder hatten bereits zuvor ähnliche Vorschriften auf nationaler Ebene erlassen oder fügten diese später bei der nationalen Einführung der Richtlinie über Mindestvorschriften ein. Mehrere Länder veröffentlichten zusätzlich Handlungsanleitungen und Empfehlungen für die Implementierung auf Unternehmensebene.

### *Umsetzung*

In vielen Ländern hat die gesetzliche Umsetzung die nationalen Regelungen nicht im großen Maße verändert. Viele vorher bestehende gesetzliche Rahmenwerke deckten bereits die Regelungsbereiche der Richtlinie über Mindestvorschriften ab. In einigen Fällen ermöglichte die Umsetzung der EU-Richtlinie in nationales Recht die Modernisierung der vorhandenen Gesetzgebung und die Ergänzung zuvor fehlender Bestimmungen.

Die meisten der professionellen Akteure waren der Ansicht, dass die Anforderungen der EU-Richtlinie für die nationale Gesetzgebung von Bedeutung waren. Generell war die Umstellung nicht Gegenstand einer kontroversen nationalen Debatte.

Die praktische Umsetzung der Verpflichtungen aus der Richtlinie über Mindestvorschriften - kann als 'gut' bezeichnet werden. Aus der Analyse der Daten folgt, dass das Niveau der Umsetzung der spezifischen Anforderungen, z.B. an Raumgestaltung, Notausgänge, Raumtemperatur etc., besser ist als das Niveau der Implementierung der allgemeinen Vorschriften (z.B. Gefährdungsbeurteilung, Information, Beteiligung der Arbeitnehmer, Beratung und Training); die Einhaltung der übergeordneten Regeln scheint weniger gut zu gelingen.

### *Auswirkungen*

Die konkreten Auswirkungen der Richtlinie auf den Arbeits- und Gesundheitsschutz sind schwer quantitativ zu bestimmen, jedoch tendieren die Befragten zu einer leicht positiven Einschätzung hinsichtlich der Resultate. Einige Akteure sind davon überzeugt, dass die Richtlinie ganz allgemein zur Verbesserung der Arbeitsverhältnisse beigetragen hat.

### *Effektivität*

Vergleicht man die Bedeutung, die der Richtlinie bei ihrer Entstehung für die Beeinflussung von Gesundheit und Sicherheit an den Arbeitsplätzen zugemessen wurde, mit ihrer praktischen Wirksamkeit, dann kann man von einer effektiven Richtlinie und Richtlinienumsetzung sprechen. Allerdings variiert der Grad der Beeinflussung stark von Mitgliedsstaat zu Mitgliedsstaat, weil vorher bereits unterschiedliche gesetzliche Vorgaben existierten. Insgesamt ist die Bedeutung der Richtlinie in den Betrieben offensichtlich 'hoch' und 'positiv'

### *Aktuelle und zukünftige Bedeutung der Richtlinie*

Es gab nur wenige Vorschläge für zukünftige grundlegende Änderungen in der Richtlinie. Ein Großteil der professionellen Akteure, der Arbeitnehmer und Arbeitgeber führten aus, dass keine Änderungen erforderlich seien.

Praktische Verbesserungsvorschläge bezogen sich auf spezifische Punkte und betrafen die Genauigkeit und den Detailgrad der Vorschriften; dazu gehörten etwa die stärkere Berücksichtigung psychosozialer Risiken, die ergonomische Gestaltung, die Innenraumluftqualität oder mobile Arbeitsstätten (bezugnehmend auf spezifische Arbeitssituationen, wie Telearbeit, Transport,...).

### **Erfahrungsbericht der Pilotstudie und Empfehlungen**

Der „Vier Schritte-Ansatz“ der allgemeinen Evaluationsmethode hat als generelles Modell seine Anwendbarkeit in der Pilotevaluation bewiesen. Auch die vier Hauptdatenquellen Studien, professionelle Akteure, Arbeitgeber und Arbeitnehmer ermöglichten eine breit angelegte Bewertung der Richtlinienwirksamkeit. Dies könnte weitergehend durch das systematische Einbeziehen von weiteren relevanten Spezialisten (in diesem Fall Baufachleute, Wissenschaftler) verbessert werden.

Probleme in der Evaluation entstehen durch die Verwendung der englischen Sprache in Befragungen (finanzielle Grenzen der Evaluation) und durch Ungleichgewichte in der Repräsentanz der professionellen Akteure aufgrund ihrer freiwilligen Teilnahme an der Untersuchung. Desweiteren werden die Informationen über die Lage in einem Mitgliedsstaat hauptsächlich von professionellen Akteuren gegeben, die nicht immer über einen präzisen Überblick über die Situation auf Unternehmensebene verfügen. Das Wissen dürfte die «Werte» der Befragten oder der Organisation, die sie oder er vertreten, ausdrücken.

Um das bestmögliche Bild aller Aspekte einer Richtlinie zu erhalten, empfehlen wir, in zukünftigen Evaluationen zusätzlich die Durchführung von Fallstudien in ausgewählten Ländern. Diese Fallstudien sollten vor der Entwicklung von Instrumenten für die repräsentativen Arbeitgeber- und Arbeitnehmerbefragungen unternommen werden, da dies die Fokussierung auf die relevanten Aspekte unterstützt.

Nach unseren Erfahrungen ist die Evaluation von EU-Arbeitsschutzrichtlinien vor allem mit vier zentralen Herausforderungen konfrontiert:

- Die Beziehungen zwischen einer bestimmten EU-Arbeitsschutzrichtlinie und der Situation auf Arbeitsplatzebene in einem Mitgliedsstaat werden durch die nationale Gesetzgebung vermittelt. Den meisten Beteiligten ist die EU- Richtlinie als Hintergrund der nationalen Gesetzgebung nicht bekannt.
- Die Entwicklung von überprüfbaren und sinnvollen Indikatoren, die in den meisten Ländern durch das Fehlen eines angemessenen Monitoringsystems erschwert wird.
- Die Schwierigkeit, die länderspezifisch unterschiedlichen kontextuellen Faktoren in Betracht zu ziehen .
- Das Spektrum der Regelungen ist sehr breit und die praktische Umsetzung kann sehr stark zwischen den Regelungsbereichen innerhalb einer Richtlinie schwanken. Dies galt für die Richtlinie über Mindestvorschriften für Sicherheit und Gesundheitsschutz in Arbeitsstätten mit ihren 20 verschiedenen Regelungsbereichen in besonderem Maße.

# **WPD Analysis Report - Annexes**

## Methodology for Evaluation of EU OSH Directives – Progress Project 2010-2011

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April 2012

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## Annexes

### *Annex I: Conversion table of the tender questions and the generic evaluation questions*

Tender questions	Corresponding generic evaluation questions	Generic sub-questions	Sources
<b>Quality of OSH legislation</b>			
1. Have the requirements of the Directive been chosen adequately?	Combination of Question 3: Have the measures required to achieve the desired objectives been chosen adequately? and  Question 4: Have the necessary means to apply the chosen measures been estimated?	The choice of measures <ul style="list-style-type: none"> <li>- Was knowledge available; to what extent exists uncertainty about the OSH issue?</li> <li>- Was the operational OSH management process taken into account when considering measures to impose?</li> <li>- Was interaction with other risks or current or emerging evolutions taken into account?</li> <li>- Were lessons learnt from national experiences, legislative or other measures?</li> <li>- Were there diverging or common opinions and statements about the measures to be applied (concerning aspects like approach, adequateness, coverage, expected effects, etc)?</li> </ul> The choice of means	EU preparatory documents <ul style="list-style-type: none"> <li>- Reflecting knowledge about the issue</li> <li>- Reflecting the consultation of stakeholders</li> <li>- Reflecting the background to the choice</li> <li>- Integrating the lessons learned</li> </ul>

		<ul style="list-style-type: none"> <li>- Have organisational changes been estimated: information/communication, participation, rules &amp; procedures?</li> <li>- Have the required human resources been estimated: knowledge, competences, skills, new functions, training needs?</li> <li>- Have the required material needs been estimated: technical, material adaptations?</li> <li>- Has the availability of the organisational capacity, human and material resources been estimated (internal availability within organisations, external availability on the market)?</li> <li>- Were there diverging or common opinions and statements about the means to be applied (concerning aspects like approach, adequateness, coverage, expected effects, etc)?</li> </ul>	<p>Research simulations on estimated means</p> <p>Case studies</p> <p>Stakeholder interviews/ Employer and worker surveys</p>
2. Have the objectives of the Directive been achieved with the instruments used (effectiveness of the instruments)?	Question 14: Have the objectives and expected results been achieved x years after the adoption of the EU OSH legislation?	<ul style="list-style-type: none"> <li>- How have the direct objective and subjective OSH results evolved since the adoption of the Directive?</li> <li>- How have context factors evolved since the adoption of the Directive?</li> <li>- How do side effects and macro effects influence the direct OSH results?</li> <li>- What are the strengths and/or shortcomings of the Directive itself (initial relevance, quality of implementation)?</li> <li>- What are the strengths and/or shortcomings of the national transposition?</li> <li>- What are the strengths and/or shortcomings of the national implementation?</li> <li>- Could the same objectives have been reached without the EU Directive?</li> </ul>	<ul style="list-style-type: none"> <li>- ESAW</li> <li>- EODS</li> <li>- Labour Force Survey</li> <li>- Labour Force Survey ad hoc module 2002</li> <li>- EWCS</li> <li>- National Surveys (stakeholders/employers and workers)</li> <li>- Eurobarometer</li> <li>- Case studies</li> <li>- Survey data</li> </ul>
Which intended and unintended side effects did it produce?	Question 12: What are observable side effects at national level related to the scope of the EU OSH Directive?	<p>What are positive/negative observable OSH side effects (attributable to the EU OSH Directive)?</p> <ul style="list-style-type: none"> <li>- Modernisation of legislation</li> <li>- Simplification of regulations</li> </ul>	<ul style="list-style-type: none"> <li>- National (statistical) reports</li> <li>- Reports and studies of national administrations, inspectorates</li> <li>- National Surveys</li> </ul>

		<ul style="list-style-type: none"> <li>- Productivity improvement</li> <li>- Innovation of working and productivity methods and techniques</li> </ul>	(stakeholders/ employers and workers)
3. Have the instruments been used efficiently?	Question 5: Have the instruments required to achieve the desired objectives/results been chosen adequately?	<ul style="list-style-type: none"> <li>- Have several optional types of intervention been discussed (legislation in form of a directive, a regulation etc., change of existing legislation, no legislative action but campaigns, guidance, etc.), taking into account the available knowledge/degree of uncertainty, the selected measures and the social perception/social acceptance of the OSH issue to be regulated?</li> <li>- Have the merits and weaknesses of each optional been evaluated, including costs and benefits, and possible side effects?</li> <li>- Have lessons been drawn from national instruments, regulatory or other to impose the necessary measures?</li> <li>- Has a mix of instruments (Directive in combination with research, awareness campaign, etc.) been considered?</li> <li>- Were there diverging or common opinions and statements about the instruments to be applied (concerning aspects like approach, adequateness, coverage, expected effects, etc)?</li> </ul>	<p>EU preparatory documents</p> <ul style="list-style-type: none"> <li>- Reflecting knowledge</li> <li>- Reflecting the background to the choice</li> <li>- Reflecting the national experiences</li> </ul>
4. What is the relevance of the directive?	Question 15: What is the (actual and future) relevance of the EU OSH Directive?	<ul style="list-style-type: none"> <li>- Is the EU OSH Directive still OSH relevant?</li> <li>- Has the EU OSH Directive still legislative relevance?</li> </ul>	<ul style="list-style-type: none"> <li>- Risk analysis reports</li> <li>- Reports of national authorities or other stakeholders investigating the need for a legislative action</li> <li>- The opinion documents of the social partners</li> <li>- EU and national surveys on OSH situation in companies</li> <li>- National reports from labour inspectorate, accident insurance companies, OSH</li> </ul>

			<p>institutes etc.</p> <ul style="list-style-type: none"> <li>- National implementation reports to the Commission</li> <li>- National/EU studies</li> <li>- EU reports on OSH aspects (occupational diseases, accidents at work, etc.)</li> <li>- Stakeholder interviews/</li> <li>- Employer/worker surveys</li> <li>- Data from labour inspectorate, accident insurance companies etc.</li> </ul>
<p>5.Which changes related to the policy and regulatory framework and/or practice would have happened anyway? Could the same objectives have been reached with other instruments than legislation?</p>	<p>Sub-question “Could the same objectives have been reached without the EU Directive?” to Question 14: Have the objectives and expected results been achieved x years after the adoption of the EU OSH legislation?</p>	<ul style="list-style-type: none"> <li>- Could the same objectives have been reached without the EU Directive?</li> </ul>	<ul style="list-style-type: none"> <li>- Surveys (stakeholders/ employers and workers)</li> </ul>
<p>6.Has the Directive led to a level playing field between member states with regard to OSH?</p>	<p>Question 13: Is there an observable level playing field between the Member States, after x years of implementation?</p>	<p>What is the level of enforcement of the EU OSH Directive in the Member States?:</p> <ul style="list-style-type: none"> <li>- Existence of national enforcement policies and measures</li> <li>- Existence and application of sanctions for workplace safety infractions</li> </ul> <p>What is the level of compliance of the Member States with the EU OSH Directive?</p>	<ul style="list-style-type: none"> <li>- Data from Labour Inspectorate</li> <li>- Conclusions drawn from the comparison of the level of transposition, application and enforcement of the EU provisions in the EU Member States</li> </ul>

7. Are the obligations laid down in the Directive clearly formulated?	Question 2: Are/were the objectives of the EU OSH Directive clearly formulated/do they correspond to the defined OSH need?	<ul style="list-style-type: none"> <li>- Were the objectives of the EU legislation in line with the overall EU Strategy?</li> <li>- Were the objectives SMART-ly formulated?</li> <li>- Were the expected (short term, medium, long term) results of the objectives made explicit from the start?</li> <li>- Were the objectives of the OSH Directive sufficiently clear for those who are responsible for the transposition into national regulations?</li> <li>- Do the objectives correspond to the defined OSH needs?</li> </ul>	<ul style="list-style-type: none"> <li>- EU preparatory document (referring to EU OSH strategy; describing objectives)</li> <li>- Correspondence between Commission and Member States</li> </ul>
<b>Implementation at the workplace</b>			
<i>Practical implementation</i>			
8. What is the level of practical implementation of the provisions of the Directive (including (technical) requirements of the annex (es))?	Question 7: Have the national provisions transposing the EU legislation been applied in a qualitative way (process quality)?	<ul style="list-style-type: none"> <li>- To what extent are the national provisions correctly applied (those of the specific Directive* in combination with the general obligations of the Framework Directive)?</li> <li>- How widely have the basic OSH-requirements of the Framework Directive 89/391/EEC been implemented (E.g. risk assessment, information of workers)?</li> <li>- To what extent does the practical implementation of national provisions encounter difficulties/problems?</li> <li>- To what extent are (sector, size, activity, category of worker, ...) specific successes or problems observed?</li> <li>- Did the enterprises (their associations), the workers (the trade union or workers' representatives), governmental institutions or scientists report about the implementation (e.g. reasons for changes, practical or organisational problems, costs of administration or costs of technical adaptations)?</li> <li>- Were proposals for legal changes made by any of the</li> </ul>	<ul style="list-style-type: none"> <li>- National reports from labour inspectorate, accident insurance companies, OSH institutes etc.</li> <li>- National implementation reports to the Commission</li> <li>- National/EU studies</li> <li>- EU reports on OSH aspects (occupational diseases, accidents at work, etc.)</li> <li>- Stakeholder interviews/</li> <li>- Employer/worker surveys</li> <li>- Data from labour inspectorate, accident insurance companies etc.</li> </ul>

		<p>stakeholders? Which proposals?</p> <ul style="list-style-type: none"> <li>- What was the impact on practical health and safety measures at enterprise level and in practical supervision of the government?</li> </ul>	
<p>9. What is the level of the fulfillment by the employers of general legal obligations laid down in Directive 89/391/EEC (e.g. risk assessment, information of workers, consultation of workers, workers participation and training) in the context of the implementation at the workplace of the specific Directive under evaluation?</p>	<p>Sub-question “How widely have the basic OSH-requirements of the Framework Directive 89/391/EEC been implemented (E.g. risk assessment, information of workers)?” of Question 7: Have the national provisions transposing the EU legislation been applied in a qualitative way (process quality)?</p>	<ul style="list-style-type: none"> <li>- How widely have the basic OSH-requirements of the Framework Directive 89/391/EEC been implemented (E.g. risk assessment, information of workers)?</li> </ul>	<ul style="list-style-type: none"> <li>- National reports from labour inspectorate, accident insurance companies, OSH institutes etc.</li> <li>- National implementation reports to the Commission</li> <li>- National/EU studies</li> <li>- EU reports on OSH aspects (occupational diseases, accidents at work, etc.)</li> <li>- Stakeholder interviews/</li> <li>- Employer/worker surveys</li> <li>- Data from labour inspectorate, accident insurance companies etc.</li> </ul>
<p>10. What are the results of the comparison with the workers/workers representatives/experts estimations as regards the fulfilment of legal obligations by the employers?</p>	<p>Question 9: How coherent is the perception of the fulfilment of the national provisions transposing the EU OSH Directive?</p>	<p>What is the perception of</p> <ul style="list-style-type: none"> <li>- National civil servants (administrations and inspectorates)?</li> <li>- Internal OSH experts?</li> <li>- External OSH experts?</li> <li>- Employers?</li> <li>- Employers’ organisations?</li> <li>- Workers?</li> <li>- Workers’ organisations?</li> </ul> <p>How coherent are these perceptions?</p>	<ul style="list-style-type: none"> <li>- Stakeholder interviews and surveys</li> <li>- Employer/worker surveys</li> </ul>
<p><i>Overall evaluation of effectiveness and efficiency</i></p>			
<p>11. What are the reasons</p>	<p>Sub-questions “What are the</p>	<ul style="list-style-type: none"> <li>- What are the strengths and/or shortcomings of the Directive</li> </ul>	<ul style="list-style-type: none"> <li>- ESAW</li> </ul>

<p>for the successes/shortcomings found? (e.g. the Directive it-self/ the national transposition/the national enforcement strategies/other factors)</p>	<p>strengths and/or shortcomings of the Directive itself (initial relevance, quality of implementation)?”, “What are the strengths and/or shortcomings of the national transposition?”, “What are the strengths and/or shortcomings of the national implementation? “of Question 14: Have the objectives and expected results been achieved x years after the adoption of the EU OSH legislation?</p>	<p>itself (initial relevance, quality of implementation)?</p> <ul style="list-style-type: none"> <li>- What are the strengths and/or shortcomings of the national transposition?</li> </ul>	<ul style="list-style-type: none"> <li>- EODS</li> <li>- Labour Force Survey</li> <li>- Labour Force Survey ad hoc module 2002</li> <li>- EWCS</li> <li>- National Surveys (stakeholders/ employers and workers)</li> <li>- Eurobarometer</li> <li>- Case studies</li> <li>- Survey data</li> </ul>
<p>12. Should there be changes in: The legal provisions (EU and/or national); the implementation at company level; the enforcement strategies of national authorities; other accompanying measures for improving OSH at workplaces (e.g. economic incentives, awareness raising, practical tools)?</p>	<p>Sub-questions “What changes are necessary regarding the OSH requirements?” and “What changes are necessary regarding the regulatory initiatives?” of Question 15: What is the (actual and future) relevance of the EU OSH Directive?</p>	<ul style="list-style-type: none"> <li>- What changes are necessary regarding the OSH requirements?</li> <li>- What changes are necessary regarding the regulatory initiatives?</li> </ul>	<ul style="list-style-type: none"> <li>- Risk analysis reports</li> <li>- Reports of national authorities or other stakeholders investigating the need for a legislative action</li> <li>- The opinion documents of the social partners</li> <li>- EU and national surveys on OSH situation in companies</li> <li>- National reports from labour inspectorate, accident insurance companies, OSH institutes etc.</li> <li>- National implementation reports to the Commission</li> <li>- National/EU studies</li> <li>- EU reports on OSH aspects (occupational diseases, accidents at work, etc.)</li> </ul>



			<ul style="list-style-type: none"> <li>- Stakeholder interviews/</li> <li>- Employer/worker surveys</li> <li>- Data from labour inspectorate, accident insurance companies etc.</li> </ul>
13. Has the Directive had particular effects on any type of establishments (e.g. depending on sector, size, etc.) and workers (depending on sex, age occupation, etc.)?	Question 11: Are there sector specific national results or diversified results for specific categories of workers?	<ul style="list-style-type: none"> <li>- Are the objective results (statistics) in the scope of the EU OSH legislation differentiated by sector, by category of workers?</li> <li>- Are the subjective results (perception) in the scope of the EU OSH legislation differentiated by sector, by category of workers?</li> </ul>	<ul style="list-style-type: none"> <li>- ESAW</li> <li>- EODS</li> <li>- Labour Force Survey</li> <li>- Labour Force Survey ad hoc module 2002</li> <li>- Case studies</li> <li>- Survey data</li> <li>- EWCS</li> <li>- National Surveys (stakeholders/ employers and workers)</li> <li>- Eurobarometer</li> <li>- Case studies</li> <li>- Survey data</li> </ul>
14. Has the Directive had an impact on the rates of occupational accidents and diseases?	Sub-questions “Is there any statistic evidence of the OSH impact of the directive, e.g. less accidents or diseases etc.?” and “What are the factual (objective) results?” of Question 10: What are the objective and subjective results at national level of the EU OSH Directive?	<ul style="list-style-type: none"> <li>- Is there any statistic evidence of the OSH impact of the directive, e.g. less accidents or diseases etc.?</li> <li>- What are the factual (objective) results?</li> </ul>	<ul style="list-style-type: none"> <li>- ESAW</li> <li>- EODS</li> <li>- Labour Force Survey</li> <li>- Labour Force Survey ad hoc module 2002</li> </ul>
<i>Economic effects</i>			

15. How to measure compliance costs of the Directive for employers?	Question 16: What means have been deployed and what are the corresponding costs induced by the EU OSH Directive (employers, public sector, others)?	<ul style="list-style-type: none"> <li>- What organisational, human and material/technical means were required to implement the directive?</li> <li>- What is the cost of these investments (employers, public sector, others)?</li> </ul>	<ul style="list-style-type: none"> <li>- Surveys</li> <li>- Cost-benefit model</li> </ul>
16. Do the benefits of the Directive outweigh the costs linked to its implementation and enforcement?	Question 17: What is the cost-benefit of the chosen EU measures (provisions) and the EU Directive as instrument?	<ul style="list-style-type: none"> <li>- What are the real/estimated implementation costs (organisation, human resources, material)?</li> <li>- Do the benefits outweigh the costs?</li> <li>- What is the balance between estimated and real costs (what items differ)?</li> </ul>	<ul style="list-style-type: none"> <li>- Surveys</li> <li>- Cost-benefit model</li> </ul>
17. Did the Directive have macro-economic effects (for example on employment, productivity, competitiveness)? How can these effects be measured and assessed?	Sub-question "What are positive/negative observable OSH side effects (attributable to the EU OSH Directive): Productivity improvement?" of Question 12: What are observable side effects at national level related to the scope of the EU OSH Directive?	<ul style="list-style-type: none"> <li>- What are positive/negative observable OSH side effects (attributable to the EU OSH Directive): Productivity improvement?</li> </ul>	<ul style="list-style-type: none"> <li>- Surveys</li> <li>- Cost-benefit model</li> </ul>

*Annex II: Conversion table of the generic evaluation questions and sub-questions and their application to the WPD case*

Generic evaluation questions	Generic evaluation sub-questions	Corresponding questions in the desk research	Corresponding questions in the stakeholder surveys	Corresponding questions in the employer/worker questionnaires
<b>Step 1: Identifying the OSH problem and the need for policy intervention</b>				
Question 1: Does/did the EU Directive respond to an OSH need?	<ul style="list-style-type: none"> <li>- What triggered the preparation/consideration of EU OSH legislation (the existence of national legislation, ...)?</li> <li>- Which OSH-need was the reason and background for the start/preparation of activities?</li> <li>- Are the objectives of the EU Directive based on the objective (data) and subjective results (perception) of risk analysis ?</li> <li>- Was there a need for a EU harmonization?</li> <li>- What are/were the context factors such as economic circumstances, legal tradition, and safety culture at the time of considering the adoption of EU OSH legislation?</li> </ul>	The same questions can be used in the desk research (literature and factual data)		

	<ul style="list-style-type: none"> <li>- Which common / controversial opinions and statements about the OSH needs and the necessary activities were emphasised during the discussions at European level?</li> <li>- Which major arguments (indicators, data) were used to justify the actions/ activities? Which data from which countries were used in this phase (Monitoring instruments like statistics, registers, surveys and or studies)?</li> </ul>			
<b>Step 2: Elaborating a qualitative OSH (legislative) policy</b>				
Question 2: Are/were the objectives of the EU OSH Directive clearly formulated/do they correspond to the defined OSH need?	<ul style="list-style-type: none"> <li>- Were the objectives of the EU legislation in line with the overall EU Strategy?</li> <li>- Were the objectives SMART-ly formulated?</li> <li>- Were the expected (short term, medium, long term) results of the objectives made explicit from the start?</li> <li>- Were the objectives of the OSH Directive sufficiently clear for those who are responsible for the transposition into national regulations?</li> <li>- Do the objectives correspond to the defined OSH needs?</li> </ul>		<ul style="list-style-type: none"> <li>- The obligations laid down in the WPD are clearly formulated (statement).</li> <li>- The targets mentioned in the WPD are important for efficiently improving health and safety at workplaces in Europe?</li> </ul>	<p>E504: What about the level of detail of these legal regulations? Do you consider it as adequate, insufficient or exaggerated?</p> <p>W516/W517: Are the legal regulations of help for the employees.</p>
Question 3: Have the measures required to	<ul style="list-style-type: none"> <li>- Was knowledge available; to what extent exists uncertainty about the</li> </ul>		<ul style="list-style-type: none"> <li>- Have the requirements of the WPD have been chosen</li> </ul>	

<p>achieve the desired objectives been chosen adequately?</p>	<p>OSH issue?</p> <ul style="list-style-type: none"> <li>- Was the operational OSH management process taken into account when considering measures to impose?</li> <li>- Was interaction with other risks or current or emerging evolutions taken into account?</li> <li>- Were lessons learnt from national experiences, legislative or other measures?</li> <li>- Were there diverging or common opinions and statements about the measures to be applied (concerning aspects like approach, adequateness, coverage, expected effects, etc)?</li> </ul>		<p>adequately?</p>	
<p>Question 4 Have the necessary means to apply the chosen measures been estimated?</p>	<ul style="list-style-type: none"> <li>- Have organisational changes been estimated: information/communication, participation, rules &amp; procedures?</li> <li>- Have the required human resources been estimated: knowledge, competences, skills, new functions, training needs?</li> <li>- Have the required material needs been estimated: technical, material adaptations?</li> <li>- Has the availability of the organisational capacity, human and material resources been estimated (internal availability within</li> </ul>		<ul style="list-style-type: none"> <li>- Are there any unnecessary aspects mentioned in the WPD?</li> <li>- Are there any important aspects missing in the WPD?</li> <li>- The WPD has a perfect level of detail (statement).</li> </ul>	

	<p>organisations, external availability on the market)?</p> <ul style="list-style-type: none"> <li>- Were there diverging or common opinions and statements about the means to be applied (concerning aspects like approach, adequateness, coverage, expected effects, etc)?</li> </ul>			
<p>Question 5: Have the instruments required to achieve the desired objectives/results been chosen adequately?</p>	<ul style="list-style-type: none"> <li>- Have several optional types of intervention been discussed (legislation in form of a directive, a regulation etc., change of existing legislation, no legislative action but campaigns, guidance, etc.), taking into account the available knowledge/degree of uncertainty, the selected measures and the social perception/social acceptance of the OSH issue to be regulated?</li> <li>- Have the merits and weaknesses of each optional been evaluated?</li> <li>- Have lessons been drawn from national instruments, regulatory or other to impose the necessary measures?</li> <li>- Has a mix of instruments (Directive in combination with research, awareness campaign, etc.) been considered?</li> <li>- Were there diverging or common opinions and statements about the instruments to be applied</li> </ul>		<ul style="list-style-type: none"> <li>- The directive is still the best possible option to reach the objectives. Alternatives for regulation would not have provided the same level of prevention and protection (statement).</li> </ul>	

	(concerning aspects like approach, adequateness, coverage, expected effects, etc)?			
<b>Step 3.1. Monitoring the quality of the legal implementation at national level</b>				
Question 6: Has the EU Directive been transposed into national regulations in a qualitative way (process quality)?	<ul style="list-style-type: none"> <li>- To what extent has the EU OSH Directive been transposed in national regulations?</li> <li>- What problems did the transposition of the EU OSH Directive encounter?</li> <li>- How has the EU OSH legislation been transposed into national regulations (legislation or other instruments)?</li> <li>- Are there national add-on's: did the EU Directive trigger the inclusion of new or additional aspects of OSH in the national legislation? Did the EU Directive trigger more detailed and/or more user friendly regulations at national level?</li> <li>- Which common / controversial opinions and statements about the OSH needs and the necessary activities were emphasised during the discussions at national level?</li> <li>- Which institutions were made responsible to implement the directive (e.g., was an adaptation of the institutional powers necessary, was education of supervisory personnel necessary or were all</li> </ul>		<ul style="list-style-type: none"> <li>- Can you explain in how far the national legislation had to be changed?</li> <li>- Were there any aspects of the WPD discussed controversially when the directive was transposed into national law?</li> <li>- The transposition of the WPD into national law resulted in relevant legislation changes in my country.</li> <li>- The transposition of the WPD into national law led to national legislation that is almost the same, stricter, less strict</li> <li>- The transposition of the WPD into national law led to national legislation that is almost the same, better defined, less defined</li> <li>- To what extend does the national law transposing the WPD differ from the original directive?</li> <li>- Did the transposition of the WPD into national legislation take into account pre-existing national law?</li> </ul>	



	competences for an adequate implementation available, was the responsibility given to the employers and allowed to contract private prevention services etc.)?		- Has the WPD improved or positively influenced the national legislation?	
<b>Step 3.2. Monitoring the operational implementation at national level</b>				
Question 7: Have the national provisions transposing the EU legislation been applied in a qualitative way (process quality)?	<ul style="list-style-type: none"> <li>- To what extent are the national provisions correctly applied (those of the specific Directive in combination with the general obligations of the Framework Directive)?</li> <li>- How widely have the basic OSH-requirements of the Framework Directive 89/391/EEC been implemented (E.g. risk assessment, information of workers)?</li> <li>- To what extent does the practical implementation of national provisions encounter difficulties/problems?</li> <li>- To what extent are (sector, size, activity, category of worker, ...) specific successes or problems observed?</li> <li>- Did the enterprises (their associations), the workers (the trade union or workers' representatives), governmental institutions or scientists report about the implementation (e.g. reasons for changes, practical or organisational</li> </ul>		<ul style="list-style-type: none"> <li>- Companies usually comply with the national transposition of the WPD.</li> <li>- When doing risk assessments, companies usually take the WPD requirements into account.</li> <li>- Consultation of workers' representatives usually includes questions related to the requirements of the WPD.</li> <li>- In cases of infringement, what is the reason why companies do not comply with the national law/transposition of the WPD?</li> <li>- Which aspects cause most problems when trying to comply with the national law/transposition of the WPD?</li> </ul>	<p><b>Worker survey (W):</b></p> <p>W301: On which of the following topics has your establishment provided you with information concerning safety and health (Rules for the clearance of traffic and emergency routes, Behaviour in case of a fire emergency, Proper handling and adjustment of working equipment and devices, Behaviour in case of a work accident, Working methods beneficial for long-term health)?</p> <p>W302a: Would you need more information on any of these topics?</p> <p>W302b: Would you need information on any of these topics?</p> <p>W303: And in which of these areas would you need more information?</p> <p>W304: In which of the following ways is information on health and safety issues usually provided in your establishment? By way of...</p>

	<p>problems, costs of administration or costs of technical adaptations)?</p> <ul style="list-style-type: none"> <li>- Were proposals for legal changes made by any of the stakeholders? Which proposals?</li> <li>- What was the impact on practical health and safety measures at enterprise level and in practical supervision of the government?</li> </ul>			<p>W305: Do you consider the frequency with which information on safety and health issues is provided to be sufficient?</p> <p>W501: Are you familiar with the emergency exits and escape routes in the building where you work?</p> <p>W502: Is your establishment equipped with fire extinguishers?</p> <p>W504: Are you generally happy with the room climate at your workstation?</p> <p>W505: Why are you not happy with it? Is it due to missing possibilities to adjust the room climate to your needs or is it because of a lack of consensus between your colleagues and you about the ideal room temperature?</p> <p>W506: Is there always enough light available at your workstation to carry out your work without risks to your safety and health?</p> <p>W507: Are the room dimensions of your workstation large enough as to allow you to perform your work without risk to your safety or health?</p>
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				<p>W508: Are the traffic routes and – if applicable – loading bays and ramps at your workplace consequently kept free of trip hazards and obstacles?</p> <p>W509: If you had a work accident: Would you know where to find the first aid installations or first aid equipment?</p> <p>W510: Are toilets and washrooms in your establishment kept to an adequate level of hygiene?</p> <p>W511: All things considered, how satisfied are you with the safety and health situation at your establishment?</p> <p>W512: Have you ever noticed safety and health relevant deficiencies with respect to any of the following topics (Escape routes or emergency exits, Fire alarm system or fire fighting facilities, Room climate, Room size, Traffic routes, loading bays or ramps, First aid installations and first aid equipment, Toilets and washrooms) ?</p> <p>W513: And did you ask your employer or the safety and health expert at your workplace for an adjustment of any of these deficiencies?</p>
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				<p><b>Employer survey (E):</b></p> <p>E301: Do you agree, partly agree or disagree with the following statements:</p> <ul style="list-style-type: none"> <li>- All escape routes and emergency exits in our establishment are clearly marked and well accessible</li> <li>- The fire alarm and fire fighting facilities are being checked regularly</li> <li>- All indoor workplaces can be adequately ventilated</li> <li>- All workstations receive either enough daylight or are well lit by an artificial lighting system</li> <li>- At all workstations rooms are dimensioned so as to allow for safe and pain-free working</li> <li>- The traffic routes in our establishment are well surfaced and kept free from obstacles</li> <li>- Toilets and washrooms are kept at an adequate level of hygiene</li> </ul> <p>E302: During the last three years: Have there been any needs to implement changes in the context of safety and health issues with respect to...</p> <ul style="list-style-type: none"> <li>- Escape routes or emergency exits</li> <li>- Fire alarm system or fire fighting facilities</li> <li>- Room climate</li> <li>- Room lighting</li> </ul>
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				<ul style="list-style-type: none"> <li>- The dimensioning of workplaces</li> <li>- Traffic routes, loading bays or ramps</li> <li>- Toilettes and washrooms</li> </ul> <p>E303: Why did changes in the mentioned areas become necessary? Was it because of...</p> <ul style="list-style-type: none"> <li>- Requests or complaints from employees or their representatives</li> <li>- Deficiencies discovered during risk assessments or other routine checks</li> <li>- Recommendations of the Labour Inspectorate or other authorities</li> <li>- A relocation of the establishment or single workstations</li> <li>- A rearrangement of workstations</li> <li>- The occurrence of work accidents</li> </ul> <p>E304: Which of the following types of changes or measures did you apply to improve the encountered deficits?</p> <ul style="list-style-type: none"> <li>- Structural modifications to the work building</li> <li>- Rearrangements of workstations</li> <li>- Repair or replacement of equipment</li> <li>- Information and sensitisation of employees</li> <li>- Intensified involvement of workers or their representatives in the regulation of these issues</li> </ul> <p>E305: Were these changes and measures</p>
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				<p>necessary in order to adjust workstations to the legal minimum safety and health requirements or did they concern improvements going beyond the legal requirements?</p> <ul style="list-style-type: none"> <li>- For an adjustment to minimum legal requirements</li> <li>- Changes go beyond the minimum requirements</li> <li>- Both applies</li> </ul> <p>E306: Are workstations at this establishment regularly checked for safety and health as part of a risk assessment or similar measures?</p> <p>E307: Are these risk assessments or workplace checks being documented?</p> <p>E308: Are employees during these checks consulted about their work habits or about health problems they attribute to their work environment?</p> <p>E401: Do you regularly provide employees with information on occupational safety and health issues?</p> <p>E402: On which of the following topics do you provide your employees with information?</p> <ul style="list-style-type: none"> <li>- Rules for the clearance of traffic and</li> </ul>
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				<p>emergency routes</p> <ul style="list-style-type: none"> <li>- Behaviour in case of a fire emergency</li> <li>- Proper handling and adjustment of working equipment and devices</li> <li>- Behaviour in case of a work accident</li> <li>- Working methods beneficial for long-term health</li> </ul> <p>E403: In which ways do you usually provide employees with information on occupational safety and health issues? By way of...</p> <p>E404: For which of the following reasons are employees in this establishment not regularly provided with information on occupational safety and health issues? Is it because...</p> <p>E501: In the last three years: Have you used the legal safety and health regulations on any of the following issues as guidance, be it for decisions on safety and health measures or for the clarifications of claims and rights?</p> <ul style="list-style-type: none"> <li>- Escape routes or emergency exits</li> <li>- Fire alarm system or fire fighting facilities</li> <li>- Room climate</li> <li>- Room Size</li> <li>- Traffic routes, loading bays or ramps</li> <li>- Toilettes and washrooms</li> </ul>
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				<p>E502: And at which of the following types of occasions or events did you make use of the legal regulation?</p> <ul style="list-style-type: none"> <li>- At relocations of the establishment or single workstations</li> <li>- For the rearrangement of workstations</li> <li>- Following requests or complaints of employees or their representatives</li> <li>- In disputes with the Labour Inspectorate or other authorities</li> <li>- For the clarification of responsibilities in case of work accidents</li> </ul>
<p>Question 8: To what extent are the national provisions transposing the EU OSH Directive known by the stakeholders?</p>	<p>What is the knowledge of</p> <ul style="list-style-type: none"> <li>- National civil servants (administrations and inspectorates)?</li> <li>- OSH experts?</li> <li>- Employers?</li> <li>- Employers' organisations?</li> <li>- Workers?</li> <li>- Workers' organisations?</li> </ul>		<ul style="list-style-type: none"> <li>- Employers are generally aware of the national transposition of the WPD.</li> </ul>	
<p>Question 9: How coherent is the perception of the fulfilment of the national provisions transposing the EU OSH Directive?</p>	<p>What is the perception of</p> <ul style="list-style-type: none"> <li>- National civil servants (administrations and inspectorates)?</li> <li>- Internal OSH experts?</li> <li>- External OSH experts?</li> <li>- Employers?</li> </ul>		<ul style="list-style-type: none"> <li>- Employers are generally aware of the national transposition of the WPD (analysis of replies by type of stakeholders).</li> </ul>	

	<ul style="list-style-type: none"> <li>- Employers' organisations?</li> <li>- Workers?</li> <li>- Workers' organisations?</li> </ul> <p>How coherent are these perceptions?</p>			
<b>Step 4: Evaluating the impact of EU OSH Directive</b>				
Question 10: What are the objective and subjective results at national level of the EU OSH Directive?	<p>Factual results of the implementation of the national legislation</p> <ul style="list-style-type: none"> <li>- Is there any statistic evidence of the OSH impact of the directive, e.g. less accidents or diseases etc.?</li> <li>- What are the factual (objective) results?</li> <li>- Statistical data on OSH conditions related to the targets of the EU OSH Directive (match with the desired results)*:</li> <li>- Accidents at work (/1000 workers): evaluation over time</li> <li>- Occupational diseases (/1000 workers): evaluation over time</li> <li>- Sickness absence (% of employed people absent from work due to illness, injury or temporary disability): evaluation over time</li> <li>- Disability (% of workers stating that they have a longstanding health problem or a disability): evaluation over time</li> <li>- Is there an overall assessment of</li> </ul>			<p>E703: Number of accidents registered in the establishment in 2009</p> <p>E704: Development of the number of accidents in the last 3 years</p> <p>E705: Factors to which reduction of work accident is attributed</p> <p>Comparison of E301 et seq., E401 et. seq., E501 et seq. etc. between the five countries</p> <p>E501 et. seq. assessment of national provisions of the WPD.</p> <p>Comparison of W301, W401, W501 et seq. between the different countries.</p> <p>W601 – W604 (but no comparison before/after the introduction of the Directive possible)</p> <p>E: Sector &amp; size analysis on Q about implementation, information</p>

	<p>the effects on society performed (macroeconomic e.g. productivity or employment, social, ecologic)? Are data aggregated on a national level?</p> <p>Perception of the results of the implementation of the national legislation</p> <ul style="list-style-type: none"> <li>- What is the perception of the improvement of the OSH conditions (subjective results)?</li> <li>- Work related health risks (% of workers thinking that their health or safety is at risk because of work)</li> <li>- Job quality (indices on several aspects of working conditions – physical working conditions, psychological working conditions, work, autonomy, work intensity)</li> <li>- Sustainability of jobs (ageing workforce, worker participation)</li> <li>- Creating equal OSH level playing field</li> <li>- Job satisfaction, job happiness, motivation</li> <li>- Workplace health promotion</li> </ul>			<p>Analysis of implementation indicators by sex, sector, size, temp agency (W202), public/private (W207); ER existence (W209)</p>
<p>Question 11: Are there sector specific national results or diversified results for specific categories of workers?</p>	<p>Objective results of the implementation of the national legislation – per sector/worker categories</p> <ul style="list-style-type: none"> <li>- Are the objective results (statistics) in the scope of the EU OSH legislation differentiated by sector, by category of workers?</li> </ul>		<ul style="list-style-type: none"> <li>- Are there any sectors being especially affected by the national law/transposition of the WPD, either positive or negative?</li> </ul>	<p>All answers in the Employer Survey are differentiated by sector, size, country etc.. Equivalently, all answers in the Worker Survey can be differentiated by sector, firm size, country, age, sex, education etc.</p>

	<p>Perception of the results of the implementation of the national legislation – per sector/worker category</p> <ul style="list-style-type: none"> <li>- Are the subjective results (perception) in the scope of the EU OSH legislation differentiated by sector, by category of workers?</li> </ul>			
<p>Question 12: What are observable side effects at national level related to the scope of the EU OSH Directive?</p>	<p>What are positive/negative observable OSH side effects (attributable to the EU OSH Directive)?</p> <ul style="list-style-type: none"> <li>- Modernisation of legislation</li> <li>- Simplification of regulations</li> <li>- Productivity improvement</li> <li>- Innovation of working and productivity methods and techniques</li> </ul> <p>What are the context factors at the time of the ex post evaluation?</p> <p>What are observable new, emerging (OSH) trends related to the scope of the EU OSH Directive?</p>		<ul style="list-style-type: none"> <li>- Did the provisions of the WPD cause side effects (not directly linked to occupational safety and health issues, for example on employment, productivity, competitiveness)?</li> </ul>	
<p>Question 13: Is there an observable level playing field between the Member States, after x years of implementation?</p>	<p>What is the level of enforcement of the EU OSH Directive in the Member States?:</p> <ul style="list-style-type: none"> <li>- Existence of national enforcement policies and measures</li> <li>- Existence and application of sanctions for workplace safety infractions</li> </ul> <p>What is the level of compliance of the</p>		<ul style="list-style-type: none"> <li>- The WPD has reduced the differences between Member States regarding health and safety at work (statement).</li> </ul>	<p>Comparison of E301 et seq., E401 et. seq., E501 et seq. etc. between the five countries</p> <p>Comparison of E301 et seq., E401 et. seq., E501 et seq. etc. between the five countries</p> <p>Comparison of W301, W401, W501 et seq. between the different countries.</p>

	Member States with the EU OSH Directive?			<p>E501 et. seq. assessment of national provisions of the WPD.</p> <ul style="list-style-type: none"> <li>- Usage of regulations as guidance</li> <li>- Usefulness of nat. regulations</li> <li>- Detailedness</li> <li>- What if there was no legislation?</li> </ul> <p>W516/W517: Are the legal regulations of help for the employees.</p>
<b>Step 5.1. Evaluating the effectiveness of the EU OSH Directive under evaluation</b>				
<p>Question 14: Have the objectives and expected results been achieved x years after the adoption of the EU OSH legislation?</p>	<ul style="list-style-type: none"> <li>- How have the direct objective and subjective OSH results evolved since the adoption of the Directive?</li> <li>- How have context factors evolved since the adoption of the Directive?</li> <li>- How do side effects and macro effects influence the direct OSH results?</li> <li>- What are the strengths and/or shortcomings of the Directive itself (initial relevance, quality of implementation)?</li> <li>- What are the strengths and/or shortcomings of the national transposition?</li> <li>- What are the strengths and/or shortcomings of the national implementation?</li> <li>- Could the same objectives have been reached without the EU Directive?</li> </ul>			<p>E503: How useful were the legal regulations in these occasion(s) all in all?</p> <p>General requirements: → E301 et seq.</p> <p>Information and consultation of workers and their representatives : → E308, E401, E402, W301, W401, E602 – E605, W209-W210</p> <p>E505: If there was no legislation regulating the issue: Would your establishment pay the same, somewhat less or considerably less attention to the following areas.</p> <ul style="list-style-type: none"> <li>- Indication and control of escape routes and emergency exits</li> <li>- Provision of ventilation or air conditioning facilities</li> <li>- Regular checks of first aid installations and first aid equipment</li> <li>- Regular checks of the room lighting</li> <li>- The dimensioning of workstations</li> <li>- The state and clearance of traffic routes</li> </ul>

				<p>- The information of employees on health and safety issues</p> <p>Bulgaria: E704 If you compare the number of accidents in your establishment in the last year to the situation three years ago [Bulgaria: to the situation between 2000 and 2007]: Has it increased, stayed about the same or decreased?</p>
<b>Step 5.2. Evaluating the current and future relevance of the EU OSH Directive under evaluation</b>				
<p>Question 15: What is the (actual and future) relevance of the EU OSH Directive?</p>	<ul style="list-style-type: none"> <li>- Is the EU OSH Directive still OSH relevant?</li> <li>- Has the EU OSH Directive still legislative relevance?</li> </ul>		<ul style="list-style-type: none"> <li>- Which provisions of the WPD are particularly relevant and why?</li> <li>- Which would be your recommendations with regard to an update or revision of the WPD?</li> </ul>	<p>A) General requirements: E301-E308, E402 E302: Need to implement changes? E303: Why changes? E304: Types of changes E305: Changes necessary to adjust OSH situation to minimum requirements or beyond? E501: Usage of WPD as guidance for certain occasions E502: Usage of WPD at certain occasions E503: Usefulness of the legal regulations E505: (see above). If a majority of the establishments argues that they would pay the same attention with regard to a certain issue (e. g. the provision of ventilation) this may indicate that there is no need for regulating the issue W511: Satisfaction of workers with the OSH situation.</p>

				<p>W512: Deficiencies?</p> <p>W513 et seq.: Asked for adjustments and where the granted?</p> <p>W515: Reference to legal regulations for query</p> <p>W516/517: Where legal regulations of help?</p> <p>W701: Compliance with safety and health rules</p> <p>B) Information Employers → see implementation/effectiveness</p> <p>W301 et seq. -W501 et seq. and Employer questionnaire series</p> <p>Possible/suggested changes in</p> <p>a) the legal provisions (EU and/or national)</p> <p>b) the implementation at company level</p> <p>c) the enforcement strategies of national authorities</p> <p>d) other accompanying measures for improving OSH at workplaces</p> <p>W302a/b: Need for more information?</p> <p>W303: On which topics?</p> <p>W305: Frequency of information sufficient?</p> <p>W404: Presence during risk assessment?</p> <p>W405: Consulted about work habits?</p> <p>W406: Asked for complaints?</p> <p>W407: OSH issues discussed in meetings?</p>
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<b>Step 6. Evaluating the costs and benefits of the EU OSH Directive under evaluation</b>				
Question 16: What means have been deployed and what are the corresponding costs induced by the EU OSH Directive (employers, public sector, others)?	<ul style="list-style-type: none"> <li>- What organisational, human and material/technical means were required to implement the directive?</li> <li>- What is the cost of these investments (employers, public sector, others)?</li> </ul>		<ul style="list-style-type: none"> <li>- Which provisions of the transposition of the WPD do impose administrative costs on companies?</li> <li>- Were administrative costs increased by the transposition of the WPD in comparison to the preexisting legislation?</li> <li>- Could you give an estimation of costs that companies have to calculate in order to comply with the requirements of the national implementation of the WPD?</li> <li>- Could you give percentages on the distribution of the costs?</li> <li>- Do you estimate a difference in costs per capita for SMEs and larger companies?</li> </ul>	
Question 17: What is the cost-benefit of the chosen EU measures (provisions) and the EU Directive as instrument?	<ul style="list-style-type: none"> <li>- What are the real/estimated implementation costs (organisation, human resources, material)?</li> <li>- Do the benefits overweight the costs?</li> <li>- What is the balance between estimated and real costs (what items differ)?</li> </ul>			

***Annex III: Stakeholder Questionnaire***

The questionnaire is added as a separate document.

***Annex IV: Employer Questionnaire***

The questionnaire is added as a separate document.

***Annex V: Worker Questionnaire***

The questionnaire is added as a separate document.

***Annex VI: List of stakeholders***

The names of the stakeholders are given upon request.

# **Assessing the Compliance Costs and Benefits of European OSH Directives**

Methodology for Evaluation of EU OSH Directives –  
Progress Project 2010-2011

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31 January 2012

## **Foreword**

This attempt to develop an intuitive common model for economic appraisal of the Occupational Safety and Health Directives is a response to the European Commission's request to include a specific methodology on economic aspects within a much broader methodology focussed on a systematic evaluation of the EU OSH legislation. This global assessment methodology should make it possible to assess both the quality of the European OSH Directives and their actual practical implementation at the workplaces, including favourable and inhibiting factors alike.

The proposal is based on the actual practice of costs and benefits analysis of health and safety programmes found in the literature as well as in the input and feedback of external experts.

The proposed intuitive model is only a basis for further discussions and developments. It needs further refinements and does not have the ambition to be applicable as such. As with all economic models, it presents a number of limits as it is, by nature, trying to reduce a complex system into a practicable framework taking into account the means and the reasonably available background material. Using a model also involves making a number of assumptions that do not correspond to what could probably be observed in the "real world", the first strong assumption being that the OSH Directives directly and uniformly apply to European businesses. Further assumptions are detailed further in this document.

The limits of such a cost-benefit analysis model does not allow them to be transformed into a decision making instrument, but only into a tool to be used in a broader - not only quantitative but also qualitative – assessment practice.

## **1. Introduction: The Need for a Cost-Benefit Analysis**

Just as it is impossible to achieve a zero risk situation, there is no infinite sum to invest in prevention. The cost-benefit analysis, although it identifies the desirable level of spending for reducing the level of risk, brings with it many practical problems and ethical questions. But decisions on prevention must be taken and it makes sense to prefer a society where there exist decision criteria based on a precise argumentation. As such, the cost-benefit analysis aims to discuss a level of effective prevention for society in addition to the social and ethical approach.

## **2. Ex-ante vs. Ex-post**

Cost-benefit analyses are mostly developed ex-ante because they are used as a guide for decisions. But ex-post analyses are full of findings and useful to compare with other regulations or to amend them. Also, many ex-post analyses have shown the weaknesses of the decision, even if a regulation has initially passed the cost-benefit test.

## **3. Baseline Principles of a Cost-Benefit Analysis and Specific Choices.**

### **3.1 A question of maximizing social welfare**

The cost-benefit analysis aims to make decisions for which the benefits exceed the costs. In the context of the prevention of occupational risks, the benefits would consist of a lower number of accidents, diseases, or improved worker productivity, etc. On the cost side, we have the costs associated with the need to adapt to regulatory requirements. It is noted that any new legislation inevitably leads to a form of costs, sometimes only in the field of administrative costs (costs related to the need of information, adaptation, etc). Even administrative simplification measures will create some costs, at least in the short term, because processes need to be adapted and this could lead to errors, the need for new equipment, learning time, transmission of new instructions, ...).

It has to be noted also that the comparison between costs and benefits requires a common unit of measurement, traditionally a monetary measurement. However, in the field of prevention, the

monetary measurement of benefits is generally more difficult to obtain, and more controversial, than the measurement of costs.

In economic terms, a decision will be a good one if it generates a net surplus. But quality does not only refer to a monetary surplus. In economics, it is referred to a maximizing of the "social welfare" of individuals in society. The social welfare depends on a number of elements embodied in the idea of satisfaction of preferences. Those preferences may take a monetary value.

Transposing this principle into the field of prevention means that a monetary value can be put on the preference of individuals for safety or the will to reduce the risk exposure.

"By nature" the cost-benefit analysis models are based on this principal. But this approach suffers also from bias relating to the information that individuals have with regard to risks and the rationality with which they make choices for their wellbeing. While some economists claim that, overall, individual errors compensate each other, psychological research shows that individuals in general tend to overestimate small risks and underestimate large ones<sup>1</sup>. The methods of calculation of these values are not further explained because the model proposed herein relies on the "human capital" evaluation technique (see explanation in 3.7).

The negative impact on health is not necessarily death, which is why another unit has been developed, namely the "Quality-Adjusted-Life-Year" (QALY), which is a health unit where 0 is death and 1 is a perfect state of health. If a monetary value is attributed to a QALY, it should be possible to compare a benefit to the costs. There are different ways to calculate the QALYs and the monetary values attributed to them vary a great deal in the literature. In this intuitive model, QALYs will be used to estimate human costs.

### **3.2 Individual preferences versus expert opinion**

As already mentioned above, on the one hand, individuals do not always have sufficient information about risks and this could lead to an incorrect estimation of their wellbeing. On the other hand, it is observed that when experts, who are supposed to be well informed, calculate a level of risk below which a negative effect on human health can be observed, this level could be unrealistic in terms of the prevention costs. It is important to keep in mind that the resources invested in preventing specific risks reduce the possibility of tackling other risks, as resources are limited. Those arbitrages are complex. A combination of views is necessary in order to avoid extreme scenarios.

In analogy with this reflection, the model proposes to combine both areas of knowledge. This will be particularly the case with regard to the evaluation of compliance costs. Information can be gathered from the field (at the company level) with the help of an expert and the collaboration of safety representatives or work councils.

### **3.3 Modifying the level of risk and reference scenario**

The aim of the OSH regulation is to reduce the level of risk. To estimate the benefits, it is important to appraise the effect of a preventive measure on the probability of accidents and occurrence of occupational diseases. Usually, this relation is not known or not predictable because the effect depends on the value of a large range of parameters, sometimes not directly related to the quality of the decision made. Also, the availability and reliability of sufficiently detailed and historic data can be inaccurate as an indicator of the current problem. As far as work-related ill health is concerned, given the lengthy time lag that may exist between exposure to a risk and the resulting health effects, the evidence may not be available and the estimates may be difficult to define. However, this estimation of the effect is a key concept of the cost-benefit analysis and assumptions will have to be made. The result of the cost-benefit analysis may be crucially dependent on the choice of assumptions. This needs to be investigated systematically by varying the assumptions and seeing the ensuing changes to the outcome. That is why the choice is made to present the results as a range, rather than as a single estimate. (See model).

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<sup>1</sup> Treich Nicolas, Lerna-Inra, University of Toulouse, L'analyse coût-bénéfice de la prévention des risques, 2005

The question of the reference scenario is also important. The effect of a piece of legislation is often measured as the difference between a situation with and without the regulation. This means that, in the case of ex-ante analysis, the reference scenario is the present situation. This implies the use of current industry practice and current occupational health and safety statistics, even if this involves a degree of non-compliance with the current legislation. The current practice would probably make it easier to elicit information from firms on the costs of new regulations: firms would be comparing the costs of moving from actual practice to a hypothetical state (full compliance with the new proposal), rather than being forced to make a comparison between two hypothetical states (perfect compliance with existing regulations and compliance with the new proposal)<sup>2</sup>. Because the cost calculation is based on a realistic situation, overestimating the compliance costs will be avoided.

In the case of an ex-post evaluation, it is necessary to take into consideration the situation before the regulation had to be implemented and the current situation.

### **3.4 Discounting the future**

A prevention measure will not have instantaneous effects. This means that the benefits from investments in OSH will accrue in the future. However, in economics, there is a preference for the present, which means that future benefits are less attractive than what can be immediately seen as a usable resource. If the future benefits are less attractive, it is necessary to apply a discount rate. The reference rates for economists are market rates, because if the productivity of the investment in prevention is less than investing the amount at the market rate, it is economically more interesting to invest at the market rate. The choice of the discounting rate depends on the time horizon over which cost and benefits are to be analysed. Here also, it would be interesting to apply various scenarios.

### **3.5 Valuing the compliance costs**

Where new requirements mean that employers have to divert labour from other productive tasks to training, inspections, meetings, administrative tasks, and so on, the cost is the loss of the output produced by that labour. Since this may be difficult to measure directly, it is common practice to assume it can be measured by the cost of the labour inputs (i.e. the paid wages plus other non-wage labour costs).

### **3.6 Costs of illness**

The starting point of benefit calculation is the cost of illness.

As health should be understood in the sense of the WHO definition as a state of physical, mental and social wellbeing, illness is thus a state where those aspects of physical, mental and social wellbeing are diminished. Illness in this model covers accidents and diseases for which a causal relation can be identified with an exposure to an occupational risk. The data being used can be recognised occupational accidents or diseases but estimates from public health data may also be used for some pathologies. In this case, the model will make use of the attributable fractions. In other words, it is necessary to assess the proportion of a disease that could be prevented if the exposure to the risk factor were eliminated at the workplace. The data that exist in the EU countries will be looked at. It can also be that extrapolation of the available data in other countries according to the local characteristics will be necessary.

For fatal accidents (premature deaths), the model takes into account the average life expectancy in order to calculate the years of life lost.

#### *Cost typology*

Most studies divide costs of occupational accidents or diseases into two categories, direct costs and indirect costs. However, sometimes the terminology of insured and uninsured costs, tangible and intangible costs, visible and invisible costs, is found in the literature. These terminologies are generally

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<sup>2</sup> Lunde Jensen Per, et. Al., An Economic Appraisal of European Union Health and Safety At Work Legislation: Final Report to the European Commission, December 1995.

interchangeable, even if they do not always include the same cost elements. The choice is made here to use the terms *direct and indirect costs*, considering these are by far the most used in the literature<sup>3</sup>.

Reading the papers from the literature research, there seems to be no consensus on the elements belonging to both cost categories. An element can be classified as a direct cost in one study and as an indirect cost in another. In recent studies, there is a third cost category: human or individual costs. Some authors incorporate these costs into the indirect costs (this is what the French college of health economists recommends, for example), others include certain elements in the direct costs (e.g. compensation for physical injury and permanent disability). It is proposed to create a third category of costs because of the intangibility of these costs and the difficulty of estimating them. In addition, among the most recent studies, this way of classifying the human cost is being used increasingly<sup>4</sup>.

Some authors define direct costs as those directly relating to the injury, others as those directly relating to the accident. Although similar, these two definitions do not involve the same costs. The first definition focuses only on elements associated with the treatment and the "repair" of the injury, while the second definition also includes other cost items relating directly to the accident, such as material damage. In general, these costs are readily measurable.

- **Direct costs**

#### *Medical expenses*

Almost all studies include medical expenses, hospitalization and rehabilitation in the direct costs. These costs represent all costs, incurred or anticipated, in offering medical care to the injured or the sick. In addition to the sums paid for medical equipment and drugs, they often include transportation costs and administrative costs (hospital).

This information can be obtained from a government agency that provides insurance against accidents at work, compensates occupational sicknesses or that gathers information on medical care expenses.

Certain medical expenses, usually covered by the health and safety insurance system, can be charged to the injured, when they are not prescribed by a doctor. These medical expenses may consist of drugs, medical equipment and even healthcare (chiropractic, osteopathy, psychology, etc.).

#### *Property damage*

This can be defined as any damage to machinery, tools or other items owned by the company. This includes the cost of replacement and repair of equipment, the value of the damage suffered by the goods, and cleaning costs. Even though some studies include these costs in either direct or indirect costs, they will not be taken into account, essentially because they are usually covered by voluntary insurance. Furthermore, they are extremely difficult to estimate.

- **Indirect costs**

Indirect costs are costs that do not directly relate to the treatment and repair of the injury, but more often to lost opportunities for the injured worker, his or her family, the employer, work colleagues and the community. Unlike direct costs, indirect costs usually do not involve out of pocket expenses and are generally not insured. This means they are much more difficult to measure.

- **Human costs**

The human costs (pain and suffering costs), sometimes called intangible costs, are increasingly considered in cost estimates. Naturally, these costs are difficult to measure and are easily contestable. However, it is more and more agreed upon that these costs - based on the value of the change in quality of life of workers and other people involved (family, friends, colleagues and other members of the community) - are probably highly important and should not be ignored. They will be taken into

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<sup>3</sup> Lebeau Martin, Duguay Patrice, Les coûts des lésions professionnelles : une revue de la littérature, IRSST, Rapport R-676, 2011.

<sup>4</sup> Ibidem



account in the cost of illness calculation.

### 3.7 Valuing the Benefits: Human Capital Theory

Information and data relating to direct costs are usually found in national, statistical databases. As far as indirect costs are concerned, and despite many weaknesses, the method inspired by the *human capital* theory is suggested: the value of life is considered to be a future output (production) that can be reduced in case of early death or retirement. This technique relies on the principle that the economy aims to maximize the production. The weakness is of course that individuals do not conceive their life according to their contribution to the economy.

Another criticism is that the method does not give a value to the individuals who are not on the jobs market (pensioners, children, the unemployed...).

Despite these important weaknesses, this method is preferred because it enables the use of the macro-economic data that are usually available. Furthermore, it is the most frequently used method for calculating indirect costs.

The human capital method requires a calculation of a discount of the amounts (current value of the future incomes).

## 4. Proposal of an Intuitive Model

### 4.1 Introduction

The proposed model needs to be sufficiently broad to be applicable to all types of OSH Directives. The cost-benefit analysis is done at the macro level. This implies that where macro level data exist they will be used prior to data extrapolated from a micro level (company level). Objective data are as much as possible preferred to subjective data. In most cases, the cost-benefit analysis will be done using a combination of both macro level data and extrapolated ones, as well as objective and subjective data.

The aim of the model is to analyse whether the benefits of regulatory compliance outweigh the compliance costs. This means that the model does not seek to analyse if the chosen legal requirements are the most economically efficient ones or whether one can make the « highest profits » for the « least investments ».

In other words, the principle of the model is to put into balance the compliance costs and the benefits of the compliance resulting from avoided occupational accidents and diseases. Since the same value references need to be used for the compliance costs and benefits, the decrease of accidents and diseases must also be expressed in monetary terms.

Three components are needed for a cost-benefit analysis:

- the **cost** resulting from the implementation of legal requirements;
- the **effect** of the implementation of legal requirements on their goals that is to say, avoiding occupational accidents and diseases;
- the **benefits** i.e. the monetary value of the effect of compliance.

### 4.2 Assumptions of the model

The reality is too complex to be taken into account as such. The role of the model is also to reduce the reality to a set of dimensions that can be managed. This implies making a series of assumptions:

### *1° No distinction is made between requirements of the Directive and national transposition*

It is obvious that companies do not implement the requirements of the Directive but the requirements of the national regulation. As the national regulation may imply variations in the scope of the requirements, the costs for implementing them may vary from one country to another. To simplify, it is assumed that implementing the national transposition of the directive is equivalent to implementing the Directive itself.

### *2° Estimate of the level of compliance*

In the case of an ex-ante cost-benefit analysis, the assumption can be made that 100% of the companies will comply with 100% of the Directive requirements. This is the most optimistic scenario. In reality, it can be assumed that this will never be the case so that less optimistic scenarios could be envisaged to avoid over-estimating the compliance costs.

In the case of ex-post analysis, the level of compliance needs to, as much as possible, reflect a certain reality. Two approaches are possible. The first approach is to assume that only a part of all companies comply with 100% of the requirements. This implies that companies which comply with only some but not all requirements are excluded from the analysis. The second approach is to consider that all companies comply with at least some of the requirements. This second approach is preferred to the first one because it is closer to the reality, and the method for collecting data on compliance cost suggested by the model permits to make the estimation on this basis with a direct relationship to correspondent costs. Also some estimates can possibly be found in labour inspectorates' statistics.

### *3° Compliance measures implemented at company level*

Many legal requirements give room for companies to choose the way they will implement them in practice. This means that the same legal requirement can be implemented differently and thus generate variations in terms of cost. Here it can be assumed that each company is making economically rational decisions, so that it will always choose the most economically efficient means to comply with the regulation.

### *4° The economy is equal to the sum of individual businesses*

The economy is a system composed of various economic agents and exchanges between them. This implies that a cost for one economic agent may be a benefit for another one. Taking into account these transfers in the economy would complicate the model, so the compliance costs are only considered as individual costs even if from a macro economic perspective these costs could be considered as transfers inside the economic system, e.g. acquisition of a new equipment is an expense (cost) for the buyer but a revenue (benefit) for the company that sold the equipment.

### *5° The society is a global community*

A consequence of the previous assumption is that society has to be reduced to a community within which no distinction is made between its various members (state, individuals, businesses). The benefit from the avoided occupational accidents and diseases is seen as a collective gain for the entire community without any further distinction. It means that companies that bear the costs are implicitly also the beneficiaries of their actions. Thus, the model does not permit to determine who wins what.

## **4.3 Estimation of the three components of the model**

### **4.3.1 Compliance cost**

Compliance costs maybe considered as those borne by companies and those borne by authorities, which duties are to control the correct implementation of the regulation at the company level. To simplify the model, the second type of cost is not taken into consideration as the cost at company level obviously represents a very large proportion of the total compliance cost.

In evaluating the compliance costs for companies, a distinction must be made between:

- The costs that would have been borne voluntarily;
- The additional costs imposed by legislation that improve safety as a by-product of meeting other objectives; and
- The additional costs imposed by OSH legislation.

The costs of compliance with OSH regulation should only be the last cost type. Also the legal obligations can be categorised into three types:

- **Organisational measures** refer to the implementation of prevention policies, training and information, appropriate work design and procedures.
- **Technical measures** refer to the purchase of equipment and products, investment in infrastructure, such as the provision of a restroom and a first-aid room.
- **Administrative measures** refer to obligations for employers to provide information on their activities to public authorities or to private parties.

The distinction between the types of costs is not important as such for the estimation, because only a global estimate will eventually be taken into consideration. The objective here is not to examine which type of requirements is the most costly to companies. Also, it is not the goal of the model to distinguish administrative burdens from other costs borne by companies. The categorisation serves as an aid to figure out all sorts of costs and to adapt the calculation methods to the type of obligation.

A stepwise approach for collecting data would be as follows:

**Step 1: Identification and classification of obligations**

Identify the obligation (e.g. risk assessment, notification, provision of PPE)

The Framework Directive and its 19 individual Directives lay down a number of minimum requirements and fundamental principles, such as the principles of prevention and risk assessment, as well as the responsibilities of employers and workers. The principles and responsibilities for these directives have been identified and classified in the table below.

Table: List of obligations in the Framework Directive and its individual directives



## Step 2: Identification of the type of obligation

Defining whether the obligations are administrative, technical or organisational

This categorisation is necessary to identify which variables are to be taken into consideration in the compliance cost calculation.

## Step 3: Identification of variables

Identification of variables with their frequency, target group and sector

Defining a calculation period (e.g. 5 years)

For each of the obligations, the target group should be defined as well as the frequency of action (on-off versus recurrent) and the period of time for which the calculation is made.

Obligation	Type of Obligation	Target Group	Tardif (Hours)	Time (Minutes)	Frequency /Year	Acquisition Cost	Total
Risk assessment	A, O	All sectors					
Information	O	All sectors					
Training	O	All sectors					
Consultation and participation	O	All sectors					
PPE	T	All sectors			1		

The cost of the Risk Assessment – Information – Training – Consultation and Participation obligation cluster needs to be calculated at every assessment, since these are the basic principles of all EU OSH Directives.

## Step 4: Identification of Cost Parameters

Identification of labour costs and equipment costs

For the identification of the cost parameters, the parameters of the EU Standard Cost Model (Impact to Assessment Guidelines, 2009) are used.

For **labour costs**, the cost parameters for the *price per action* (administrative action carried by the targeted entity itself) are the (i) **number of minutes spent on a specific action**, (ii) the **hourly pay** of those performing the action. This hourly pay should correspond to the gross salary plus overhead costs (25% by default).

For **acquisition costs**, the cost parameters for *equipment & supplies* (i.e. acquired by the targeted entity to comply with the information obligation and solely used for that purpose) are the **acquisition price** and the **depreciation period** (service life of 'x' years).

### Method for data collection:

The basic data source is the compliance cost estimate calculated by a panel of companies. The compliance costs are evaluated as a percentage of a value easily measurable at company level for which aggregates at European level do exist (e.g. payroll costs).

This panel is limited to a reasonable number of businesses (500 companies) that is statistically acceptable for representing the European businesses. Each member state has representative companies on the panel. The number of companies on the panel from each country is proportional to the number of companies in that country. This means that the number of companies on the panel would be 3 for Luxembourg, 75 for France, 50 for the UK, 75 for Poland and 18 for Belgium, for example.

The sample is stratified or at least represents the country's economic landscape (sector and company sizes).

Data are collected in the companies with the help of an expert and the collaboration of safety representatives and/or work councils. The role of the expert is to guarantee the consistency of the data collection method on the basis of the identified legal obligations and their implications on the situation of the company. The expert is in charge of controlling the completeness and correctness of the used variables to calculate the costs. The expert helps the company in identifying the necessary data and in the calculation exercises. The data collected through the company panel is used to calculate an average cost for each company that can be extrapolated for all businesses in the EU.

#### **4.3.2 Estimate the effect of compliance to the legislation**

Estimating the effectiveness of the implementation of legal measures is a crucial point in the process. But it is also the most hazardous. Reliable data are missing and most of the time the effect cannot be seen as a result of a particular compliance measure. The benefit is calculated on the basis of the proportion of the costs, which can be avoided as a result of the measures taken by companies. This means that the bringing into line is not, in any case, 100% effective.

It is also assumed that bringing the company into line with the legislation does not involve any negative effects in terms of workers' health. So it is necessary to estimate which is the attributable fraction of occupational accidents and/or diseases that are avoided due to the legal compliance.

##### **Case of an ex-ante evaluation**

As already stated, by nature, the cost-benefit analysis is an instrument for ex-ante analysis. In that case, the effect has to be hypothetically determined. Possibly, it can be based on the ex-ante effectiveness assessment in the generic evaluation of the Directive. This effect can then be applied on the current level of occupational accidents and diseases.

##### **Case of an ex-post evaluation**

When it is used ex-post, the effect of regulation compliance on occupational accidents or diseases must be estimated by comparing the situation before and after the implementation of the legislation.

This technique requires isolating the effects of compliance with the law from other factors. This means that comparing the statistics before the implementation of legislation with statistics a few years after the compliance is only possible, if it is possible to identify all the variables that could independently influence the statistics of accidents and diseases. Indeed, changes in the number of accidents and diseases but also the evolution of the costs can be influenced by factors such as employment trends, inflation, increase of health costs, ... Such an approach would require the construction of an econometric model that goes beyond the ambitions of this project.

The generic methodology for the evaluation of OSH Directives integrates the dimension of the impact of the directive on the level of OSH. When the ex-post evaluation enables a quantification of the impact of the Directive on the number of occupational accidents and diseases, the cost-benefit analysis will obviously be based on these findings.

However, for the reasons explained above, in many cases, the evaluation of the impact but also of the effectiveness of the Directive will be expressed in qualitative findings that cannot easily be interpreted in quantitative terms.

An alternative to the many technical difficulties in the before-after comparison would be to make the ex-post analysis, under the conditions of an ex-ante analysis based on the evaluation of the effectiveness of the directive as it appears in the results of the generic evaluation of the Directive. The construction of a hypothetical impact scenario will be connected to the « qualitative » estimate of the Directive's effectiveness.

If the effectiveness is evaluated as being "high", a most optimistic scenario will be applied. A medium optimistic scenario and a low optimistic scenario will respectively be applied if the effectiveness is estimated as being "medium" or "low".

Quantification of the three types of scenarios is a difficult operation and will be a task for the evaluator. The study of literature findings on the effectiveness of prevention programmes in businesses may serve as background information. Nevertheless, the following ranges of effectiveness can be reasonably accepted: 5 to 10% in an optimistic scenario, 3 to 5% in a moderately optimistic scenario and 1% to 3% in a less optimistic case.

#### **4.3.3 Estimation of the compliance benefit**

Benefits are generated by a decrease of the occupational accident and disease costs. The first operation in calculating the compliance benefit is to estimate the cost of accidents and the burden of diseases that are within the focus of the Directive at the time of the evaluation in an ex-ante case, and the identification of risk factors tackled by the legislation will enable to list the types of occupational accidents and diseases resulting from these risk factors.

This causal relationship should if possible be guided by information gathered from the literature. This step consists of creating the "scope" of the analysis. Also, statistical data on these occupational accidents and diseases need to be collected here.

#### **Step 1 Identifying the risk factors tackled by the legislation**

This identification can lead to identifying the risk factors such as a piece of equipment or exposure to a dangerous substance.

#### **Step 2 Identifying causal relationships**

The effects on health of the risk factors concerned (causal agent) can be found in the literature or in occupational accident databases.

This analysis requires the construction of the scope for the calculation of the illness cost. One needs to list the types of costs, to categorise them, to identify the data sources and to calculate the overall cost to society.

#### **Step 3 Identifying the types of costs to be taken into account**

Costs of accidents at work and work-related illness need to be analysed on three levels: the society, the company and the victim. These three levels are affected by the consequences of poor working conditions and incur costs. But the costs are not equally distributed between the three groups and are not perceived in the same way. The allocation of costs among the employer, the worker and the rest of society can also vary depending on the characteristics of the compensation regimes in force in each country. As this allocation has no impact on the overall illness cost, such a distinction is not necessary in this study.

As suggested at 3.6, this proposal has structured the costs into three main categories: direct, indirect and human costs.



Category	Type of Cost	Definition	Examples
<b>DIRECT</b>	Care expenditure	Medical expenses (or advances) to cure the injury	<i>First aid Medical expenses in hospital, drugs, rehabilitation, transport, administrative costs, Medical expenses not covered by insurance or social security systems</i>
	Material damage	All damage occurring at the time of injury	<i>Damage (machines, cleaning ...) Private insurance premiums Damages potentially not covered (clothing...)</i>
	Emergency services	All emergency services that may be involved during an accident	<i>Ambulance Police Fireman</i>
	Funeral expenses	All funeral expenses incurred for a deceased worker's funeral	<i>Covered burial and funeral expenses (net of compensation)</i>
<b>INDIRECT</b>	Productivity loss	Decreased productivity after shutting down or slower production due to damage or accidents affecting the workers' physical integrity	<i>Decreased productivity (short term - accident) Decreased capacity production (long term – occupational sickness/handicap)</i>
	Payroll costs	Financial implications caused by changes in wage levels of the injured and / or other workers	<i>Overtime premiums Loss of earnings (net of compensation) Decrease in wages due to a change path Professional (net of compensation) Uncollected taxes Income Financial state assistance</i>
	Social Benefits	Overall benefits enjoyed by the worker, additionally to pay	<i>Benefits borne by the employer, for a worker not productive  Lost benefits assumed by the community</i>
	Housework	Economic services lost in the household that are outside the labour market, but could have been produced by another person on the market without the need to change the utility for household members	<i>Housework compensated  Inability to perform the housework (net of compensation)  Overburdening of other members of the household</i>
	Administrative costs	Overhead costs for hiring a substitute	<i>Recruitment Training Administrative fee</i>
	Legal expenses generated by court proceedings		<i>Medical conflicts Defence file Proceedings</i>
	Image	Financial losses relating to reputation Negative image engendered by an accident at work	<i>Loss of contracts Recruiting difficulties</i>
<b>HUMAN COST</b>	Human costs	Human costs that affect quality of life (e.g. physical pain, suffering and loss of enjoyment of life)	<i>Problems in labour relations  Stress and anxiety in other workers  Pain, anxiety, stress and loss of enjoyment of life after the accident, family members and friends (net of compensation)  Family Problems</i>

Source: Lebeau Martin, Duguay Patrice, *Les coûts des lésions professionnelles : une revue de la littérature*, IRSST, Rapport R-676, 2011.

#### Step 4 Identifying data sources

The ability to put a monetary value on the variables identified in the previous step relies to a great extent on the availability of statistical data, access to that data and their reliability.

The identification of the statistical data is the step that determines the costs that will be expressed in monetary value and the ones that will not be defined in that way. (See next step).

## Step 5 Categorising the costs

As already mentioned above, the costs are borne by individuals, by companies and by society. However putting a monetary value on some of them is a highly hazardous exercise. The lack of data but also the subjectivity and weakness of evaluation methods make methodological choices necessary.

The costs of accidents and diseases take all of the following cost components<sup>5</sup> into account:

° **Identified costs:** costs for which it can easily be admitted that they are related to the occupational diseases or occupational accidents in question, but for which quantification is too difficult or even impossible to establish (e.g. for the company: loss of image, material damages...). This type of costs can be listed for the record but will not enter into the benefit calculation.

° **Evaluated costs:** For the direct costs, it concerns mainly costs of care. For the indirect costs, it concerns the loss of production resulting from absenteeism, premature death or early withdrawal from labour market due to illness and compensation costs. For the human cost, it concerns an estimate for the loss of quality of life.

In our model, only the last type of cost is evaluated in monetary values. The other costs should be listed as a reminder, but they cannot be evaluated on a monetary basis.

## Step 6 Calculating the costs

The time dimension is important in analyzing illness costs, since an injury may have financial consequences for many years or, in the case of occupational diseases, there is a latency period. The calculation of the illness costs can be based either on the incidence or on the prevalence.

When the calculation is based on incidence, only new injuries/diseases that have occurred during a particular year are taken into account and it estimates the total cost of those injuries, not whether they extend over one or more years. However, since all the costs associated with the injury do not occur in the same year, the future costs are assessed and discounted, which brings a degree of uncertainty into the estimations.

An analysis on prevalence focuses only on the costs in a particular year, regardless of the date of the injury. This approach is much simpler to apply because it requires less data and no assumption with regard to future costs. This is an approach that is widely used, especially when occupational diseases are concerned<sup>6</sup>, which is why this method is preferred.

### *Calculation of care costs and compensation:*

The basis for calculating the care costs and the compensation costs are the data of the year of evaluation related to the type of occupational accidents and diseases identified in step 2.

### *Calculation of productivity loss:*

The productivity loss represents the loss in terms of revenue generated by the number of not worked days per year (absenteeism). In case of premature death or early retirement, the estimation has to be reduced to an annual amount.

### *Calculation of human costs:*

If many countries recognize non-pecuniary losses as being subject to financial compensation, significant differences exist in terms of how and in how far these damages should be financially compensated. The literature shows that the magnitude of pain and suffering damages for personal

<sup>5</sup> Ibidem

<sup>6</sup> Jozef Pacolet, et.al., Sociale kosten-batenanalyse van alcoholgebruik en –misbruik in België, Hiva, KULeuven, 2003

injuries differ greatly between and, even, within countries<sup>7</sup>. The jurisprudence of compensation granted by courts for personal damages in case of accidents does not provide a sufficient large and stable framework to serve as a reference to put a price on suffering and pain or more generally on the loss of quality of living after an injury or an illness.

The concept of “Quality-Adjusted-Life-Years” (QALY) from the domain of health economics permits to assess the impact of different health conditions on the quality of life. A QALY expresses the value of living one year in a certain health condition. By monetising the QALYs, this impact can be expressed in monetary terms.

To calculate the QALYs, different health conditions are established ranging from perfect health to death. Each condition is assigned a QALY-weight varying from 0 (death) to 1 (perfect health). Different methods exist to establish the QALY-weight of an ailment. This model does not suggest a specific method as QALYs attributed to a specific injury or illness may possibly be found in the scientific literature. If not, standard questionnaires (such as the EuroQoL EQ-5D) may be used to calculate the weight of a QALY.

To estimate the cost of the loss of quality of life, it is necessary to attach a monetary value to a QALY. There are various methods to do this. A very common method is to calculate the willingness to pay for a QALY increase. Such amounts can be found in the literature. However the value of a QALY may very much vary: 80.000 €, 100.000 €, 150.000 €, 184.000 €<sup>8</sup>. The English National Institute for Clinical Excellence uses a lower limit of about 32.500 to 48.500 €. A Dutch evaluation from the year 2000 puts a value of a QALY at about 85.000 €<sup>9</sup>. In another estimate from the year 2000, an amount of 306.000 € is mentioned as median value of the different estimates (28 of the 35 estimates exceed 113.000 €).<sup>10</sup>

Experts from the Rotterdam Institute of Law and Economics suggest that an amount of 50.000 € (2008) would be a conservative figure attributed to a QALY to calculate human costs, but would not eventually overestimate the human costs as regard to the amounts granted for personal injuries by courts in Europe<sup>11</sup>.

The human cost is also evaluated on an annual basis.

#### *Overall estimate of the compliance benefit:*

The overall illness cost for the identified types of occupational accidents and diseases is the sum of the following costs:

- the direct costs (healthcare covered or not by the social security system and amounts paid by compensation boards) over the year,
- the indirect costs (mainly represented by the loss of productivity) over the year,
- the human costs over the year,

related to those occupational accidents and diseases.

## **5. Methodological Limitations of the Model**

As already stated in the introduction, the cost-benefit analysis, however useful it can be, suffers from many uncertainties. The available data as well as the chosen calculation methods can lead to bias.

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<sup>7</sup> Vaia Karapanou, Louis Visscher, The magnitude of pain and suffering damages from a law and economics and health economics point of view, Rotterdam Institute of Law and Economics, 2008

<sup>8</sup> Vaia Karapanou, Louis Visscher, op. cit.

<sup>9</sup> Bomhoff, Het rendement van de gezondheidszorg, NYFER, 2000

<sup>10</sup> R.A. Hirth, et.al., Willingness to pay for a quality-adjusted-life-year: In Search of a Standard, in: Medical Decision Making, n° 340, 2000

<sup>11</sup> Vaia Karapanou, Louis Visscher, op. cit., The comparison concerns the amounts granted by courts in different european countries (The Netherlands, Germany, Greece, Italy) for the same injuries.

The available data can lead to double counting, since transfers between agents are one of the insurance system operations. Moreover, the occupational safety accidents and diseases usually suffer from a phenomenon of under-reporting. Also, occupational diseases are not defined in the same way in all European countries. All those difficulties can make the cost-benefit analysis exercise quite hazardous.

The choice of the human capital theory for evaluating the benefits leads inevitably to underestimate the real "sickness cost". The quality of the estimates will also very much be depending on the availability of good quality statistical data, if available at all.

The crucial point however remains the assumptions on the effectiveness of compliance measures. The impact of the measures will depend on many contextual factors that are difficult to grasp even for observers from the companies themselves.

As the model does not monetise many aspects of the benefits, the positive impact of improvements in working relations, workers' motivation or company image, e.g. are not taken into consideration. The positive effects such as a legal basis for workers to claim their rights for better protection of health and safety are not reflected in the cost-benefit model.

Cost-benefit analysis is not a rule for decision. It is a tool that may help the decision-making process in addition to other in-depth and qualitative analyses.

## 6. Bibliography

Avraham Ronen, Putting a Price on Pain-and-suffering Damages: A Critique of the Current Approaches and a Preliminary Proposal for Change, in: *Northwestern University Law Review*, Vol. 100, n° 1, 2006, pp. 87-120.

Bartel Ann P. and Thomas Lacy Glenn, Direct and indirect effects of regulation: a new look at osha's impact, in : *Journal of Law & Economics*, vol. 28, April 1985, 25 p.

Béjan Sophie, Trontin Christian, Conditions de travail et coût du stress: une évaluation économique, Université de Bourgogne, INRS, 12 p.

Best practice regulation handbook, Australian Government, Department of Finance and Deregulation, 2010

Business Compliance Costs Statements. Guidelines for Departments. Ministry of Economic Development, 2001

Drie jaar uitvoering REACH in Nederland (2007-2010). Evaluatierapport, Bureau KLB, 2011

Driesen David M., Distribution the costs of environmental, health and safety protection: the feasibility principle, cost-benefit analysis and regulatory reform, in: *Environmental Affairs*, vol. 32, n° 1, 2005, 95 p.

Hakan Brodin, Hodge Stephen, A guide to quantitative Methods in health impact assessment, Swedish national Institute of Public health, 2008, 27 p.

Handbook of cost-benefit analysis, Commonwealth of Australia, 2006

Karapanou Vaia, Visscher Louis, The Magnitude of Pain and Suffering Damages for a Law and Economics and Health Economics Point of View, Rotterdam Institute of Law and Economics of the Erasmus School of Law, 2008, 19 p.

Kip Viscusi W., The impact of occupational safety and health regulation, in: *The Bell Journal of Economics*, Vol. 10, n° 1, spring 1979, pp. 117-140.

Kramer Ina, Bödeker Wolfgang, Return on Investment in Kontext der Betrieblichen Gesundheitsförderung und Prävention: IGA Report 16, IGA, 2008, 36p.

Krämer Walter, How to Overreach oneself – a critical view on the EU Commission's Estimate of Health Benefits of its new chemicals Policy, 32 p.

Langhoff Thomas, Integration ökonomischer Nutzenpotentiale des Arbeitsschutzes für betriebliche Performance measurement und Controllingssysteme, BauA, 2003.

Lebeau Martin, Duguay Patrice, Les coûts des lésions professionnelles: une revue de la littérature, IRSST, Rapport R-676, 2011.

Lunde Jensen Per, et. Al., The Economic appraisal of European Union health and safety at work legislation : final report to the European Commission, December 1995.

Measuring Compliance Costs. Evaluation of the Dutch Standard Cost Model and the Australian Cost Model (Incorporating a Trial Measurement of the Costs Arising from the Schedules to the Securities Regulations 1983), PriceWaterhouseCoopers for the Ministry of Economic Development, New Zealand, 2006

Pacolet Jozef, et.al., Sociale kosten-batenanalyse van alcoholgebruik en -misbruik in België, Hiva, KULeuven, 2003

Pathak Maniv, The costs to employers in Britain of workplace injuries and work-related ill health in 2005/2006, Discussion Paper Series n°2, HSE, 2008

Regulation of the European Parliament and of the Council concerning the registration, evaluation, authorisation and restrictions of chemicals: extended impact assessment, Commission Staff Working Paper, European Commission, October 2003, 33 p.

Reihlen Antonia, Luskow Heike, Analysis of studies discussing benefits of reach, Okopol, February 2007, 58 p.

Report on Economic Impact of the Safety, Health and Welfare at Work Legislation, prepared for the Department of Enterprise, Trade and Employment, Indecon, 2006.

Shapiro Sidney A., Occupational safety and health regulation, in: Encyclopedia of Law and Economics, pp. 596-622.

Sugarman Stephen D., A Comparative Law Look at Pain and Suffering Awards, DePaul L. Review, N° 55, 2005-2006, pp. 399-434.

Treich Nicolas, Lerna-Inra, University of Toulouse, l'analyse coût-bénéfice de la prévention des risques, 2005

Van Trimpont D., Denoyelle Ch., Tableau indicatif en matière de réparation du dommage corporel pour les praticiens de la réparation du préjudice, Bureau d'Avocats Elfri De Neve, Belgique, 2008.

Weil David, Assessing OSHA performance: New evidence from the construction industry, in: Journal of Policy analysis and Management, Vol. 20, issue 4, Fall 2001, 12 p.

Work, health and safety. An inquiry into occupational health and safety. Volume 2: Appendices, Commonwealth of Australia, 1995