



In order to encourage improvements, especially in the working environment, as regards the protection of the health and safety of workers as provided for in the Treaty and successive action programmes concerning health and safety at the workplace, the aim of the Agency shall be to provide the Community bodies, the Member States and those involved in the field with the technical, scientific and economic information of use in the field of health and safety at work.

European Agency for Safety and Health at Work <http://osha.eu.int>

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M O N I T O R I N G

The State of Occupational Safety and Health in the European Union — Pilot Study

Summary Report



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The State of
Occupational Safety
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in the European Union – Pilot Study
Summary Report

A great deal of additional information on the European Union is available on the Internet. It can be accessed through the Europa server (<http://europa.eu.int>).

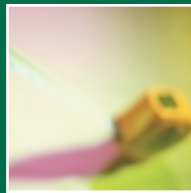
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FOREWORD
CONTENTS

FOREWORD

According to Article 2 of the Council Regulation establishing a European Agency for Safety and Health at Work, the aim of the European Agency is to encourage improvements in the working environment by providing the Community bodies, the Member States and those involved in safety and health at work with the technical, scientific and economic information of use in the field of safety and health at work. For the purpose of achieving the aim described in Article 2, the European Agency carries out information projects to collect and disseminate relevant information in the Member States.

The European Agency information project "The State of Occupational Safety and Health (OSH) in the European Union (EU) - Pilot Study" is a first step to the development of a system for monitoring the safety and health in the EU. It aims at providing decision-makers at Member State and European level with an overview of the current safety and health situation in the EU and in this way supporting the identification of common challenges and priority areas for preventive actions.

This summary report presents a condensed overview of both the major findings and of the information contained in the main "The State of OSH in the EU-Pilot Study" report. It is intended to be read by a broad audience, i.e. those who may be involved in setting/reviewing OSH policies on European/national level or conducting OSH research, studies and field surveys. The reader can find information about the data sources and methodology used in the Pilot Study. Furthermore the major findings on the State of OSH in the EU are presented. In Chapter 4, the reader is presented with the initial lessons learned during the course of this Pilot Study, i.e. information gaps on particular risk categories. More details will become evident from the feedback of the European Agency's "Evaluation project".

All associated documents such as main report, appendices, manual for the data collection and all national reports from the Member States can be found on the attached CD-ROM.

The European Agency for Safety and Health at Work wishes to thank the Focal Points, the Thematic Network Group OSH Monitoring, the Expert Group assisting the European Agency in drafting the manual for the data collection for their comprehensive work and all other individuals involved in this information project.

We especially thank the European Foundation for the Improvement of Living and Working Conditions and Eurostat for their kind co-operation and for providing the European data for this information project.

Bilbao, October 2000

EUROPEAN AGENCY FOR SAFETY AND HEALTH AT WORK

CONTENTS

PART 1: SUMMARY REPORT

FOREWORD	5
CONTENTS	7
1 INTRODUCTION	10
2 DATA SOURCES AND METHODOLOGY USED IN THE PILOT STUDY	12
2.1 Manual	12
2.2 Data Sources	13
2.3 Consolidation Process	14
3 MAJOR FINDINGS ON THE STATE OF OCCUPATIONAL SAFETY AND HEALTH IN THE EUROPEAN UNION – PILOT STUDY	18
3.1 Key Points	18
3.2 The Need for the Development of Additional Preventive Actions	23
3.3 Risk Categories	25
3.4 Chemical/Biological Hazards	28
3.5 Emerging Risks	29
4 INITIAL LESSONS LEARNED	32
4.1 Information Gaps European/National Data Situation	33
4.2 Information Gaps on Particular Risk Categories	36
4.3 Strengths and Weaknesses	37
5 EUROPEAN PICTURE ON EXPOSURE INDICATORS/ OSH OUTCOMES	40

PART 2: CD-ROM

- Main Report and Appendices
- Summary Report in all languages
- National Reports of all Member States
- Manual used by the Focal Points for the Data Collection



INTRODUCTION

INTRODUCTION

To pursue the goal of making a contribution towards the development of a monitoring system for safety and health at work in the European Union, the European Agency decided to undertake a comprehensive assessment of the state of Occupational Safety and Health (OSH) throughout EU-Member States. This led to:

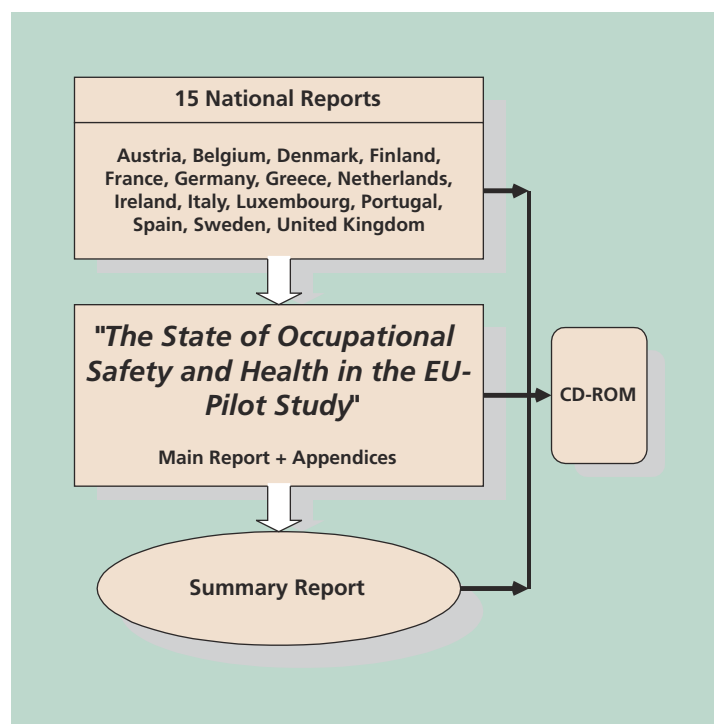
- the production of a national report regarding the state of OSH in each of the Member States; and
- the production of a consolidated report regarding the state of OSH in the EU based upon the fifteen national reports.

From the onset the large amount of work to be undertaken and the effort required to achieve the objectives were recognised. The end result is that the Pilot Study provides a current “snap shot” of the state of OSH in the European Union. In the process of presenting this European consolidated picture and on the lessons learned the project also identified the requirements for conducting future and more regular updates of OSH information across the European Union.

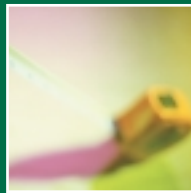
This summary report is structured in the following five Chapters:

- Chapter 1 the introduction, gives an overview of the Pilot Study;
- Chapter 2 discusses the data sources and the methodology used;
- Chapter 3 presents the major findings from the Pilot Study which includes: key points, the need for developing additional preventive actions, sectors, occupations and gender at risk and other risk categories, chemical/biological hazards and emerging risks;
- Chapter 4 discusses the initial lessons learned from undertaking the Pilot Study; and
- Chapter 5 provides a European picture on exposure indicators/ OSH outcomes assessed in the Pilot Study.

The summary report provides a compacted overview of the complete Pilot Study as illustrated below.



2.



DATA SOURCES AND METHODOLOGY
USED IN THE PILOT STUDY

DATA SOURCES AND METHODOLOGY USED IN THE PILOT STUDY

At the heart of the Pilot Study was the manual, which provided the framework for each Focal Point to use in order to establish the state of OSH at the national level. The national reports were then consolidated to give the European picture. Completing the manual required a combination of data sources to be used, primarily from national sources as well as from European sources including the Second European Survey on Working Conditions (ESWC) from the European Foundation for the Improvement of Living and Working Conditions and European Statistics on Accidents at Work (ESAW) from Eurostat - the European Statistical Office.

Both the manual and the data sources used are discussed in the next two sections.

2.1

MANUAL

A group of experts nominated by the Member States as well as from the European Commission, Eurostat and European Foundation for the Improvement of Living and Working Conditions assisted the European Agency in developing a manual for collecting the data on the state of occupational safety and health in the Member States. A number of specific indicators considered best suited for describing the exposure situation at work, the context of work, the outcomes and the preventive capacity in the Member States were selected and included in the manual to provide a comprehensive picture of the working environment in the Member States. The exposure indicators/OSH outcomes included in the manual encompassed the following:

- Physical exposures: noise, vibration, high temperature, low temperature;
- Posture and movement exposures: lifting/ moving heavy loads, repetitive movements, strenuous working postures;
- Chemical exposures: handling chemicals, carcinogenic substances, neurotoxic substances, reproductive hazards;
- Exposures to biological factors;
- Psycho-social working conditions: high speed work, workplace dictated by social demand, machine dictated workplace, physical violence, bullying and victimisation, sexual harassment, monotonous work; and
- Occupational Safety and Health (OSH) Outcomes: accidents at work with more than 3 days absence, fatal accidents, work-induced musculoskeletal disorders, stress, occupational sickness absence and occupational diseases.

In addition to the specific exposure indicators listed above a number of questions were formulated with respect to the context of work, including:

- telework (an estimation of the number of people undertaking telework and particular points regarding safety and health at work);
- particular concerns regarding working conditions of people with fixed term contracts, temporary employment agency contracts, apprenticeship or any other training schemes and the self-employed;
- use of Personal Protective Equipment;
- provision of information about risks at work; and
- OSH training provided by the employer.

Each Focal Point was asked in the manual to describe the preventive capacity of their national occupational safety and health systems by presenting an overview of the organisational structure, number of Labour Inspectors, percentage of workers covered by preventive OSH services and the number of workers receiving occupational safety and health training each year.

Once the manual had been issued it was left to the individual Focal Points to decide on the exact method of data collection to be operated. This approach was adopted because it was realised by the Focal Points themselves, that there were in existence within each Member State vastly different methods and procedures for data collection and collation.

In some cases a committee of experts was formed to complete the manual, whilst in others, the individual Focal Point completed the manual after seeking out relevant data and/or canvassing appropriate expert opinion.

The manual is reproduced on the CD-ROM.

2.2 DATA SOURCES

The data collection was based on existing data available either at European and/or at the national level. Further the Member States received tailor-made annexes with the relevant European data from the European Foundation for the Improvement of Living and Working Conditions and Eurostat.

National process for collating OSH information

In general, national networks were utilised to gather the relevant information and these were frequently co-ordinated by government groups supported by the relevant technical experts and other organisations. Information sources used included national surveys, national statistical reports and expert opinion from national network organisations.

When the situation arose in which there was a lack of available information question sets were devised in order to query the relevant experts in the particular field of safety and health at work. Experts were chosen from the authorities concerned with safety and health experience. Information was obtained from a wide selection of organisations, which included the likes of Social Partners, Workers Compensation Board, employee insurance funds and medical organisations.

As well as the use of national data, information from two European level sources was used. These data sources are discussed below.

Second European survey on working conditions (ESWC)

At the end of 1995 and beginning of 1996 the second *ESWC* was carried out by *the European Foundation for the Improvement of Living and Working Conditions*. A representative sample of the total active population, i.e. people who were, at the moment of the interview, either employed or self-employed was sought.

Individuals were interviewed from the age of 15 years and above. All retired, unemployed people, as well as housewives, etc. were excluded. Non-Europeans were included on the condition that they could be interviewed in the respective national language(s) of the countries where they work.

Interviews were carried out in all Member States of the European Union with the respondents being interviewed at home.

The target was 1,000 cases per country (500 in Luxembourg, 2,000 in Germany: 1,000 for former East Germany and 1,000 for former West Germany).

It is recognised that both the methodology and any comparisons made with the data will have limitations to which the reader should be aware. These limitations are discussed in detail in the report "Second European Survey on Working Conditions" (published by the European Foundation for the Improvement of Living and Working Conditions in 1997) and include: the different industrial structures between countries, the legal and cultural differences, the distribution of the workforce between sectors and occupations and the sample size used.

European statistics on accidents at work (ESAW)

The *ESAW* project carried out by *Eurostat* in close co-operation with the Member States of the European Union aims at collecting Union-wide comparable data on accidents at work and establishing a database.

All cases of accidents at work leading to an absence of more than three calendar days are included in the *ESAW* data.

An accident at work is defined as a "discrete occurrence in the course of work, which leads to physical or mental harm". This includes cases of acute poisoning and wilful acts of other persons but excludes deliberate self-inflicted injuries and

accidents on the way to and from work (commuting accidents). “In course of work” means whilst engaged in an occupational activity or during the time spent at work. This includes cases of road traffic accidents in the course of work.

A fatal accident is defined as an accident, which leads to the death of a victim within one year (after the day) of the accident. In practice the majority of the Member States include the cases of fatal accidents at work counted in their national statistics.

Depending on the reporting procedure in the Member States (insurance or non-insurance based systems) the reporting levels for accidents at work differ. In general, the reporting levels are very high in the insurance based systems and considered to be about 100 percent. The non-insurance based system has only a medium reporting level usually ranging from 30 to 50 percent, on average, for all branches of economic activity taken together. The data from the two sources, insurance based data or non-insurance based data corrected according the reporting level, are not strictly comparable.

2.3 CONSOLIDATION PROCESS

An example of the consolidation methodology is presented in this section for “Occupations considered most at risk from noise exposure in the workplace”.

From the national reports the identified occupations were inserted into the spreadsheet model, shown below. This then gives an indication of the complete range of occupations the Focal Points reported as being most at risk to noise exposure at work.

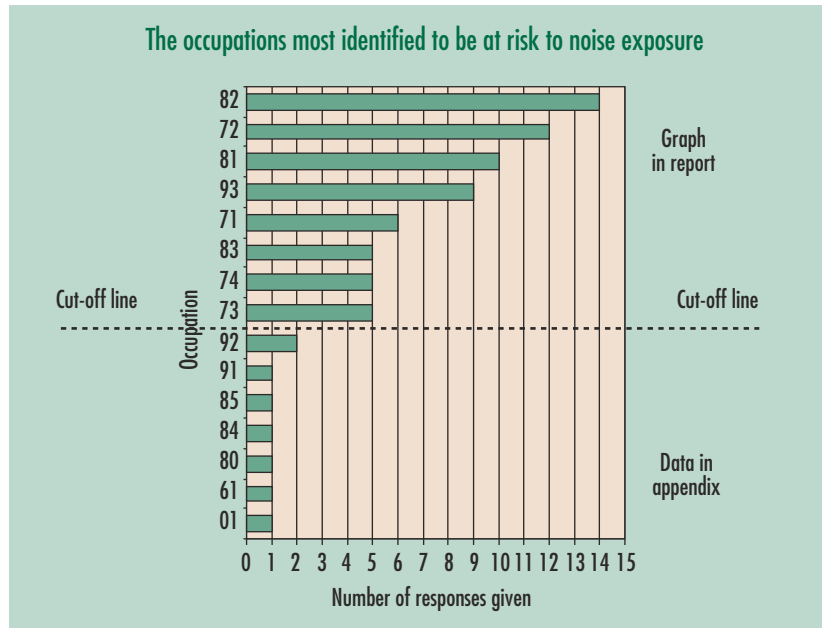
Each Focal Point was requested to identify five occupations they considered most at risk. Therefore, the maximum number of different occupations that could be identified was seventy-five (5 x 15). With this number of responses, presenting legible graphs to the reader became difficult. For this reason a cut-off value was introduced to decide which occupations to include

Occupation (ISCO)	Total	FOCAL POINT														
		UK	Finland	Germany	Ireland	Spain	Denmark	Belgium	Greece	Austria	Sweden	Italy	Luxembourg	France	Netherlands	Portugal
01	1		*													
61	1		*													
80	1						*									
84	1								*							
85	1								*							
91	1												*			
92	2			*						*						
73	5	*			*	*			*							*
74	5	*				*	*					*				*
83	5			*				*				*	*			*
71	6		*		*	*			*	*	*					
93	9			*	*		*	*	*	*	*		*			*
81	10	*		*	*	*	*		*	*	*	*	*	*	*	*
72	12	*	*		*	*	*		*	*	*	*	*	*	*	*
82	14	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

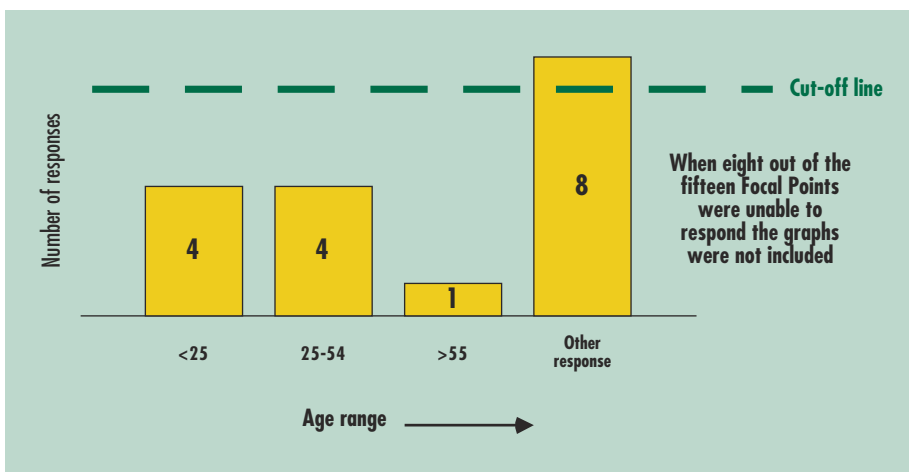
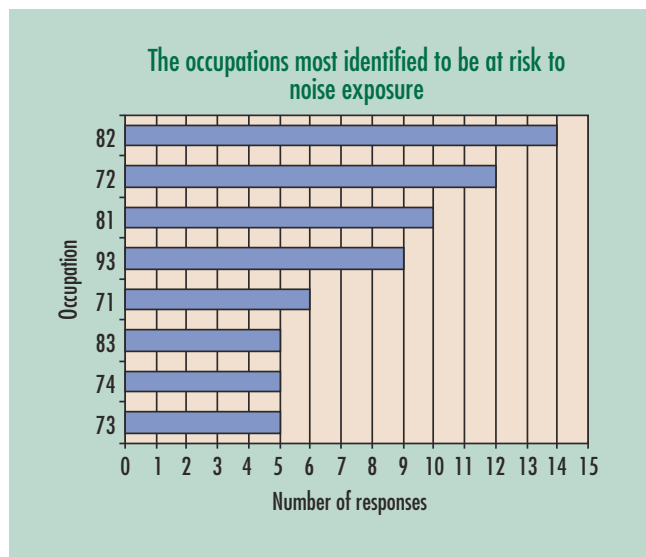
in the graph and which to include in a table in an appendix. This cut-off value was left to the discretion of the OSH experts analysing the information.

Data from the above spreadsheet has been inserted into the graphical model on page 15. This graph illustrates a natural cut-off at around five responses. In this case, five or more responses were included in the graph and below five the occupations were contained in a table in an appendix.

Having applied the cut-off criteria to the data in the spreadsheet, the occupations identified in the national reports were only presented in the graph for five or more responses, as illustrated below.



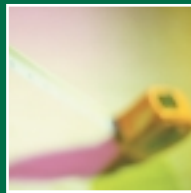
In an ideal situation each graphical model developed for the project would have been used to present the findings for all risk categories (i.e. sector, occupation, gender, age, company size and employment status). However, in a high proportion of questions, national information was not available. In these situations it was considered unsound to present the information in graphs. Therefore, graphs have only been presented where eight or more Focal Points provided a response. An example is illustrated below for the category "age". Ultimately, this meant that few graphs were presented for: company size, gender, age and employment status because the data provided by the Focal Points did not allow the European picture to be illustrated.



The following level of information is presented in the main report for each exposure indicator/OSH outcome:

- *Overview on the main findings;*
- *A European picture:* this section provides a European picture using data from the 2nd Survey European Foundation Dublin (ESWC-Data) or data from the European Statistics on Accidents at Work of Eurostat;
- *Comparison between European data and national data:* if Focal Points presented national data on exposure indicators, they were asked to compare this data, with ESWC-data, in order to identify and comment on any differences;
- *Sectors and occupations at risk:* the most frequently identified sectors and occupations which the Focal Points considered to be most at risk are provided and commented on;
- *Information on other risk categories such as company size, gender, age category and employment status:* whenever data given by the Focal Points allow a European picture with regard to these risk categories, the findings are presented;
- *Trend:* the Focal Points indicated if the number of workers exposed to the exposure indicator or suffering from the OSH outcome over the last 3-5 years had decreased, remained stable or increased. In addition, their submitted comments regarding the identified trends are given; and
- *Evaluation:* this section includes information consolidated from the national reports about the necessity for the development of additional preventive actions. Furthermore, details about these actions described by the Focal Points are presented.

3.



MAJOR FINDINGS ON THE STATE OF
OCCUPATIONAL SAFETY AND HEALTH
IN THE EUROPEAN UNION –
PILOT STUDY

MAJOR FINDINGS ON THE STATE OF OCCUPATIONAL SAFETY AND HEALTH IN THE EUROPEAN UNION – PILOT STUDY

This Chapter summarises the major findings on the State of Occupational Safety and Health in the European Union.

It begins in Section 3.1 with a review of the “key points” from the Pilot Study, which in essence is an overview of the consolidated information. In addition, summarised findings for each exposure indicator/OSH outcome assessed in the Pilot Study are presented in the Chapter 5 “European Picture on Exposure Indicators/OSH Outcomes”.

Where the national reports indicated a need for the development of additional preventive actions to combat particular exposure indicators/OSH outcomes, these are discussed in Section 3.2.

The picture within the European Union, especially with respect to sector and occupation categories at risk from workplace hazards, is discussed in Section 3.3. The findings from chemical and biological hazards are included in Section 3.4.

Identification of emerging risks and their potential implications on the working environment are discussed in Section 3.5.

3.1

KEY POINTS

Exposures in the working environment

Physical/chemical exposures

Physical/chemical exposure indicators	European picture workers exposed ¹	Number of Focal Points identifying development of additional preventive action is necessary	Most identified sector(s) ²	Most identified occupation(s) ³
Noise	28%	7	Manufacture of fabricated metal products, except machinery and equipment; manufacture of wood, wood products and cork, except furniture and manufacture of straw articles and plaiting materials	Machine operators and assemblers
Vibration	24%	9	Construction	Labourers in mining, construction, manufacturing and transport; extraction and building trades workers; drivers and mobile plant operators
High temperature	20%	6	Manufacture of basic metals	Labourers in mining, construction, manufacturing and transport
Low temperature	23%	7	Manufacture of food products and beverages; construction	Labourers in mining, construction, manufacturing and transport; extraction and building trades workers
Handling chemicals	14%	8	Manufacture of chemicals and chemical products	Labourers in mining, construction, manufacturing and transport; stationary-plant and related operators

¹ ESWC-data, 2nd Survey European Foundation Dublin 1996.

² Only the sector with the highest number of responses is indicated. If there are more than one sector with equal numbers of indications, all these sectors are mentioned.

³ Only the occupation with the highest number of responses is indicated. If there are more than one occupation with equal numbers of indications, all these occupations are mentioned.

Exposure to vibration and its subsequent ill health effects was the most frequently reported physical risk for which nine Focal Points considered the development of additional preventive actions was required to minimise the risk. This was closely followed by “Handling chemicals”, for which eight Focal Points in their national report declared the requirement for additional preventive actions.

As the exposure indicators, noise, vibration, high temperature, low temperature and handling chemicals, are common hazards across the working environment there was no one particular sector category identified as being most at risk. However, in relation to the occupation category, “Labourers in mining, construction, manufacturing and transport” was the most frequently reported occupation at risk from vibration, high temperature, low temperature and handling chemicals. “Machine operators and assemblers” were considered most at risk from noise exposure.

Posture and movement exposures

Posture and movement exposure	European picture workers exposed ⁴	Number of Focal Points identifying development of additional preventive action is necessary	Most identified sector(s) ⁵	Most identified occupation(s) ⁶
Repetitive movements	57%	7	Manufacture of food products and beverages	Machine operators and assemblers
Strenuous working postures	45%	6	Construction	Labourers in mining, construction, manufacturing and transport
Lifting/moving heavy loads	34%	9	Construction	Labourers in mining, construction, manufacturing and transport

Exposure to lifting/moving heaving loads was the most frequently reported posture and movement exposure for which nine Focal Points considered the development of additional preventive actions was required to minimise the risk. This was followed by “Repetitive movements”, for which seven Focal Points in their national report declared the requirement for additional preventive actions.

The sector category “Construction” was reported most at risk from “Strenuous working postures” and “Lifting/moving heavy loads”. Both of which can be affected by ergonomic factors within the workplace. “Manufacture of food products and beverages” was the sector category reported as being most at risk from “Repetitive movements”.

The occupation category “Labourers in mining, construction, manufacturing and transport” was the most frequently reported occupation at risk from “Strenuous working postures” and “Lifting/moving heavy loads”. “Repetitive movements” was the most frequently reported posture and movement exposure affecting the occupation category “Machine operators and assemblers”.

Psycho-social working conditions

Psycho-social working conditions	European picture workers exposed ⁴	Number of Focal Points identifying development of additional preventive action is necessary	Most identified sector(s) ⁵	Most identified occupation(s) ⁶
Workpace dictated by social demand	67%	3	Hotels and restaurants	Customer services clerks
High speed work	54%	6	Hotels and restaurants	Corporate managers; customer services clerks
Monotonous work	45%	6	Tanning and dressing of leather, manufacture of luggage, handbags, saddlery, harness and footwear; manufacture of textiles; manufacture of food and beverage	Machine operators and assemblers; sales and services elementary occupations
Machine dictated workplace	22%	4	Manufacture of textiles	Machine operators and assemblers
Bullying and victimisation	8%	7	Health and social work	Sales and services elementary occupations; personal and protective services workers; customer services clerks
Physical violence	4%	7	Health and social work	Personal and protective services workers; life science and health associate professionals
Sexual harassment	2%	2	Hotels and restaurants; health and social work	Personal and protective services workers

The above table indicates that there was no psycho-social working condition for which a majority of Focal Points identified the need for developing additional preventive actions. Although, “Bullying and victimisation” and “Physical violence” were both identified in seven national reports as issues requiring such actions. However, from a European picture (data from the 2nd Survey European Foundation Dublin) both of these topics show a low rate regarding the number of workers exposed.

For all seven psycho-social working conditions exposure indicators there was no one particular sector category reported as being most at risk. “Hotels and restaurants” was most frequently reported as being at risk from “Workpace dictated by social demand”, “High speed work” and “Sexual harassment”. The “Health and social work” sector was identified as being at risk from “Bullying and victimisation”, “Physical violence” and “Sexual harassment”.

As the psycho-social working conditions are applicable across the complete working environment there was no one occupation category identified as being most at risk. In fact two occupations were reported more than three times, “Customer services clerks”, reported at risk from workplace dictated by social demand, high speed work and bullying and victimisation and “Personal and protective services workers” which was reported to be at risk from bullying and victimisation, physical violence, and sexual harassment.

⁴ ESWC-data, 2nd Survey European Foundation Dublin 1996.

⁵ Only the sector with the highest number of responses is indicated. If there are more than one sector with equal numbers of indications, all these sectors are mentioned.

⁶ Only the sector with the highest number of responses is indicated. If there are more than one sector with equal numbers of indications, all these sectors are mentioned.

OSH outcomes

OSH outcomes	Number of accidents/european picture workers exposed ⁷	Number of Focal Points identifying development of additional preventive action is necessary	Most identified sector(s) ⁸	Most identified occupation(s) ⁹
Accidents with more than three days absence	4, 757 611 in 1996 (Eurostat data)	7	Construction	Machine operators and assemblers
Fatal accidents	5,549 in 1996 (Eurostat data)	6	Construction	Labourers in mining, construction, manufacturing and transport; drivers and mobile plant operators; extraction and building trades workers
Occupational diseases	No European data	7	Construction	Metal, machinery and related trades workers; labourers in mining, construction, manufacturing and transport
Musculoskeletal disorders	30%	8	Construction	Labourers in mining, construction, manufacturing and transport
Stress	28%	10	Health and social work; education	Life science and health professionals
Occupational sickness absence	25%	5	Health and social work; public administration and defence, compulsory social security	Labourers in mining, construction, manufacturing and transport

OSH outcomes are ultimately the end effect from being exposed to particular workplace hazards. It is evident from the above table that ten Focal Points were in agreement that the development of additional preventive actions was required to combat "Stress". No other issue considered in the Pilot Study had as many responses for the need for further actions than stress. It must be appreciated that stress is an outcome (effect) and any preventive actions must be directed at treating the root cause. Root cause initiators may be any one, or combinations, of the exposure indicators previously discussed, or other workplace hazards.

Musculoskeletal disorders was the second most frequently reported OSH outcome for which eight Focal Points identified the need for the development of additional preventive actions.

In relation to the sector categories, "Construction" was most frequently reported in the national reports as being at risk from "Accidents with more than 3-days absence", "Fatal accidents", "Occupational diseases" and "Musculoskeletal disorders". The "Health and social work" sector category was identified as being at risk from "Stress" and "Occupational sickness absence".

Other than "Labourers in mining, construction, manufacturing and transport", there was no one particular occupation category that was most exposed to the OSH outcomes. The latter occupation was reported by the Focal Points as being at risk from "Fatal accidents", "Occupational diseases", "Musculoskeletal disorders" and "Occupational sickness absence".

Trend in the number of workers exposed

An increased trend in the number of workers exposed was reported in relation to the exposure indicators "High speed work" and "Stress".

The need for additional preventive actions

The main exposure indicators/ OSH outcomes for which the Focal Points reported that there was a need for developing additional prevention actions to combat the risk are summarised in the table below. The full table is reproduced in Chapter 3.2.

⁷ ESWC-data, 2nd Survey European Foundation Dublin 1996.

⁸ Only the sector with the highest number of responses is indicated. If there are more than one sector with equal numbers of indications, all these sectors are mentioned.

⁹ Only the sector with the highest number of responses is indicated. If there are more than one sector with equal numbers of indications, all these sectors are mentioned.

Exposure indicator/OSH outcome	Number of Focal Points reporting the development of additional preventive action is necessary
Stress	10
Vibration	9
Lifting/moving heavy loads	9
Handling chemicals	8
Musculoskeletal disorders	8

Stress was the indicator with the highest number of responses from the Member States reporting the need for the development of further preventive actions (10 Member States). Stress was a dominant hazard in the following sectors: "Health and social work", "Education", "Land transport, transport via pipelines", "Public administration and defence, compulsory social security" and "Agriculture, hunting and related service activities".

Most frequently identified sectors at risk

For all of the exposure indicators/OSH outcomes included in the Pilot Study a summary of the most frequently identified sector categories at risk is given in the table below. The full table is presented in Section 3.3.

Sector description	Total number of times identified
Construction	112
Manufacture of fabricated metal products, except machinery and equipment	63
Agriculture, hunting and related service activities	62
Health and social work	57
Manufacture of food products and beverages	52

In terms of chemical/biological hazards, the "Health and social work" sector was identified by fourteen Focal Points as being vulnerable to infectious biological hazard hepatitis B/C.

Most frequently identified occupations at risk

For all of the exposure indicators/OSH outcomes included in the Pilot Study a summary of the most frequently identified occupation categories at risk is given in the table below. The full table is presented in Section 3.3.

Occupation description	Total number of times identified
Labourers in mining, construction, manufacturing and transport	123
Metal, machinery and related trades workers	80
Extraction and building trades workers	76
Machine operators and assemblers	73
Stationary- plant and related operators	40

Gender

Males were most frequently identified as being most at risk to noise, vibration, high temperature and low temperature. Furthermore, males were considered most at risk to accidents with more than 3 days absence, fatal accidents and occupational diseases.

Females were most frequently identified as being most at risk to sexual harassment. Also, in their national reports the Focal Points frequently discussed females as being at risk from monotonous work, physical violence and repetitive movements.

Other risk categories

The self-employed, temporary workers and those on short term contracts were frequently discussed and commented upon by the Member States as being more at risk because of their restricted resource in particular limited access to safety and health training and information.

Telework

The number of “teleworkers” in the Member States varies from 0.6 - 9% of the working population. Occupational safety and health concerns reported were social isolation, excessive working hours, ergonomic design of the workplace and burden of proof and liability should a case of an accident at home occur. Also, the potential risk for a repetitive strain injury (RSI) was recorded.

Emerging risks

The topics associated with the emerging risks as reported by each Focal Point are presented below. Further explanations into these topic areas and their potential consequences are discussed in Section 3.5.

Topics
Changed work organisation
Young workers
Stress
Manual handling
Use of new chemicals
Research needs for “Health and social work” sector
Older workers
Violence
Repetitive strain

There was significant interest in the issues related to the changing working life together with an ongoing concern about psycho-social, ergonomic and chemical risk factors.

3.2 THE NEED FOR THE DEVELOPMENT OF ADDITIONAL PREVENTIVE ACTIONS

For each exposure indicator and OSH outcome detailed in the manual the Focal Points were asked to evaluate its present state in relation to safety and health effects and the adequacy of the current measures. The table below ranks the exposure indicators and OSH outcomes by the number of Focal Points reporting that the development of additional preventive actions was necessary.

Exposure indicator/OSH outcome	Number of Focal Points reporting the development of additional preventive action is necessary	
Physical exposures		
Vibration	9	Austria, Belgium, Denmark, Finland, Ireland, Italy, Portugal, Spain and United Kingdom.
Noise	7	Belgium, Finland, Ireland, Italy, Portugal, Spain and United Kingdom.
Low temperature	7	Austria, Belgium, Finland, Italy, Portugal, Spain and Sweden.
High temperature	6	Belgium, Finland, Greece, Italy, Portugal and Spain.
Posture and movement exposures		
Lifting/moving heavy loads	9	Austria, Belgium, Denmark, Finland, Italy, Portugal, Spain, Sweden and United Kingdom.
Repetitive movements	7	Austria, Belgium, Finland, Italy, Portugal, Spain and Sweden.
Strenuous working postures	6	Austria, Belgium, Finland, Italy, Spain and Sweden.
Chemical exposures		
Handling chemicals	8	Belgium, Finland, Ireland, Italy, Luxembourg, Portugal, Spain and United Kingdom.
Carcinogenic substances	6	Belgium, Germany, Ireland, Luxembourg, Portugal, Spain and Sweden.
Infectious biological factors	6	Finland, Ireland, Italy, Portugal, Spain and United Kingdom.
Reproductive hazards	5	Belgium, Finland, Ireland, Portugal and Spain.
Non-infectious biological factors	5	Finland, France, Ireland, Portugal and Spain.
Neurotoxic substances	4	Finland, Ireland, Portugal and Spain.
Psycho-social working conditions		
Physical violence	7	Belgium, Denmark, Finland, Netherlands, Ireland, Spain and Sweden.
Bullying and victimisation	7	Belgium, Denmark, Finland, Netherlands, Ireland, Spain and Sweden.
High speed work	6	Belgium, Denmark, Finland, Netherlands, Italy and Spain.
Monotonous work	6	Austria, Belgium, Denmark, Finland, Spain and Sweden.
Machine dictated workpace	4	Belgium, Denmark, Italy and Spain.
Workpace dictated by social demand	3	Denmark, Spain and Sweden.
Sexual harassment	2	Denmark and Spain.
Context of work		
Personal protective equipment	6	Belgium, Finland, Italy, Luxembourg, Portugal and Spain.
OSH outcomes		
Stress	10	Belgium, Denmark, Finland, Greece, Ireland, Italy, Portugal, Spain, Sweden and United Kingdom.
Musculoskeletal disorders	8	Austria, Belgium, Denmark, Finland, Luxembourg, Portugal, Spain and Sweden.
Accidents at work with more than 3 days absence	7	Belgium, Finland, Ireland, Italy, Luxembourg, Portugal and Spain.
Occupational diseases	7	Belgium, Denmark, Finland, Ireland, Italy, Portugal and Spain.
Fatal accidents	6	Belgium, Finland, Ireland, Italy, Portugal and Spain.
Occupational sickness absence	5	Belgium, Ireland, Luxembourg, Portugal and Spain.

The above table indicates a fairly evenly distribution for the need for further preventive action across all exposure indicators/OSH outcomes. The traditional workplace risks, represented in the physical exposures group, were still reported as needing to be adequately addressed, particularly exposure to vibration. However, within each exposure/OSH outcome groups there are varying degrees of differences for the need of further preventive actions between each Member State.

In the posture/movement exposure group, lifting/moving of heavy loads, often associated with manual handling, was a risk for which nine Member States identified the need for further preventive action.

In the psycho-social working conditions group both “Physical violence” and “Bullying and victimisation” were the leading risks for which further preventive action was required, closely followed by “High speed work” and “Monotonous work”.

Out of all the exposure indicators/OSH outcomes “Stress” was the risk identified by ten Member States requiring the need for additional prevention actions for further control in the working environment.

3.3 RISK CATEGORIES

Sectors and occupations

For each exposure indicator and OSH outcome the most frequently recorded sector and occupation categories are presented in the following two tables.

Sector category code	Sector description	Total number of times identified
45	Construction	112
28	Manufacture of fabricated metal products, except machinery and equipment	63
01	Agriculture, hunting and related service activities	62
85	Health and social work	57
15	Manufacture of food products and beverages	52
27	Manufacture of basic metals	34
60	Land transport; transport via pipelines	33
55	Hotels and restaurants	27
17	Manufacture of textiles	25
20	Manufacture of wood and of products of wood and cork, except furniture	23
75	Public administration and defence; compulsory social security	20
93	Other services activities	15
80	Education	15
24	Manufacture of chemicals and chemical products	14
14	Other mining and quarrying	13
02	Forestry, logging and related service activities	12
05	Fishing, operation of fish hatcheries and fish farms; service activities incidental to fishing	11
18	Manufacture of wearing apparel; dressing and dyeing of fur	11
52	Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods	11
26	Manufacture of other non-metallic mineral products	8
21	Manufacture of paper and paper products	7

Sector category code	Sector description	Total number of times identified
19	Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear	7
64	Post and telecommunications	6
65	Financial intermediation, except insurance and pension funding	5
50	Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel	4
90	Sewage and refuse disposal, sanitation and similar activities	3
40	Electricity, gas, steam and hot water supply	3
34	Manufacture of motor vehicles, trailers and semi-trailers	3
30	Manufacture of office, accounting and computing machinery	3
22	Publishing, printing and reproduction of recorded media	3
25	Manufacture of rubber and plastic products	3
16	Manufacture of tobacco products	3
51	Wholesale trade and commission trade, except of motor vehicles and motorcycles	2

“Construction” was the most frequently reported sector (112 times) most at risk in the following nine of the twenty exposure indicators/OSH outcomes:

- Vibration, low temperature, lifting/moving heavy loads, strenuous working postures, use of personal protective equipment;
- Accidents with more than three days absence, fatal accidents, occupational diseases, musculoskeletal disorders.

In the next group of frequently reported sectors (between 63-52 times) were “Manufacture of fabricated metal products, except machinery and equipment”, “Agriculture, hunting and related service activities”, “Health and social work”, and “Manufacture of food products and beverages”.

Occupation category code	Occupation description	Total number of times identified
93	Labourers in mining, construction, manufacturing and transport	123
72	Metal, machinery and related trades workers	80
71	Extraction and building trades workers	76
82	Machine operators and assemblers	73
81	Stationary-plant and related operators	40
83	Drivers and mobile plant operators	39
91	Sales and services elementary occupations	36
42	Customer services clerks	35
92	Agricultural, fishery and related labourers	33
74	Other craft and related trades workers	29
51	Personal and protective services workers	25
22	Life science and health professionals	20
32	Life science and health associate professionals	19
61	Skilled agricultural and fishery workers	17
52	Models, salespersons and demonstrators	13
12	Corporate managers	10
23	Teaching professionals	10
73	Precision, handicraft, craft printing and related trades workers	7
13	Managers of small enterprises	4
41	Office clerks	3

“Labourers in mining, construction, manufacturing and transport” was the most frequently reported occupation (123 times) considered most at risk in the following ten of the twenty exposure indicators/OSH outcomes:

- Vibration, low temperature, high temperature, lifting/moving heavy loads, handling chemicals, strenuous working postures;
- Fatal accidents, occupational sickness absence, occupational diseases, musculoskeletal disorders.

The occupation groups ranked 2nd to 4th included “Metal, machinery and related trades workers”, “Extraction and building trades workers” and “Machine operators and assemblers” (mentioned 80, 76 and 73 times, respectively).

Different occupations in the public and private service sector that were mentioned between 19 to 36 times included those occupations related to sales, customer service and to the health and social work sector.

OTHER RISK CATEGORIES - COMPANY SIZE, GENDER, AGE AND EMPLOYMENT STATUS

Due to the unavailability of information at national level, a low response rate was obtained in relation to the risk categories company size, gender, age and employment status. Therefore it was not possible to identify which of these risk categories were considered to be most at risk (see Chapter 4.2). For this reason, with the exception of the risk category “gender”, only common comments reported by the Focal Points in their national reports are included below.

Gender

The data collected from the national reports clearly indicates that the male worker was considered most exposed to noise, vibration, high temperature and low temperature. Furthermore, males were considered most at risk to accidents at work which result in more than 3 days absence, to fatal accidents and to occupational diseases. In general, women were considered at risk from repetitive movements and sexual harassment.

The number of Focal Points recording a gender for the exposure indicators/OSH outcomes are presented in the table below.

Exposure indicator/OSH outcome	Number of Focal Points identifying gender at risk	
	Male	Female
Noise	11	0
Vibration	11	0
High temperature	10	0
Low temperature	8	0
Lifting/ moving heavy loads	5	3
Repetitive movements	1	7
Sexual harassment	0	8
Accidents > 3 days absence	13	0
Fatal accidents	12	0
Occupational diseases	9	1

FINDINGS FOR THE OTHER RISK CATEGORIES BASED ON COMMON COMMENTS REPORTED BY THE FOCAL POINTS

Company size

The smaller enterprise was often identified by the Focal Points as being at a greater risk because of their restricted resources (time, financial and expertise) to understand about specific workplace hazards and the current best practices to reduce the risk.

Age

Young workers were frequently discussed as being particularly vulnerable to hazardous situations in the workplace for a number of reasons. In some cases it was reported that young workers were more willing to take risks and because of their age, were considered potentially at a greater risk through their lack of experience and understanding of the working environment. Also, they can have an eagerness to impress fellow workers, which can be a contributing factor in an accident scenario.

Risk perception may also be a weakness with the younger worker because many occupational injuries may take considerable time to materialise from the initial exposure, e.g. noise, manual handling, exposure to hazardous substances. Therefore, the risk may not be fully appreciated and adherence to any control measure may subsequently suffer. This could be one explanation why some young workers were reported as being reluctant to wear PPE.

Employment status

The self-employed, temporary workers and those on short term contracts were frequently discussed and commented upon by the Focal Points as being more at risk because of their restricted resource, in particular, limited access to safety and health training and information. It was not clear how these groups are organised for safety and health or what the management responsibilities were. Currently it cannot be mentioned how these groups are provided with adequate safety and health information or even what mechanism there is for ensuring this is achieved. How these groups access safety and health information and training is an important point to establish.

3.4 CHEMICAL/BIOLOGICAL HAZARDS

The table below summarises the total number of responses given by the Focal Points when asked to identify a maximum of five hazardous chemical/biological substances/factors within each hazardous exposure category that are to be considered to be the most important risks for the working population in the Member States.

The above table indicates that asbestos was most frequently identified by the Focal Points as a major source of carcinogenic substances in the workplace.

For neurotoxic substances there was no single substance that was frequently identified, this fell between organic solvents, organophosphates/pesticides and lead and its compounds.

Lead and its compounds were the most frequently reported reproductive hazard at work.

Out of all chemical and biological hazards listed hepatitis B/C was the most frequently reported hazard as identified by fourteen of the fifteen Focal Points. There was no clear non-infectious biological hazard reported, those that were recorded, e.g. endotoxins, were only noted in four national reports.

Exposure category	Most identified	Number of responses
Carcinogenic substances	<ul style="list-style-type: none"> Asbestos. Chromium (VI) compounds. Crystalline silica. Benzene. 	13 9 8 8
Neurotoxic substances	<ul style="list-style-type: none"> Organic solvents. Organophosphates / pesticides. Lead and its compounds. Toluene/xylene, aromatic/chlorinated solvents. 	8 7 7 4
Reproductive hazards	<ul style="list-style-type: none"> Lead and its compounds. Mercury and its compounds. Acrylamide, methoxy ethanol, ethoxy ethanol, ethylene oxide, organic solvents, halothane. 	11 3 2
Infectious biological factors	<ul style="list-style-type: none"> Hepatitis B/C. Tuberculosis. HIV. Leptospirosis. Borrelia burgdorferi. 	14 11 6 5 4
Non-infectious biological factors	<ul style="list-style-type: none"> Endotoxins. Moulds. Thermophilic actinomyces fungi. Organic dust. Animal epithelium. 	4 4 3 2 2

3.5 EMERGING RISKS

The Focal Points mostly identified the following themes associated with emerging risks:

Topics	Number of times reported by the Focal Points
Changed work organisation	8
Particular sensitive risk groups: Young workers	8
Stress	8
Manual Handling	8
Use of new chemicals with little known about the associated risks	7
Research needs for the “Health and Social Work” sector	6
Particular sensitive risk groups: Older workers	6
Violence	6
Repetitive Strain	6

The above table indicates that there was significant interest with the impact of the changes in working life together with ongoing concern in relation to psycho-social, ergonomic and chemical risks.

Topic	Implications
Changing Working Patterns	<i>Changed work organisation</i> was identified as a significant concern. That is the way in which the work is organised or structured has changed significantly. This may include changes to shift patterns or the order in which work tasks are completed, or alternatively, changes to the organisation of the management/company structure, all of which can increase the risks to workers.
Particularly sensitive risk groups	<i>Young workers</i> are defined as people under the age of 18. They are considered to be an “at risk” group as they are deemed to be unfamiliar with the hazards present in the workplace. They often lack the experience of workplaces to safely deal with risks in comparison to adults. Their perception of risk can also vary from that of a mature worker.
Psycho-social aspects.	<i>Stress</i> was identified as being of significant concern. When an individual perceives that the task at hand is unachievable in a particular time frame or is outside of his or her capabilities this can lead to stress. Stress can also be brought on by environmental conditions such as extremes of noise, temperature, humidity and light. Too little time to relax can also lead to stress. Anxiety about being unable to meet commitments outside of work can also generate a serious problem. The stress can lead to poor performance at work and an increase in mistakes made, thereby increasing the likelihood of accidents.
Ergonomics.	<i>Manual handling</i> was identified as being of significant concern. Moving of heavy or awkward loads in the workplace poses a serious risk to employees and should be automated where possible or work practices changed to reduce the need to move and handle loads, for example good workplace layout. Peoples’ backs are often most at risk from moving and handling. An example of this in the workplace is unloading of a truck by hand when it may be done using a fork lift truck.

Topic	Implications
Chemical risk factors.	<i>New chemicals</i> such as pesticides or cold disinfectants for medical uses may have insufficient data on the physiological effects to ensure safe usage. The employer is unlikely to be familiar with the product, which increases the risks in using the chemical without adequate control measures or understanding of the associated risks.
Sector research.	<i>Health and social work</i> was identified as a sector with research needs. The main concerns within this area of work are lone working, temporary workers and manual handling.
Particularly sensitive risk groups	<i>Older workers</i> were also identified as a significant concern as a particular sensitive risk group. Older workers may have inherent muscular problems, which can reduce their ability to lift or move objects. Also, they may have an increased sensitivity to extremes of temperature and slower reflexes.
Psycho-social aspects.	<i>Violence</i> may take the form of bullying at work or the threat of violence from working in high risk areas. Such as violence from clients in an accident and emergency unit of a public hospital, from pupils for teachers or from members of the public when working on a construction site in a high crime area.
Ergonomics.	<i>Repetitive strain</i> was identified as being of significant concern. Repetitive strain injuries are caused when movements are repeated excessively by particular parts of the body for long periods of time. Examples of tasks vulnerable to this risk include typing, computer related work and checkout operators moving items across a scanner.

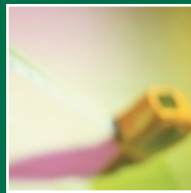
The national reports indicate significant interest in four key areas, “changing working patterns”, “psycho-social aspects”, “ergonomics” and “chemical risk factors”. An indication as to the degree of importance of these issues is given by the number of Focal Points that have considered them as candidates for additional preventive actions. With psycho-social topics, stress was a frequently reported concern. This is supported by the fact that ten Focal Points identified the need for further preventive actions to deal with this issue.

Ergonomics, which can encompass, manual handling, lifting/moving, repetitive strain etc, was also frequently reported as meriting the need for further preventive actions.

Handling and using new chemicals was also a topic area for which eight Focal Points reported the need for introducing additional preventive actions to control the workplace risk.

Emerging risks for particular sensitive risk groups identified both extremes of the employee age spectrum (young worker and older worker) as being vulnerable to workplace hazards for different reasons.

4.



INITIAL LESSONS LEARNED

INITIAL LESSONS LEARNED

Lessons have been learned through the process of carrying out the project 'The state of OSH in the EU – Pilot Study' as outlined in this Chapter. The difficulties in comparing national and EU data together with identifying where data gaps existed are discussed in Section 4.1. The shortage of data for particular risk categories (company size, gender, age and employment status) is highlighted in Section 4.2. Finally, some of the major strengths and weaknesses of the Pilot Study are discussed in Section 4.3.

There is little doubt that the Pilot Study has identified several key areas for future discussion where potential improvements in the whole process could be made. At this stage in the reporting process of the Pilot Study already some initial lessons have been learned. More will become evident from the feedback in the European Agency's "Evaluation" project.

A significant fact from carrying out the Pilot Study has highlighted the contrasting differences in the OSH systems across all fifteen Member States. This emphasises the difficulties in comparing the information collected from such systems and using it to present an overall general European picture as to the state of OSH.

The consolidation exercise demonstrates the importance in preparing questions to collect the information with more precise definitions to promote a common understanding so as to avoid ambiguity in order to make consolidation process easier and more accurate.

The lessons learned so far can be grouped at three levels, *European level*, *national level* and at the *European Agency level* for the preparation of the manual and its subsequent use and analysis.

At the *European level* it was frequently reported that slightly different questions were used in the 2nd European Survey on working conditions, compared to those in national surveys. If the questions asked are different then not only does this make it more difficult to do a comparison but also it raises doubt as to the validity of such a comparison. The feasibility of introducing a set of standardised/harmonised questions for future European surveys on working conditions and using the same set at the national level could be a potential discussion point for any future planning strategy.

At the *national level*, for the risk categories sectors and occupations the Focal Points provided a response based on a number of data sources, national data, statistical surveys, published data or from considering the judgement of expert opinion. However, beyond sectors and occupations the availability of data for the other risk categories was limited. This was particularly the case for employment status, age and company size. Without such data it was not feasible to present a European picture or to validate some of the discussion points raised.

To produce a consolidated report which is statistically sound would require each Member State to use an almost identical data collection scheme with similar question sets at the national level and for there to be a common understanding of these questions.

For some of the more historical workplace safety and health issues, e.g. noise and asbestos, there appeared to be an abundance of information available. These topic areas tended to have been afforded a degree of protection through the implementation of control measures such as legislation, monitoring/surveying and awareness/information campaigns. For other exposure categories, e.g. stress, workplace dictated by social demand and machine dictated workplace, the availability of data was scarce.

At the *European Agency level*, it is recognised that the preparation of the manual without open ended questions is paramount. For future studies questions in the manual could be supplemented with additional text/graduated scales to provide assistance to those answering to avoid ambiguity. For example, in the current manual how has the definition of "risk" been interpreted by the Member States? Was it, "risk" based on actual historical records (injury/death/disease), or "risk" on the basis that a large number of individuals are exposed to a particular hazard?

Also, consideration needs to be given to establishing whether each of the risk categories used would provide meaningful results, e.g. company size, if data was freely available. If such a category was required to be included in future OSH monitoring surveys then clear guidance will need to be given to the meaning of size. For example, a large company of 500 employees may in reality consist of ten smaller separate units each with 50 people working autonomously. Is this then a large or small sized company?

The interrelationship between risk categories may need further investigation to facilitate clear categories, particularly to differentiate between the outcome and its root cause.

The information collected in the national reports presents a picture of what has happened, i.e. it is a reactive measure. Currently there is no indication of the proactive issues such as the degree to which specific European legislation has been implemented and to what extent this has been effective. In a complete safety and health management system both reactive and proactive elements are essential performance indicators.

For any repeat of the Pilot Study further clarification would be required for some of the issues discussed. In particular, this refers to the responses to the evaluation question used in the Pilot Study. When a Focal Point indicated that the development of further preventive actions was needed it was not always evident as to what extent this would entail. Preventive actions could range from the introduction of new legislation through to awareness campaigns, surveys, field inspections, published information such as guidance notes or codes of practice or general information leaflets. Also, such preventive actions could either be applied in a focused manner to a specific industrial sector and its associated processes or they can be applied in a broad approach covering many sectors and processes. In either case the manual would need to reflect the requirement to collect such information.

4.1

INFORMATION GAPS EUROPEAN/NATIONAL DATA SITUATION

The lack of available data and the comparability problems experienced by the Focal Points between the national data and EU data is evident from the table below. This table presents an overview with respect to each exposure indicator and OSH outcome identifying the number of Focal Points that were able to make a comparison and those that could not either because of a lack of national data or dissimilarities between the data sets.

	Question 1				Question 2			
	"Are there differences between the national data and the data from European sources?"				"Does the additional national information highlight sectors or occupations that are not evident from the ESWC-data?"			
	Yes	No	No comparison reported		Yes	No	No comparison reported	
			Lack of National data	Difficulty in comparability of data			Lack of National data	Difficulty in comparability of data
Physical exposures								
Noise	4	4	2	5	4	4	3	4
Vibration	3	4	4	4	3	2	6	4
High temperature	0	2	9	4	1	2	9	3
Low temperature	1	2	8	4	0	3	9	3
Posture and movement exposures								
Lifting/moving heavy loads	5	2	4	4	4	2	5	4
Repetitive movements	5	2	4	4	3	2	6	4
Strenuous working postures	5	2	4	4	3	3	6	3
Handling chemicals	3	2	6	4	3	2	7	3
Psycho-social working conditions								
High speed work	6	1	5	3	1	1	9	4
Workpace dictated by social demand	3	1	8	3	2	0	9	4
Machine dictated workpace	3	1	9	2	1	0	11	3
Physical violence	2	2	7	4	4	0	9	2
Bullying and victimisation	2	2	6	5	1	0	9	5
Sexual harassment	3	3	7	2	2	2	10	1
Monotonous work	4	2	6	3	2	1	9	3
Context of work								
PPE	1	2	7	5	1	0	10	4
OSH outcomes								
Musculoskeletal disorders	2	1	5	7	2	1	8	4
Stress	3	2	6	4	1	1	8	5
Occupational sickness absence	5	1	8	1	5	0	10	0
Information about risks	1	2	8	4	0	0	10	5
Training provided by the employer	1	2	11	1	1	2	10	2

The table on page 33 shows that in the majority of exposure indicators/OSH outcomes establishing whether there were differences between national and European data and whether the additional national data was able to highlight sectors and/or occupations at risk was indeterminable. In relation to question 1 “Are there differences between the national data and the data from European sources?” the most frequent response was the lack of national data, hence the inability of the Focal Points to be able to answer the question.

Similarly, for question 2, in the majority of cases the Focal Points were unable to answer the question because of a lack of national data. More precise information behind these deficiencies will become evident from the European Agency’s “Evaluation” project.

Any future repetition of the project would need to assess the importance of such questions and whether a method could be implemented to facilitate the necessary responses.

The table on page 35 provides an overview on the availability of data regarding the exposure indicators at national level¹⁰.

¹⁰ The data were available from different sources such as national surveys.

Member State	Exposure indicator/OSH outcome										
	Noise	Vibration	High temperature	Low temperature	Lifting/moving heavy loads	Repetitive movements	Strenuous working postures	Handling chemicals	High speed work	Workpace dictated by social demand	Machine dictated workplace
A											
B											
DK	*	*	*	*		*					
FIN	*	*	*	*	*	*	*	*	*		
F	*	*	*	*	*	*	*	*	*	*	*
D	*	*			*	*	*	*	*	*	*
EL	*	*	*	*	*	*	*	*	*	*	*
NL	*	*			*	*	*		*		
IRL											
I											
L	*		*		*		*	*			
P											
E	*	*			*	*	*	*	*	*	*
S	*	*	*	*	*	*	*				
UK	*	*	*	*	*	*	*	*	*	*	
TOTAL	10	9	7	6	9	9	9	7	7	5	4

Member State	Exposure indicator/OSH outcome									
	Physical violence	Bullying & victimisation	Sexual harassment	Monotonous work	PPE	Musculoskeletal disorders	Stress	Occupational sickness absence	Information about risk	Training
A										
B						*		*		
DK			*							
FIN	*			*	*			*	*	*
F					*					
D				*		*	*	*		
EL	*	*	*	*	*	*	*	*	*	*
NL		*	*	*	*	*		*		
IRL										
I										
L						*		*	*	*
P										
E	*			*	*	*	*	*		*
S	*	*	*	*		*	*	*		*
UK	*			*		*	*	*		
TOTAL	5	3	4	7	5	8	5	9	3	5

A - Austria B - Belgium DK - Denmark FIN - Finland F - France D - Germany EL - Greece NL - Netherlands IRL - Ireland I - Italy
L - Luxembourg P - Portugal E - Spain UK - United Kingdom

* National data presented

4.2 INFORMATION GAPS ON PARTICULAR RISK CATEGORIES

The table below indicates where the national reports contained national data and where there was a short fall for the following risk categories: company size, gender, age and employment status.

Exposures/OSH outcomes	Company size	Gender	Age	Employment status
Noise	●	●	○	○
Vibration	○	●	○	○
High temperature	○	●	○	○
Low temperature	○	●	○	○
Lifting/moving heavy loads	○	●	○	○
Repetitive movements	○	●	○	○
Strenuous working postures	○	○	○	○
Handling chemicals	○	○	○	○
High speed work	○	○	○	○
Workpace dictated by social demand	○	○	○	○
Machine dictated workpace	○	○	○	○
Physical violence	○	○	○	○
Bullying and victimisation	○	○	○	○
Sexual harassment	○	●	○	○
Monotonous work	○	○	○	○
Accidents with more than three days absence	●	●	●	○
Fatal accidents	○	●	●	○
Occupational diseases	○	●	●	○
Musculoskeletal disorders	○	○	○	○
Stress	○	○	○	○
Occupational sickness absence	○	○	○	○

Legend:

- Data provided in national reports allowed the European picture to be given.
- Data not provided in the national reports and therefore a European picture could not be given.

Clearly the above table shows a complete deficit of national information relating to employment status. With company size and age, the data situation was almost as poor, with data only available for two and three exposure indicators/OSH outcomes, respectively. For gender, national data was available on ten exposure indicators/OSH outcomes.

Data on some exposure indicators may have been difficult to collect because of the interrelationships i.e. stress, bullying and victimisation, sexual harassment, can all have an effect on one another. Further research may be needed to determine the relative importance of these indicators from a risk based point of view in order to establish whether the effort required to collect, collate and analyse such data is merited.

If these risk categories are to be considered in any future OSH monitoring exercises as the mechanism to identify vulnerable groups then further discussions may be necessary to establish the value of these indicators and the best method to collect reliable information.

The extent of the diverse OSH systems operated in each Member State was evident in the response to the questions aimed at gathering information about these systems. Information reported back on percentage of workers covered by preventive OSH services and the number of workers receiving OSH training each year was insufficient to provide a European picture. Better understanding of the OSH systems in the Member States may be required for future data collection on the state of occupational safety and health in the European Union.

4.3 STRENGTHS AND WEAKNESSES

The “State of OSH in the EU-Pilot Study” report is the end product of considerable effort contributed by many parties throughout the fifteen Member States. This includes the national networks and affiliated associations involved in collecting data, answering the manual and preparing the national reports in order to depict the state of occupational safety and health in the EU. This process of data collection is one strength of the completed study.

The Pilot Study was a first step in developing a methodological system of monitoring occupational safety and health in the European Union. It has identified weaknesses present in collating data from such a diverse range of information sources throughout the EU. However, much useful information has been obtained in this process and this report presents a comprehensive qualitative snapshot.

The report has a number of strengths and weaknesses as highlighted below:

Strengths:

- provides a comprehensive factual qualitative snapshot of the state of occupational safety and health in the European Union; and
- presents valuable information with respect to sectors identified and discussed being most at risk.

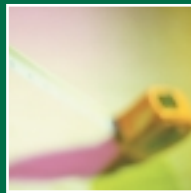
Weaknesses:

- obtaining quantitative data was too complex a task for this study; and
- shortage of qualitative data in some topic areas for some Member States resulted in some responses being the collation of expert opinion.

Apart from the valuable information obtained through the analysis of the consolidated information the exercise itself has provided valuable feedback as to the limitations in conducting such a study across national boundaries. These limitations are discussed in full in the main report and include elements such as: definitions and interpretations, deviations from the model answers, unavailability of information and handling no responses.

The European Agency has already launched a project to evaluate the Pilot Study in order to evaluate and improve the process and methodology for future studies. All stakeholders involved in the Pilot Study will be approached to present their experiences and opinions on the process of data collection and consolidation, such as involvement of national network partners, effort utilised in preparing the national reports, problem areas experienced, and the methodology used in the Pilot Study. Further topics, e.g. reliability of the indicators, added value of the national reports, are also tackled with in the “Evaluation” project.

5.



EUROPEAN PICTURE ON EXPOSURE
INDICATORS/OSH OUTCOMES

EUROPEAN PICTURE ON EXPOSURE INDICATORS/OSH OUTCOMES

To present a quick European picture of each exposure indicator/OSH outcome summary pages are given. They are based on the findings of information collated from all fifteen national reports. For this reason no individual Focal Points comments have been included.

The information summarised encompasses:

- a description of potential health effects caused by the exposure indicator;
- a European picture from the ESWC-data;
- sector categories most at risk as reported in the national reports and the number of Focal Point responses;
- occupation categories most at risk as reported in the national reports and number of Focal Point responses;
- information on the other risk categories company size, gender, age, employment status;
- trends;
- Focal Points identifying the need for additional preventive actions;
- description of indicated action; and
- summary of comments received.

Exposure indicators/OSH outcomes assessed include:

Exposure Indicator/OSH Outcome	Page Reference
Noise	41
Vibration	42
High temperature	43
Low temperature	44
Lifting/ moving heavy loads	45
Repetitive movements	46
Strenuous working postures	47
Handling chemicals	48
High speed work	49
Workpace dictated by social demand	50
Machine dictated workpace	51
Physical violence	52
Bullying and Victimisation	53
Sexual harassment	54
Monotonous work	55
Personal protective equipment	56
Accidents with more than 3 days absence	57
Fatal accidents	59
Occupational diseases	61
Musculoskeletal disorders	62
Stress	63
Occupational sickness absence	64

Exposure indicator: noise

Potential health effects	Noise induced hearing loss, tinnitus (permanent ringing can be heard in the ears), threshold shift (initially temporary but becoming permanent with prolonged exposure), loss of high frequency sounds resulting in communication problems, loss of interaction at social functions. Noise exposure can also have secondary effects such as stress and interference with communication in the workplace causing accidents.
European picture¹¹	28% of all workers interviewed were exposed to noise
Sector categories most at risk from the national reports using NACE code¹² Figures in brackets represent the number of Focal Point responses	28 Manufacture of fabricated metal products except machinery and equipment (10); 20 Manufacture of wood, wood products and cork, except furniture and Manufacture of straw articles and plaiting materials (10); 27 Manufacture of basic metals (9); 21 Manufacture of paper and paper products (7); 45 Construction (7); 17 Manufacture of textiles (6).
Occupation categories most at risk from the national reports using ISCO code¹³ Figures in brackets represent the number of Focal Point responses	82 Machine operators and assemblers (14); 72 Metal, machinery and related trades workers (12); 81 Stationary plant and related operators (10); 93 Labourers in mining, construction, manufacturing and transport (9); 71 Extraction and building trades workers (6); 83 Drivers and mobile plant operators (5); 74 Other craft and related trades workers (5); 73 Precision, handicraft, craft printing and related trades workers (5).
Other risk categories	<u>Company size</u> : In their comments the Focal Points considered that smaller businesses were at a greater risk from noise for a number of possible reasons. These reasons included the use of older machinery, fewer resources available, less knowledge and expertise of the risks and of the control measures available to tackle noise problems in the workplace. <u>Gender</u> : Eleven Focal Points identified males, particularly “blue collar” workers, as being most at risk from noise exposure; <u>Age</u> : The younger person was considered by the Focal Points to be most vulnerable to noise exposure and potential hearing loss and that their risk was aggravated by social factors. <u>Employment status</u> : The Focal Points mentioned temporary workers, self-employed workers, fixed term contract workers, those on apprenticeships and casual labour to be the status of worker at risk from noise exposure in the workplace. These groups often have less information available relating to safety and health issues, less training and less formal supervision and control in the workplace.
Trends	With regard to the trend of noise exposure in the workplace over the past 3-5 years the Focal Points were almost evenly balanced between a reduced trend and a stable trend. Six Focal Points reported that exposure had reduced, whereas six also reported that the exposure trend has remained stable. Only two had identified an increase in the exposure trend and one further Focal Point could not establish a particular trend pattern.
Focal Points identifying the need for additional preventive action	Belgium, Finland, Ireland, Italy, Portugal, Spain and United Kingdom
Description of indicated action¹⁴	Two Member States have launched national programmes to combat noise at work e.g. to reduce exposure to harmful noise levels for particular identified sectors by about 50% within five years.
Other relevant information	Where exposure to noise levels was reported to have been reduced this was achieved through a number of factors such as the introduction of low noise machinery, automation of work processes and remote operation of equipment to isolate the worker from the noise source. These methods have been effective in industries such as mining, steel, paper and chemical production. The increased use of casual labour can also have the affect of reducing risk by reducing individual exposure thereby spreading the overall risk amongst a greater number. Although, groups such as casual labour maybe more vulnerable to noise exposure because of the lack of information, supervision and control in the workplace.

¹¹ ESWC-data, 2nd Survey European Foundation Dublin 1996.

¹² The most frequently identified sectors which the Focal Points considered to be most at risk.

¹³ The most frequently identified occupations which the Focal Points considered to be most at risk.

¹⁴ The descriptions of further actions can be found in the individual chapters of the main report dealing with the exposure or OSH outcome.

Exposure indicator: vibration

Potential health effects	Sympathetic vibration of organs at low frequencies leads to nausea. Whole body vibration leading to low back pain and spinal damage. Hand-arm vibration syndrome affecting blood circulation, nerves muscles and bones in the hands and arms leading to loss of sensation and grip and severe pain in the hands. This includes such conditions as vibration white finger. Psychological effects include loss of concentration, which can cause secondary accidents.
European picture¹⁵	24% of all workers interviewed were exposed to vibration
Sector categories most at risk from the national reports using NACE code¹⁶ Figures in brackets represent the number of Focal Point responses	45 Construction (11); 28 Manufacture of fabricated metal products, except machinery and equipment (9); 14 Other mining and quarrying (6); 60 Land transport; transport via pipelines (6); 01 Agriculture, hunting and related service activities (6); 02 Forestry, logging and related service activities (5).
Occupation categories most at risk from the national reports using ISCO code¹⁷ Figures in brackets represent the number of Focal Point responses	93 Labourers in mining, construction, manufacturing and transport (10); 71 Extraction and building trades workers (10); 83 Drivers and mobile plant operators (10); 72 Metal, machinery and related trades workers (9); 92 Agricultural, fishery and related labourers (6); 82 Machine operators and assemblers (6).
Other risk categories	<u>Gender</u> : For the identified sector and occupation categories male workers were identified by eleven Focal Points to be more at risk from the health effects of vibration in the workplace. <u>Employment status</u> : The self-employed and contractors were considered to be at risk which is supported by the findings from the ESWC survey in which the self-employed were identified as being most at risk.
Trends	The responses in the national reports indicated a variety of observations in relation to the trend of exposure to vibration in the work place. Six Focal Points commented that they had identified a stable trend, four said it had decreased, three reported a decreasing trend and the remaining two were unable to identify any particular trend.
Focal Points identifying the need for additional preventive action	Austria, Belgium, Denmark, Finland, Ireland, Italy, Portugal, Spain and United Kingdom.
Description of indicated action¹⁸	Several Focal Points commented on the need for reducing vibrations at source by preventing the emission of work induced vibrations from hand tools through technical improvements at the design stage.
Other relevant information	Like noise, vibration was considered to be a classical risk in the working environment. A common issue mentioned by the Focal Points was the general lack of awareness in relation to both the health problems posed by vibrating equipment and machinery, particularly that causing whole body vibration and of the controls measures available to eliminate or reduce exposure at source. Exposure to cold weather might be a contributory factor for the increasing severity of the vibration-induced injury.

¹⁵ ESWC-data, 2nd Survey European Foundation Dublin 1996.

¹⁶ The most frequently identified sectors which the Focal Points considered to be most at risk.

¹⁷ The most frequently identified occupations which the Focal Points considered to be most at risk.

¹⁸ The descriptions of further actions can be found in the individual chapters of the main report dealing with the exposure or OSH outcome.

Exposure indicator: high temperature

Potential health effects	Body reactions to overheating are increased pulse rate, muscle cramps due to insufficient salt followed by exhaustion, dehydration and loss of mental awareness; fainting and dizziness and most seriously heat stroke.
European picture¹⁹	20% of all workers interviewed were exposed to high temperature.
Sector categories most at risk from the national reports using NACE code²⁰ Figures in brackets represent the number of Focal Point responses	27 Manufacture of basic metals (10); 15 Manufacture of food products and beverages (9); 26 Manufacture of other non-metallic mineral products (8); 28 Manufacture of fabricated metal products, except machinery and equipment (5).
Occupation categories most at risk from the national reports using ISCO code²¹ Figures in brackets represent the number of Focal Point responses	93 Labourers in mining, construction, manufacturing and transport (10); 72 Metal, machinery and related trades workers (8); 81 Stationary-plant and related operators (6); 82 Machine operators and assemblers (5); 74 Other craft and related trades workers (5); 71 Extraction and building trades workers (4).
Other risk categories	<u>Gender</u> : Ten Focal Points identified male workers most at risk. <u>Age</u> : Several Focal Points clearly identified the younger worker, less than 25 years old, as being most exposed to high temperatures.
Trends	Nine Focal Points reported a stable trend to the exposure of high temperature in the workplace whereas two reported a decreased trend. Only one Focal Point reported an increase in exposure to high temperature. Three Focal Points were unable to establish the trend.
Focal Points identifying the need for additional preventive action	Belgium, Finland, Greece, Italy, Portugal and Spain.
Description of indicated action²²	No common description could be given.
Other relevant information	In their identification of additional preventive actions the following measures were recorded by the Focal Points as measures that could be adopted and further developed to reduce exposure to high temperatures in the workplace: <ul style="list-style-type: none"> • Appropriate air ventilation systems; • Isolation of heat sources; • Improvement in the design of personal protective equipment (better comfortable); • Provision of worker training and information; and • Implementation of work organisation procedures (task rotation, scheduled breaks).

¹⁹ ESWC-data, 2nd Survey European Foundation Dublin 1996.

²⁰ The most frequently identified sectors which the Focal Points considered to be most at risk.

²¹ The most frequently identified occupations which the Focal Points considered to be most at risk.

²² The descriptions of further actions can be found in the individual chapters of the main report dealing with the exposure or OSH outcome.

Exposure indicator: low temperature

Potential health effects	Exposure to extreme cold can lead to frostbite and hypothermia. Frostbite causes pins and needles followed by complete numbness in the affected areas. If blood vessels are affected, gangrene can occur. Hypothermia causes drowsiness, lowers breathing and heart rates and can lead to unconsciousness.
European picture²³	23% of all workers interviewed were exposed to low temperature.
Sector categories most at risk from the national reports using NACE code²⁴ Figures in brackets represent the number of Focal Point responses	15 Manufacture of food products and beverages (9); 45 Construction (9); 05 Fishing, operation of fish hatcheries and fish farms; service activities incidental to fishing (6); 01 Agriculture, hunting and related service activities (5); 02 Forestry, logging and related service activities (4); 90 Sewage and refuse disposal, sanitation and similar activities (3); 40 Electricity, gas, steam and hot water supply (3).
Occupation categories most at risk from the national reports using ISCO code²⁵ Figures in brackets represent the number of Focal Point responses	93 Labourers in mining, construction, manufacturing and transport (8); 71 Extraction and building trades workers (8); 92 Agricultural, fishery and related labourers (7); 61 Skilled agricultural and fishery workers (6); 74 Other craft and related trades workers (6).
Other risk categories	<u>Gender</u> : In their national reports eight Focal Points identified males to be most exposed to low temperature in the workplace. <u>Age</u> : The older individual was considered to be more susceptible to ill effects of cold conditions and therefore it was the older worker most frequently exposed to the risk.
Trends	Although a limited response, seven Focal Points reported a stable trend to low temperature exposure whilst three reported a decrease and only one reported an increase in exposure to low temperature in the workplace.
Focal Points identifying the need for additional preventive action	Austria, Belgium, Finland, Italy, Portugal, Spain and Sweden.
Description of indicated action²⁶	In discussing the preventive actions required, suggestion were aimed at targeting future campaigns for raising awareness of low temperature working at the high risk groups namely contractors and temporary workers.
Other relevant information	Exposure to low temperature conditions can originate from two principal sources. Firstly, low temperatures can be associated with a particular work process, and secondly, it can be a factor of the local weather conditions. Some Member States experience extremely cold conditions during winter months. Therefore exposure to low temperatures is prevalent in these countries for outdoor work activities (forestry, farming, fishing, reindeer herding, construction, shipping, stevedoring, safety sector etc). All year round exposure to low temperature is generally associated with a particular industrial process such as chilling and freezing in the food industry (slaughtering, cold storage etc). Some occupations are required to carry out their work activities in low temperature conditions for the duration of a shift (e.g. preparation of food and cold storage workers).

²³ ESWC-data, 2nd Survey European Foundation Dublin 1996.

²⁴ The most frequently identified sectors which the Focal Points considered to be most at risk.

²⁵ The most frequently identified occupations which the Focal Points considered to be most at risk.

²⁶ The descriptions of further actions can be found in the individual chapters of the main report dealing with the exposure or OSH outcome.

Exposure indicator: lifting/moving heavy load

Potential health effects	Lifting/moving heavy loads can result in musculoskeletal disorders, in particular damage to the muscles and ligaments of the back, arms and hands.
European picture²⁷	34% of all workers interviewed were exposed to lifting/moving heavy loads.
Sector categories most at risk from the national reports using NACE code²⁸ Figures in brackets represent the number of Focal Point responses	45 Construction (14); 01 Agriculture, hunting and related service activities (9); 85 Health and social work (8); 28 Manufacture of fabricated metal products, except machinery and equipment (6); 20 Manufacture of wood and of products of wood and cork, except furniture; Manufacture of articles of straw and plaiting materials (4); 14 Other mining and quarrying (3).
Occupation categories most at risk from the national reports using ISCO code²⁹ Figures in brackets represent the number of Focal Point responses	93 Labourers in mining, construction, manufacturing and transport (11); 72 Metal, machinery and related trades workers (7); 32 Life science and health associate professionals (6); 71 Extraction and building trades workers (5); 91 Sales and services elementary occupations (5); 82 Machine operators and assemblers (5).
Other risk categories	<u>Gender</u> : Several Focal Points in their national reports commented on the high risk exposure to lifting/moving heavy in the "Health and Social Work" sector, particularly for female workers. <u>Age</u> : Comments made in the national reports identify the younger individuals as being more exposed to carrying out lifting of heavy loads. However, older individuals may be at a greater risk from injury because of the interaction between frequency of exposure and degenerative conditions in the musculoskeletal system.
Trends	Although a limited response, four Focal Points reported a stable trend in the exposure of lifting/moving heavy loads in the workplace. Six Focal Points reported a decreased trend and two Focal Points reported an increased exposure to the risk from lifting/moving heavy loads in the workplace.
Focal Points identifying the need for additional preventive action	Austria, Belgium, Denmark, Finland, Italy, Portugal, Spain, Sweden and United Kingdom.
Description of indicated action³⁰	No common description could be given.
Other relevant information	Exposure to lifting or moving of heavy loads continues to be a severe safety and health problem at work. The number of workers exposed is considerable and heavy lifts are an important factor contributing to the risk of musculoskeletal disorders. Increased demands on production throughput can result in increasing the speed at which individuals work. In cases where there is a high demand for variety and flexibility concerning the manipulation of goods (for example with packing/wrapping) the work remains mainly manual. In general, it was commented that the manufacturing sector has experienced a decline in handling heavy loads through the implementation of automation, which has included the use of automated equipment. Automation of work activities is expected to decrease the burden caused by lifting heavy loads in many jobs. However, in many female occupations this trend is not likely, because some lifting and moving tasks in the Health and Social Work sector are not easily mechanised.

²⁷ ESWC-data, 2nd Survey European Foundation Dublin 1996.

²⁸ The most frequently identified sectors which the Focal Points considered to be most at risk.

²⁹ The most frequently identified occupations which the Focal Points considered to be most at risk.

³⁰ The descriptions of further actions can be found in the individual chapters of the main report dealing with the exposure or OSH outcome.

Exposure indicator: repetitive movements

Potential health effects	Repetitive arm movements can lead to work related upper limb disorders such as tenosynovitis and carpal tunnel syndrome. Tenosynovitis is an inflammation of the thin synovial lining of a tendon sheath usually caused by a mechanical irritation. Carpal tunnel syndrome is a numbness and tingling in the area of distribution of the median nerve in the hand.
European picture³¹	58% of all workers interviewed were exposed to repetitive movements.
Sector categories most at risk from the national reports using NACE code³² Figures in brackets represent the number of Focal Point responses	15 Manufacture of food products and beverages (9); 18 Manufacture of wearing apparel; dressing and dyeing of fur (5); 17 Manufacture of textiles (5); 60 Land transport; transport via pipelines (5); 28 Manufacture of fabricated metal products, except machinery and equipment (3); 19 Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear (3).
Occupation categories most at risk from the national reports using ISCO code³³ Figures in brackets represent the number of Focal Point responses	82 Machine operators and assemblers (11); 93 Labourers in mining, construction, manufacturing and transport (8); 42 Customer services clerks (7); 91 Sales and services elementary occupations (7); 74 Other craft and related trades workers (5).
Other risk categories	<u>Gender</u> : From their national reports seven Focal Points identified females and one Focal Point identified males as being most exposed to repetitive movements at work. Typical female risk activities include assembly of electronic equipment, cashiers in super markets, textile and sewing workers and typists/computer operators. <u>Age</u> : It was reported in several national reports that the younger worker (less than 30 years old) was frequently more exposed to repetitive tasks, particularly young female employees.
Trends	There was no clear indication with respect to the trend in the exposure of repetitive movements in the workplace over the last 3 – 5 years. Three Focal Points reported a stable trend whereas two reported a decreased trend and five reported an increased exposure to repetitive movements in the workplace. Five Focal Points could not establish a particular trend.
Focal Points identifying the need for additional preventive action	Austria, Belgium, Finland, Italy, Portugal, Spain and Sweden.
Description of indicated action ³⁴	No common description could be given.
Other relevant information	Repetitive movements are carried out in many sectors such as agriculture, industry using work equipment, service sector and the financial sector. Repetitive Strain Injuries (RSI) has attracted a great deal of media attention. Repetitive movements combined with a rapid work pace are viewed as important risk factors in RSI. Several Focal Points commented on the rising category of computer related work (key board/mouse operations) requiring special attention.

³¹ ESWC-data, 2nd Survey European Foundation Dublin 1996.

³² The most frequently identified sectors which the Focal Points considered to be most at risk.

³³ The most frequently identified occupations which the Focal Points considered to be most at risk.

³⁴ The descriptions of further actions can be found in the individual chapters of the main report dealing with the exposure or OSH outcome.

Exposure indicator: strenuous working postures

Potential health effects	Strenuous working postures can potentially result in many health disorders affecting the bones, muscles and ligaments particularly vulnerable is the back. Also, there is the potential for increased stress levels during work activities involving strenuous postures.
European picture³⁵	45% of all workers interviewed were exposed to strenuous working postures.
Sector categories most at risk from the national reports using NACE code³⁶ Figures in brackets represent the number of Focal Point responses	45 Construction (12); 01 Agriculture, hunting and related service activities (7); 85 Health and social work (5); 93 Other service activities (4); 17 Manufacture of textiles (4); 15 Manufacture of food products and beverages (4).
Occupation categories most at risk from the national reports using ISCO code³⁷ Figures in brackets represent the number of Focal Point responses	93 Labourers in mining, construction, manufacturing and transport (9); 71 Extraction and building trades workers (6); 72 Metal, machinery and related trades workers (6); 92 Agricultural, fishery and related labourers (4); 74 Other craft and related trades workers (4); 61 Water transport (4).
Other risk categories	No common description could be given.
Trends	Although a limited response, five Focal Points reported a decreased trend in exposure to strenuous working postures. Two Focal Points reported a stable trend and a further two reported an increased trend in exposure to strenuous working postures in the workplace. Six Focal Points were unable to establish a particular trend.
Focal Points identifying the need for additional preventive action	Austria, Belgium, Finland, Italy, Spain and Sweden.
Description of indicated action ³⁸	No common description could be given.
Other relevant information	Strenuous working postures are of significant importance, especially when combined with lifting of heavy loads and repetitious work tasks. Inadequate working posture is a well-known aggravating factor causing disorders of the lower spine. Difficult working positions contribute to the potential risk of work induced musculoskeletal disorders. Musculoskeletal disorders are a common cause of early retirement. Musculoskeletal disorders are a common cause of early retirement. The prevention of strenuous postures in the working environment is related to an appropriate ergonomic design of the workplace, workstation, machinery and work organisation. Assessment of tasks and job rotation is fundamental to reducing the exposure to the risk. The implementation of new provisions on ergonomics for the protection against musculoskeletal disorders calls for more distinct supervisory activities. There is a need for improvement of the technical and organisational measures and of information and training.

³⁵ ESWC-data, 2nd Survey European Foundation Dublin 1996.

³⁶ The most frequently identified sectors which the Focal Points considered to be most at risk.

³⁷ The most frequently identified occupations which the Focal Points considered to be most at risk.

³⁸ The descriptions of further actions can be found in the individual chapters of the main report dealing with the exposure or OSH outcome.

Exposure indicator: handling chemicals

Potential health effects	Chemical burns and skin damage caused by contact with corrosive substances. Extended exposure to certain substances can cause damage to lungs, liver or other organs. Sensitisation can occur causing an allergic response (e.g. asthma or dermatitis) even at very low exposure levels.
European picture³⁹	14% of all workers interviewed were exposed to handling chemicals.
Sector categories most at risk from the national reports using NACE code⁴⁰ Figures in brackets represent the number of Focal Point responses	24 Manufacture of chemicals and chemical products (8); 01 Agriculture, hunting and related service activities (7); 45 Construction (5); 93 Other service activities (4); 50 Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel (4).
Occupation categories most at risk from the national reports using ISCO code⁴¹ Figures in brackets represent the number of Focal Point responses	93 Labourers in mining, construction, manufacturing and transport (7); 81 Stationary-plant and related operators (7); 92 Agricultural, fishery and related labourers (6); 72 Metal, machinery and related trades workers (5); 71 Extraction and building trades workers (5).
Other risk categories	No common description could be given.
Trends	Seven Focal Points reported a stable trend to handling chemicals in the workplace. One Focal Point reported a decrease in the exposure and three reported an increase to handling chemicals in the workplace. Four Focal Points were unable to establish a particular trend.
Focal Points identifying the need for additional preventive action	Belgium, Finland, Ireland, Italy, Luxembourg, Portugal, Spain and United Kingdom.
Description of indicated action⁴²	The dissemination of information on possible substitutes for hazardous chemical agents should be increased.
Other relevant information	<p>Many different occupation categories handle a variety of chemicals as part of their work activities, for example agriculture workers use pesticides, detergents and microbiological dusts and construction workers commonly use solvents and paints.</p> <p>A combination of legislation and occupational safety efforts have decreased exposures to some chemicals effectively, reported one Focal Point. The occurrence of tobacco smoke at work has decreased significantly as well as exposure to asbestos. However, the majority of chemical exposures have not changed much in the 1990s.</p> <p>The dissemination of information on substitutes for hazardous chemical agents should be increased and information and training to workers increased.</p> <p>Also reported, volatile organic compounds (VOC's) is a subject area with unanswered questions.</p> <p>It was reported that there is a need to continuously identify high occupational exposures through health surveillance methods and industrial hygiene measurements. Examples of new chemicals include enzymes used in production of animal feed and acrylates used in dentistry. Effective preventive measures are needed to decrease exposure, e.g., to allergenic and carcinogenic agents.</p> <p>There is a need for monitoring compliance with legislation.</p>

³⁹ ESWC-data, 2nd Survey European Foundation Dublin 1996.

⁴⁰ The most frequently identified sectors which the Focal Points considered to be most at risk.

⁴¹ The most frequently identified occupations which the Focal Points considered to be most at risk.

⁴² The descriptions of further actions can be found in the individual chapters of the main report dealing with the exposure or OSH outcome.

Exposure indicator: high speed work

Potential health effects	High speed work can lead to stress related illnesses and ultimately burnout of the individual. It can also induce a high margin for human error leading to workplace accidents.
European picture⁴³	54% of all workers interviewed were exposed to high speed work activities.
Sector categories most at risk from the national reports using NACE code⁴⁴ Figures in brackets represent the number of Focal Point responses	55 Hotels and restaurants (4); 64 Post and telecommunications (3); 60 Land transport; transport via pipelines (3); 45 Construction (3); 65 Financial intermediation, except insurance and pension funding (3); 18 Manufacture of wearing apparel; dressing and dyeing of fur (3); 15 Manufacture of food products and beverages (3); 34 Manufacture of motor vehicles, trailers and semi-trailers (3); 30 Manufacture of office, accounting and computing machinery (3); 22 Publishing, printing and reproduction of recorded media (3).
Occupation categories most at risk from the national reports using ISCO code⁴⁵ Figures in brackets represent the number of Focal Point responses	12 Corporate managers (5); 42 Customer services clerks (5); 83 Drivers and mobile plant operators (4); 72 Metal, machinery and related trades workers (4).
Other risk categories	No common description could be given.
Trends	With regard to the trend of exposure in the workplace to high speed work over the past 3-5 years eight Focal Points reported an increased trend. No Focal Point reported a decreased trend and only one identified a stable trend. Six Focal Points were unable to establish a particular trend.
Focal Points identifying the need for additional preventive action	Belgium, Denmark, Finland, Netherlands, Italy and Spain.
Description of indicated action⁴⁶	Assembly workers, unskilled metalworkers, manual intensive labour activities (slaughter and fish workers) are frequently exposed to both repetitive and monotonous work conducted at high speed. Consequently, as reported in the national studies there is a need for a programme to reduce the risk of ill health from such work activities. It was considered that further research was required into how pressures at work arise in order to implement effective preventive measures.
Other relevant information	There are many situations in the working environment that can lead to high speed work both as a result of the nature of the work activity (loading and unloading of materials under time pressure) and because of time pressures demanded by production delivery schedules ("Just In Time" management). High-speed work is frequently related to repetitive monotonous piece-paid work. Several national reports commented that time pressure and its outcomes should not be seen as an individual problem with individual solutions, but as an outcome of work organisation. Lack of personnel, increased demands for effectiveness, productivity and flexibility should be evaluated as key contributors to the increasing risk level.

⁴³ ESWC-data, 2nd Survey European Foundation Dublin 1996.

⁴⁴ The most frequently identified sectors which the Focal Points considered to be most at risk.

⁴⁵ The most frequently identified occupations which the Focal Points considered to be most at risk.

⁴⁶ The descriptions of further actions can be found in the individual chapters dealing of the main report with the exposure or OSH outcome.

Exposure indicator: workplace dictated by social demand

Potential health effects	Workpace dictated by social demand can lead to stress related illnesses.
European picture⁴⁷	67% of all workers interviewed were exposed to work pace dictated by social demand.
Sector categories most at risk from the national reports using NACE code⁴⁸ Figures in brackets represent the number of Focal Point responses	55 Hotels and restaurants (6); 85 Health and social work (5); 52 Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods (4); 75 Public administration and defence; compulsory social security (3); 93 Other service activities (3).
Occupation categories most at risk from the national reports using ISCO code⁴⁹ Figures in brackets represent the number of Focal Point responses	42 Customer services clerks (5); 51 Personal and protective services workers (4); 32 Life science and health associate professionals (4); 22 Life science and health professionals (4); 52 Models, salespersons and demonstrators (3).
Other risk categories	No common description could be given.
Trends	No clear conclusions can be drawn regarding the trend over the last 3-5 years. Three Focal Points reported a stable trend and three reported an increased exposure trend. In general, because of the lack of available national information nine Focal Points were unable to establish a particular trend.
Focal Points identifying the need for additional preventive action	Denmark, Spain and Sweden.
Description of indicated action⁵⁰	No common description could be given.
Other relevant information	As commented in several national reports were a number of measures that can be adopted and further developed to reduce the risk from work pace dictated by social demands, these measures included: <ul style="list-style-type: none"> • Improved work planning and organisation; • Implementation of improved work organisation including job/task rotation, regular scheduled breaks; and • Provision and information for training.

⁴⁷ ESWC-data, 2nd Survey European Foundation Dublin 1996.

⁴⁸ The most frequently identified sectors which the Focal Points considered to be most at risk.

⁴⁹ The most frequently identified occupations which the Focal Points considered to be most at risk.

⁵⁰ The descriptions of further actions can be found in the individual chapters of the main report dealing with the exposure or OSH outcome.

Exposure indicator: machine dictated workspace

Potential health effects	Machine dictated workspace can lead to stress related illnesses, possible boredom and injuries associated with lack of concentration.
European picture⁵¹	22% of all workers interviewed were exposed to machine dictated work pace.
Sector categories most at risk from the national reports using NACE code⁵² Figures in brackets represent the number of Focal Point responses	17 Manufacture of textiles (6); 15 Manufacture of food products and beverages (4); 28 Manufacture of fabricated metal products, except machinery and equipment (3); 27 Manufacture of basic metals (3); 25 Manufacture of rubber and plastic products (3); 18 Manufacture of wearing apparel; dressing and dyeing of fur (3).
Occupation categories most at risk from the national reports using ISCO code⁵³ Figures in brackets represent the number of Focal Point responses	82 Machine operators and assemblers (7); 93 Labourers in mining, construction, manufacturing and transport (6); 83 Drivers and mobile plant operators (5); 81 Stationary-plant and related operators (4).
Other risk categories	No common description could be given.
Trends	With regard to the trend of exposure to machine dictated work pace over the past 3-5 years four Focal Points reported an increased trend, one reported a stable trend and two reported a decreased trend. A total of eight Focal Points were unable to establish a particular trend.
Focal Points identifying the need for additional preventive action	Belgium, Denmark, Italy and Spain
Description of indicated action⁵⁴	No common description could be given.
Other relevant information	There are many work-related tasks that are characterised by repetitive and monotonous activities, which are governed by the relationship between the machine/production requirements and the worker. Such relationships are typically amongst unskilled labour such as metal workers, assemblers/packers and workers in the food industry. As discussed in several national reports there are a number of measures that can be implemented and improved upon to reduce the risk from exposure to machine dictated work pace, these measures include: <ul style="list-style-type: none"> • improvement in technical and organisational measures; • regular workplace inspections • implementation of regular breaks; • routine job/task rotation; and • provision of information and training.

⁵¹ ESWC-data, 2nd Survey European Foundation Dublin 1996.

⁵² The most frequently identified sectors which the Focal Points considered to be most at risk.

⁵³ The most frequently identified occupations which the Focal Points considered to be most at risk.

⁵⁴ The descriptions of further actions can be found in the individual chapters of the main report dealing with the exposure or OSH outcome.

Exposure indicator: physical violence

Potential health effects	Physical violence can lead to a wide range of physical injuries from the superficial to the life threatening. Anxiety resulting from either a threat of violence or as a direct result of actual violence can lead to stress related illnesses.
European picture⁵⁵	4% of all workers interviewed were exposed to physical violence at work.
Sector categories most at risk from the national reports using NACE code⁵⁶ Figures in brackets represent the number of Focal Point responses	85 Health and social work (11); 75 Public administration and defence; compulsory social security (7); 60 Land transport; transport via pipelines (6); 55 Hotels and restaurants (6); 52 Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods (5); 93 Other service activities (4).
Occupation categories most at risk from the national reports using ISCO code⁵⁷ Figures in brackets represent the number of Focal Point responses	51 Personal and protective services workers (7); 32 Life science and health associate professionals (7); 91 Sales and services elementary occupations (6); 22 Life science and health professionals (5); 42 Customer services clerks (5); 52 Models, sales persons and demonstrators (4).
Other risk categories	<u>Gender</u> : It was reported in several national reports that they considered female employees to be more exposed to both physical violence and threats of violence in the workplace.
Trends	Although a limited response, two Focal Points reported a stable trend to physical violence whilst one Focal Point reported a decrease and four reported an increase in physical violence. Eight Focal Points were unable to establish a particular trend.
Focal Points identifying the need for additional preventive action	Belgium, Denmark, Finland, Netherlands, Ireland, Spain and Sweden.
Description of indicated action⁵⁸	No common description could be given.
Other relevant information	<p>The sectors and occupations most at exposed to the risk of physical violence in the workplace appear to be those in which there is an interface with the public. These include banking, public transportation, health care and social work.</p> <p>People working in psychiatric wards, local social administrations, public transportation (including air), shopping centres, petrol stations, restaurants, kiosks, discotheques, and first-aid are vulnerable to physical violence during the course of their work.</p> <p>Violence is increasing in many workplaces and occupations, which have not been well prepared for violent situations. It is important to provide reliable data on the full extent of workplace violence and to develop violence prevention strategies for the high-risk industries as well as to conduct evaluation research to determine the effectiveness of these strategies. Collaboration is needed between different organisations. Workplaces should be supported with practical tools, which can be used for developing and improving the violence prevention program.</p> <p>In a number of collective labour agreements, employer and employee organisations have agreed upon ways and means to prevent violence at work. However, there is little information on the implementation and the success of such measures.</p> <p>It was believed that there is a degree of under-reporting of incidents at work particularly where only a threat occurs. Over the last few years there has been much public and media debate about violence at work. This has led to increased attention to this emerging risk at work. General public impression is that there is an increase in incidences.</p>

⁵⁵ ESWC-data, 2nd Survey European Foundation Dublin 1996.

⁵⁶ The most frequently identified sectors which the Focal Points considered to be most at risk.

⁵⁷ The most frequently identified occupations which the Focal Points considered to be most at risk.

⁵⁸ The descriptions of further actions can be found in the individual chapters of the main report dealing with the exposure or OSH outcome.

Exposure indicator: bullying and victimisation

Potential health effects	Bullying and victimisation often leads to stress related illnesses.
European picture⁵⁹	8% of all workers interviewed were exposed to bullying and victimisation at work.
Sector categories most at risk from the national reports using NACE code⁶⁰ Figures in brackets represent the number of Focal Point responses	85 Health and social work (5); 55 Hotels and restaurants (3); 80 Education (3); 75 Public administration and defence; compulsory social security (2); 65 Financial intermediation, except insurance and pension funding (2); 24 Manufacture of chemicals and chemical products (2).
Occupation categories most at risk from the national reports using ISCO code⁶¹ Figures in brackets represent the number of Focal Point responses	91 Sales and services elementary occupations (4); 51 Personal and protective services workers (4); 42 Customer services clerks (4); 93 Labourers in mining, construction, manufacturing and transport (2); 74 Other craft and related trades workers (2); 52 Models, sales persons and demonstrators (2); 23 Teaching professionals (2); 22 Life science and health professionals (2).
Other risk categories	No common description could be given.
Trends	Although a limited response, no Focal Points reported a stable trend to bullying and victimisation whilst one Focal Point reported a decrease and six an increase in exposure to bullying and victimisation. Eight Focal Points were unable to establish any particular trend.
Focal Points identifying the need for additional preventive action	Belgium, Denmark, Finland, Netherlands, Ireland, Spain and Sweden.
Description of indicated action⁶²	No common description could be given.
Other relevant information	<p>Bullying and victimisation in one report was considered to be a growing phenomenon particularly in schools with young pupils. Educational staff were reported to be subjected to varying degrees of harassment and in some cases actual violence.</p> <p>Several national reports commented on the lack of available data on this potential risk factor, particularly how to train, prepare and deal with the consequence should situations arise.</p> <p>Commented in several national reports were a number of measures that can be adopted and further developed to reduce the risk from bullying and victimisation in the workplace, some of these measures included:</p> <ul style="list-style-type: none"> • provision of training and preparation of methods for dealing with the consequences; • the need to educate occupational health professionals, labour inspectors, social partners and also personnel at the workplaces on identifying workplace bullying and its victims; • the need for developing knowledge concerning the connection between work environment factors and the searching for scapegoats; • planning and designing social relationships in the workplace; • increase the authorities protection and surveillance actions; and • provision of information and training for the workforce.

⁵⁹ ESWC-data, 2nd Survey European Foundation Dublin 1996.

⁶⁰ The most frequently identified sectors which the Focal Points considered to be most at risk.

⁶¹ The most frequently identified occupations which the Focal Points considered to be most at risk.

⁶² The descriptions of further actions can be found in the individual chapters of the main report dealing with the exposure or OSH outcome.

Exposure indicator: sexual harassment

Potential health effects	Sexual harassment can be another factor leading to stress related illnesses.
European picture⁶³	2% of all workers interviewed were exposed to sexual harassment.
Sector categories most at risk from the national reports using NACE code⁶⁴ Figures in brackets represent the number of Focal Point responses	55 Hotels and restaurants (4); 85 Health and social work (4); 52 Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods (2); 80 Education (2); 51 Wholesale trade and commission trade, except of motor vehicles and motorcycles (2).
Occupation categories most at risk from the national reports using ISCO code⁶⁵ Figures in brackets represent the number of Focal Point responses	51 Personal and protective services workers (6); 52 Models, sales persons and demonstrators (3); 42 Customer services clerks (3); 41 Office clerks (3); 91 Sales and services elementary occupations (2); 32 Life science and health associate professionals (2).
Other risk categories	<u>Gender</u> : In total, eight Focal Points identified the female gender as being most at risk from sexual harassment in the workplace.
Trends	With regard to the trend of sexual harassment in the workplace over the past 3-5 years no firm conclusions can be drawn. Four Focal Points reported a stable trend, two said the trend had increased and one said the trend had decreased. Eight Focal Points could not establish a particular trend pattern.
Focal Points identifying the need for additional preventive action	Denmark and Spain.
Description of indicated action⁶⁶	No common description could be given.
Other relevant information	Commented in several national reports were a number of measures that can be adopted to reduce the risk from sexual harassment in the workplace, these included. <ul style="list-style-type: none"> • a need for training and information of workers; • a need to improve the social defence and to encourage denunciations; and • inspection activities to assess an organisation's policy to control and (if applicable) reduce sexual harassment.

⁶³ ESWC-data, 2nd Survey European Foundation Dublin 1996.

⁶⁴ The most frequently identified sectors which the Focal Points considered to be most at risk.

⁶⁵ The most frequently identified occupations which the Focal Points considered to be most at risk.

⁶⁶ The descriptions of further actions can be found in the individual chapters of the main report dealing with the exposure or OSH outcome.

Exposure indicator: monotonous work

Potential health effects	Monotonous work can be a major contributor to stress related illnesses. It can also lead to attention lapses resulting in accidents. It can also promote an individual to take risks in order to relieve the boredom.
European picture⁶⁷	45% of all workers interviewed were exposed to monotonous work.
Sector categories most at risk from the national reports using NACE code⁶⁸ Figures in brackets represent the number of Focal Point responses	19 Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear (4); 17 Manufacture of textiles (4); 15 Manufacture of food products and beverages (4); 28 Manufacture of fabricated metal products, except machinery and equipment (3); 16 Manufacture of tobacco products (3); 20 Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials (3).
Occupation categories most at risk from the national reports using ISCO code⁶⁹ Figures in brackets represent the number of Focal Point responses	82 Machine operators and assemblers (7); 91 Sales and services elementary occupations (7); 42 Customer services clerks (6); 81 Stationary-plant and related operators (6); 83 Drivers and mobile plant operators (4); 93 Labourers in mining, construction, manufacturing and transport (4).
Other risk categories	Gender: In general terms females were frequently considered exposed to monotonous work.
Trends	With regard to the trend of monotonous work in the workplace over the past 3-5 years no firm conclusions can be drawn. Three Focal Points reported the trend had remained stable, two said it had decreased and two said it had increased. Eight further Focal Points could not establish a particular trend pattern.
Focal Points identifying the need for additional preventive action	Austria, Belgium, Denmark, Finland, Spain and Sweden.
Description of indicated action ⁷⁰	No common description could be given.
Other relevant information	Commented in several national reports were a number of measures that can be adopted and further developed to reduce the risk from monotonous in the workplace, these included: <ul style="list-style-type: none"> • the need for task enrichment and job rotation within the workplace; • introduction of new ways of work organisation to include participation of workers; and • provision of training and information for the workforce.

⁶⁷ ESWC-data, 2nd Survey European Foundation Dublin 1996.

⁶⁸ The most frequently identified sectors which the Focal Points considered to be most at risk.

⁶⁹ The most frequently identified occupations which the Focal Points considered to be most at risk.

⁷⁰ The descriptions of further actions can be found in the individual chapters of the main report dealing with the exposure or OSH outcome.

Exposure indicator: personal protective equipment (PPE)

Potential health effects	Incorrect assessment of PPE requirements and of its use can be a contributory factor in the whole range of occupational accidents and illnesses. This will be dependent upon the purposes for initiating the need for PPE in the first instance e.g. PPE issued for hearing protection can lead noise induced hearing loss if not correctly selected or correctly worn.
European picture⁷¹	25% of all workers interviewed used personal protective equipment.
Sector categories most at risk from the national reports using NACE code⁷² Figures in brackets represent the number of Focal Point responses	45 Construction (11); 28 Manufacture of fabricated metal products, except machinery and equipment (5); 24 Manufacture of chemicals and chemical products (4); 01 Agriculture, hunting and related service activities (4); 27 Manufacture of basic metals (4).
Occupation categories most at risk from the national reports using ISCO code⁷³ Figures in brackets represent the number of Focal Point responses	71 Extraction and building trades workers (7); 72 Metal, machinery and related trades workers (5); 93 Labourers in mining, construction, manufacturing and transport (4); 61 Skilled agricultural and fishery workers (3); 82 Machine operators and assemblers (3); 81 Stationary-plant and related operators (3).
Other risk categories	No common description could be given.
Trends	With regard to the trend of the use of PPE in the workplace over the past 3-5 years five Focal Points reported a stable trend, one reported a decrease and two a increase. Seven further Focal Point could not establish a particular trend pattern.
Focal Points identifying the need for additional preventive action	Belgium, Finland, Italy, Luxembourg, Portugal and Spain.
Description of indicated action⁷⁴	No common description could be given.
Other relevant information	<p>The use of PPE should be a last form of protection after organisational and technical measures have been exhausted. Several national reports commented that the provision of personal protective equipment is at the bottom of the hierarchy of safety and prevention measures used to reduce risks in the workplace. Such hierarchy systems typically achieve risk reduction by: elimination, substitution, separation and protection. This means that only when all organisational and technical measures have been implemented should the issue of personal protective equipment be considered.</p> <p>Several national reports commented the need for continued training and for the provision of information to workers in relation to the use of personal protective equipment. They considered this to be a particular problem for temporary workers as different organisations have different policies with regard to the wearing and the enforcement of wearing PPE. Also, the comment was made that young workers were not keen to wear PPE.</p> <p>Agriculture and construction sectors had higher than average proportion of workers reporting PPE either missing or not used on a regular basis in one report. Also, the use of multiple PPE may be causing problems. In the Health and Social Work sector, latex gloves which may pose a particular health issue to the wearer.</p>

⁷¹ ESWC-data, 2nd Survey European Foundation Dublin 1996.

⁷² The most frequently identified sectors which the Focal Points considered to be most at risk.

⁷³ The most frequently identified occupations which the Focal Points considered to be most at risk.

⁷⁴ The descriptions of further actions can be found in the individual chapters of the main report dealing with the exposure or OSH outcome.

OSH outcome: accidents with more than three days absence

European picture⁷⁵	<p>Some 4, 757, 611 accidents with more than 3 days absence from work were reported in total in 1996;</p> <p>In the two-year period 1994 and 1996, the risk of accidents with more than three days absence from work fell by 3.3% in the EU.</p> <p><u>Sectors</u>: 1, 357 022 accidents recorded in the Manufacturing and 831,000 accidents recorded in the Construction;</p> <p><u>Company size</u>: the majority of accidents occurred in companies with the less than 49 employees;</p> <p><u>Gender</u>: 3, 668 266 males and 920,000 females experienced accidents with more than 3 days absence;</p> <p><u>Age</u>: The incident rate for accidents at work was highest for the 18 – 24 age group;</p> <p><u>Length of absence from work</u>: of all accidents reported 47% resulted in less than two weeks absence and 48% resulted in from two weeks to less than three months absence from work.</p>
Sector categories most at risk from the national reports using NACE code⁷⁶ Figures in brackets represent the number of Focal Point responses	45 Construction (11); 28 Manufacture of fabricated metal products, except machinery and equipment (8); 20 Manufacture of wood and of products of wood and cork, except furniture manufacture of articles of straw and plaiting materials (6); 15 Manufacture of food products and beverages (5); 01 Agriculture, hunting and related service activities (4).
Occupation categories most at risk from the national reports using ISCO code⁷⁷ Figures in brackets represent the number of Focal Point responses	82 Machine operators and assemblers (9); 72 Metal, machinery and related trades workers (8); 71 Extraction and building trades workers (6); 93 Labourers in mining, construction, manufacturing and transport (6); 81 Stationary-plant and related operators (4).
Other risk categories	<p><u>Company size</u>: Companies with less than forty nine employees were considered to be at risk, although this was not the case across all sectors.</p> <p><u>Gender</u>: Thirteen Focal Points reported the male gender to be most at risk from accidents involving three days or more absence from work.</p> <p><u>Age</u>: Six Focal Points identified the age category “less than 25” years old to be most at risk from three days or more accidents at work.</p> <p><u>Employment status</u>: Out sourcing of labour was said to increase the risk of accidents for two reasons. Firstly, subcontractors are not always under their employer’s direct supervision. Secondly, subcontractors often service several contracts at the same time. These jobs are often of a short duration leaving little time for an individual to become familiar with the work surroundings. Such unfamiliarity can increase the chance of mistakes as well as increasing the level of mental stress.</p>
Trends	Nine Focal Points reported a decreased trend for workplace accidents with more than 3 days absence.
Focal Points identifying the need for additional preventive action	Belgium, Finland, Ireland, Italy, Luxembourg, Portugal and Spain
Description of indicated action ⁷⁸	Prevention of accidents in the workplace was one of the key areas for some Member States.
Other relevant information	<p>Slips, trips and falls were identified in the national reports as the main causes of accidents which resulted in three days or more absences from work. The full list of identified causes of accidents is presented on page 58.</p> <p>A number of Focal Points raised the general issue that they recognised that reporting of accidents at work is subject to a degree of under reporting. However, it is primarily accidents with a less serious consequence, which tend not to be reported.</p>

⁷⁵ Extracted from the Eurostat publication “Accidents at work in the EU in 1996” – Theme 3 – 4/2000.

⁷⁶ The most frequently identified sectors which the Focal Points considered to be most at risk.

⁷⁷ The most frequently identified occupations which the Focal Points considered to be most at risk.

⁷⁸ The descriptions of further actions can be found in the individual chapters of the main report dealing with the exposure or OSH outcome.

Full List of Causes of Accidents resulting in 3 days or more absence from work.

Causes of accidents	Number of responses
• Slips, trips and falls	7
• Manual handling	5
• Struck by moving objects	5
• Solid objects and articles	4
• Tools	4
• Transportation within the company	4
• Struck by falling objects	4
• Work environment and structure	3
• Machinery	3

OSH outcome: fatal accidents

European picture⁷⁹	<p>Some 5,549 fatal accidents were in 1996</p> <p>In the two-year period 1994 and 1996, the risk of fatal accidents in the workplace fell by more than 13% in the EU.</p> <p><u>Sectors</u>: 1,349 fatal accidents recorded in Construction and 1,128 fatal accidents were recorded in manufacturing.</p> <p><u>Company size</u>: the majority of fatal accidents occurred in companies with less than 49 employees.</p> <p><u>Gender</u>: 5,124 males and 315 females experienced fatal accidents.</p> <p><u>Age</u>: The incidence of fatal accidents in the EU showed a continuous rising trend with age. Over 50% of the fatal accidents were related to transport.</p>
<p>Sector categories most at risk from the national reports using NACE code⁸⁰</p> <p>Figures in brackets represent the number of Focal Point responses</p>	<p>45 Construction (11);</p> <p>01 Agriculture, hunting and related service activities (5);</p> <p>60 Land transport; transport via pipelines (5);</p> <p>05 Fishing, operation of fish hatcheries and fish farms; service activities incidental to fishing (5);</p> <p>14 Other mining and quarrying (4);</p> <p>28 Manufacture of fabricated metal products, except machinery and equipment (3);</p> <p>02 Forestry, logging and related service activities (3).</p>
<p>Occupation categories most at risk from the national reports using ISCO code⁸¹</p> <p>Figures in brackets represent the number of Focal Point responses</p>	<p>93 Labourers in mining, construction, manufacturing and transport (6);</p> <p>83 Drivers and mobile plant operators (6);</p> <p>71 Extraction and building trades workers (6);</p> <p>92 Agricultural, fishery and related labourers (4);</p> <p>72 Metal, machinery and related trades workers (4).</p>
Other risk categories	<u>Gender</u> : Twelve Focal Points identified male workers to be most at risk from fatal accidents at work.
Trends	A total of six Focal Points reported a stable trend to fatal accidents at work whilst seven Focal Points reported a decrease and the remaining two reported an increase.
Focal Points identifying the need for additional preventive action	Belgium, Finland, Ireland, Italy, Portugal and Spain
Description of indicated action⁸²	No common description could be given
Other relevant information	Falling from height has for some time been a major hazard at work for certain sectors and occupations as indicated in the table on page 59. This particular cause of fatal accidents had the same number of responses from the Focal Points as accidents associated with vehicles.

⁷⁹ Extracted from the Eurostat publication "Accidents at work in the EU in 1996" – Theme 3 – 4/2000.

⁸⁰ The most frequently identified sectors which the Focal Points considered to be most at risk.

⁸¹ The most frequently identified occupations which the Focal Points considered to be most at risk.

⁸² The descriptions of further actions can be found in the individual chapters of the main report dealing with the exposure or OSH outcome.

Full list of causes of fatal accidents

Causes of Fatal Accidents at Work	Number of Responses
• Accidents with vehicles	5
• Falling/leaping from platform	5
• Falling/collapsing objects	4
• Slips, trips and falls	3
• Traffic routes	3
• Dangerous machinery	2
• Entanglement/entrapment	2
• Contact with Electricity	2

OSH outcome: occupational diseases

European picture	No European data.
Sector categories most at risk from the national reports using NACE code⁸³ Figures in brackets represent the number of Focal Point responses	45 Construction (11); 85 Health and social work (5); 28 Manufacture of fabricated metal products, except machinery and equipment (5); 27 Manufacture of basic metals (5); 15 Manufacture of food products and beverages (5); 01 Agriculture, hunting and related service activities (5).
Occupation categories most at risk from the national reports using ISCO code⁸⁴ Figures in brackets represent the number of Focal Point responses	72 Metal, machinery and related trades workers (7); 93 Labourers in mining, construction, manufacturing and transport (7); 82 Machine operators and assemblers (6); 71 Extraction and building trades workers (5); 83 Drivers and mobile plant operators (3); 51 Personal and protective services workers (2); 74 Other craft and related trades workers (2).
Other risk categories	<p><u>Company size</u>: Small companies were considered as being more at risk because they have less resources available for both monitoring and implementing suitable control measures to combat occupational diseases at work.</p> <p><u>Gender</u>: Nine Focal Points identified the male gender to be most at risk to occupational diseases at work.</p> <p><u>Age</u>: Although a limited response, five Focal Points identified the age category greater than 55 years were most at risk from occupational diseases at work.</p>
Trends	With regard to the trend of the number of workers suffering from occupational diseases, two Focal Points reported a stable trend, seven reported a decrease and three Focal Points reported an increase. Only two Focal Points were unable to establish a particular trend.
Focal Points identifying the need for additional preventive action	Belgium, Denmark, Finland, Ireland, Italy, Portugal and Spain.
Description of indicated action⁸⁵	No common description could be given.
Other relevant information	Commented in several national reports were a number of measures that can be adopted and further improved upon to reduce the risk of occupational diseases in the workplace, these included: <ul style="list-style-type: none"> • provision for informing and training health practitioners about occupational diseases; • a need to implement specific medical protocols; • the importance of increasing information about emerging risk and toxicological products; • the requirement to include more occupational diseases in national registers; and • to provide the health service sector with guidelines for diagnosis and treatment of a number of work related health problems as well as information on prevention, job retention and return to work.

⁸³ The most frequently identified sectors which the Focal Points considered to be most at risk.

⁸⁴ The most frequently identified occupations which the Focal Points considered to be most at risk.

⁸⁵ The descriptions of further actions can be found in the individual chapters of the main report dealing with the exposure or OSH outcome.

OSH outcome: musculoskeletal disorders

Potential health effects	Musculoskeletal disorders can result in injury to the muscular and skeletal systems of the body. Significant work induced musculoskeletal disorders commonly affect the lower back and the hands (tenosynovitis).
European picture⁸⁶	30% of all workers interviewed were exposed to musculoskeletal disorders
Sector categories most at risk from the national reports using NACE code⁸⁷ Figures in brackets represent the number of Focal Point responses	45 Construction (7); 01 Agriculture, hunting and related service activities (6); 55 Hotels and restaurants (4); 85 Health and social work (3); 28 Manufacture of fabricated metal products, except machinery and equipment (3); 27 Manufacture of basic metals (3).
Occupation categories most at risk from the national reports using ISCO code⁸⁸ Figures in brackets represent the number of Focal Point responses	93 Labourers in mining, construction, manufacturing and transport (9); 71 Extraction and building trades workers (6); 91 Sales and services elementary occupations (5); 72 Metal, machinery and related trades workers (5); 92 Agricultural, fishery and related labourers (4); 61 Skilled agricultural and fishery workers (4).
Other risk categories	No common description could be given
Trends	Six Focal Points reported a stable trend in the exposure to musculoskeletal disorders whereas, five reported an increase and one a decreased. Only three Focal Points were unable to establish a particular trend.
Focal Points identifying the need for additional preventive action	Austria, Belgium, Denmark, Finland, Luxembourg, Portugal, Spain and Sweden.
Description of indicated action⁸⁹	Two Focal Points reported a lack of national data and the need to conduct surveys to collect such information.
Other relevant information	Musculoskeletal disorders are a major source of occupational injuries in the working environment. Occupational exposure to musculoskeletal disorders is one potential source that can result in an injury. Current lifestyles including healthy living, recreational and sporting activities also have a much more important causal connection, thereby contributing to the difficulty in establishing those that are solely attributable to workplace conditions. Repetition and monotony combined with working conditions such as low individual control of the work and high work pace can also lead to an increase in the risk of musculoskeletal disorders. It is expected that still more and better mechanical lifting aids will be developed in the future. The prevalence of musculoskeletal disorders among the active and younger age categories does not reflect the impact of work related symptoms in the oldest age group.

⁸⁶ ESWC-data, 2nd Survey European Foundation Dublin 1996.

⁸⁷ The most frequently identified sectors which the Focal Points considered to be most at risk.

⁸⁸ The most frequently identified occupations which the Focal Points considered to be most at risk.

⁸⁹ The descriptions of further actions can be found in the individual chapters of the main report dealing with the exposure or OSH outcome.

OSH outcome: stress

Potential health effects	Excessive stress causes fatigue, anxiety, sweating panic attacks and tremors. It can lead to difficulty in relaxing, loss of concentration, impaired appetite and disrupted sleep patterns. Some people become depressed or aggressive and stress increases susceptibility to ulcers, mental ill health, heart disease and some skin disorders.
European picture⁹⁰	28% of all workers interviewed were exposed to stress.
Sector categories most at risk from the national reports using NACE code⁹¹ Figures in brackets represent the number of Focal Point responses	85 Health and social work (7); 80 Education (7); 60 Land transport; transport via pipelines (5); 75 Public administration and defence; compulsory social security (4); 01 Agriculture, hunting and related service activities (4).
Occupation categories most at risk from the national reports using ISCO code⁹² Figures in brackets represent the number of Focal Point responses	22 Life science and health professionals (7); 23 Teaching professionals (6); 12 Corporate managers (5); 93 Labourers in mining, construction, manufacturing and transport (4); 13 Managers of small enterprises (4).
Other risk categories	No common description could be given.
Trends	A total of nine Focal Points reported that exposure to stress in the workplace over the last 3-5 years had increased. One Focal Point reported a stable trend to stress exposure. Five Focal Points were unable to establish a particular trend.
Focal Points identifying the need for additional preventive action	Belgium, Denmark, Finland, Greece, Ireland, Italy, Portugal, Spain, Sweden and United Kingdom.
Description of indicated action ⁹³	No common description could be given.
Other relevant information	Stress at work is often considered to be a white-collar phenomenon. However, causes of stress can be found in purely physical working conditions brought on by the environmental conditions such as noise, toxic vapours, heat, or even difficult working postures. It has long been known that shift work is particularly vulnerable to stress. Job insecurity can also add to stress problems. Commented in several national reports were a number of measures that can be adopted and further developed to reduce the risk from stress at work, these measures included: <ul style="list-style-type: none"> • implementation of work organisation procedures, • promote worker participation, • introduce job rotation work regular breaks; and • provision of training and information to workers about relaxation techniques to reduce stress.

⁹⁰ ESWC-data, 2nd Survey European Foundation Dublin 1996.

⁹¹ The most frequently identified sectors which the Focal Points considered to be most at risk.

⁹² The most frequently identified occupations which the Focal Points considered to be most at risk.

⁹³ The descriptions of further actions can be found in the individual chapters of the main report dealing with the exposure or OSH outcome.

OSH outcome: occupational sickness absence

European picture⁹⁴	Some 23% of all workers interviewed reported being absent from work for varying numbers of days.
Sector categories most at risk from the national reports using NACE code⁹⁵ Figures in brackets represent the number of Focal Point responses	85 Health and social work (4); 75 Public administration and defence; compulsory social security (4); 80 Education (3); 64 Post and telecommunications (3); 60 Land transport; transport via pipelines (3).
Occupation categories most at risk from the national reports using ISCO code⁹⁶ Figures in brackets represent the number of Focal Point responses	93 Labourers in mining, construction, manufacturing and transport (3); 92 Agricultural, fishery and related labourers (2); 83 Drivers and mobile plant operators (2); 73 Precision, handicraft, craft printing and related trades workers (2); 71 Extraction and building trades workers (2); 51 Personal and protective services workers (2); 23 Teaching professionals (2); 22 Life science and health professionals (2).
Other risk categories	No common description could be given.
Trends	Although a limited response, two Focal Points reported a stable trend to occupational sickness absence in the workplace a further two reported a decrease in the trend and three Focal Points reported an increase in exposure. The other eight Focal Points were unable to establish a particular trend.
Focal Points identifying the need for additional preventive action	Belgium, Ireland, Luxembourg, Portugal and Spain.
Description of indicated action⁹⁷	No common description could be given.
Other relevant information	Absenteeism is a complex and multi-conditional phenomenon. Various factors can affect absenteeism including, task variation, physical working conditions, management factors, remuneration, flexibility, time schedules, control measures, demographic and individual variations such as terms and conditions of employment. Commented in several national reports were a number of measures that can be adopted and further developed to reduce the risk of absenteeism in the workplace, these are indicated below: <ul style="list-style-type: none"> • further research on societal characteristics; • requirement to train and inform health practitioners about occupational sickness absence; • organisation of worker participation; • organisation of work control; • implementation of prevention plans using specific medical protocol; • further information about emerging risk, particularly about new toxic products; and • to include additional occupational diseases on national registers.

⁹⁴ ESWC-data, 2nd Survey European Foundation Dublin 1996.

⁹⁵ The most frequently identified sectors which the Focal Points considered to be most at risk.

⁹⁶ The most frequently identified occupations which the Focal Points considered to be most at risk.

⁹⁷ The descriptions of further actions can be found in the individual chapters of the main report dealing with the exposure or OSH outcome.

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