



**World Health  
Organization**

REGIONAL OFFICE FOR **Europe**



# **National Profile of Occupational Health System in Finland**



# **National Profile of Occupational Health System in Finland**



**World Health  
Organization**

---

REGIONAL OFFICE FOR

**Europe**

## Abstract

A national profile of the occupational health system is an important instrument for policy-making and programme development, as recommended by the WHO Global Plan of Action on Workers' Health and the ILO Promotional Framework for Occupational Safety and Health Convention. This document provides an overall picture of the current status of governance of workers' health in Finland, focusing on the national policy framework, priorities for action, objectives and targets, mechanisms for implementation, and human and financial resources for protecting and promoting workers' health. Along with the current statistics on occupational accidents, occupational diseases and work-related health problems, preventive and compensative approaches to noncommunicable diseases related to the working environment (such as musculoskeletal, cardiovascular and mental disorders) are described. Future priorities for occupational health system development in Finland are described, based on a survey of key stakeholders. The strengths and weaknesses of the Finnish occupational health system are analysed, together with opportunities and threats. The document concludes with a list of the prerequisites for a minimum level of occupational safety and health infrastructure. An annex provides a brief history of the evolution of the Finnish occupational health system, along with the current activities of implementing the WHO Global Plan of Action on Workers' Health in Finland. Lessons from the Finnish occupational health system reported in this document will provide policy-makers and their advisers in the WHO Member States with up-to-date guidance on good practice in the governance of workers' health to meet the challenges of the 21<sup>st</sup> century.

## Keywords

OCCUPATIONAL HEALTH  
OCCUPATIONAL HEALTH SERVICES – organization and administration  
SAFETY MANAGEMENT  
HEALTH POLICY  
FINLAND

Address requests about publications of the WHO Regional Office for Europe to:

Publications  
WHO Regional Office for Europe  
Scherfigsvej 8  
DK-2100 Copenhagen Ø, Denmark

Alternatively, complete an online request form for documentation, health information, or for permission to quote or translate, on the Regional Office web site (<http://www.euro.who.int/pubrequest>).

### © World Health Organization 2012

All rights reserved. The Regional Office for Europe of the World Health Organization welcomes requests for permission to reproduce or translate its publications, in part or in full.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by the World Health Organization to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either express or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization be liable for damages arising from its use. The views expressed by authors, editors, or expert groups do not necessarily represent the decisions or the stated policy of the World Health Organization.

Language editing by Frank Theakston, layout by Dr Jin-Won Noh.

Photographs © Finnish Institute of Occupational Health/ Iisakki Härmä.

# CONTENTS

	<i>Page</i>
<b>Contributors and acknowledgements</b> .....	iv
<b>List of abbreviations</b> .....	v
<b>Foreword</b> .....	vii
<b>Executive summary</b> .....	x
<b>Chapter 1 Indicators of occupational safety and health</b> .....	2
Basic country information .....	2
<i>Indicators of socioeconomic development</i> .....	3
<i>Social security system</i> .....	6
<i>National health system</i> .....	9
Occupational safety and health system .....	12
<i>Government structure and responsible officers</i> .....	12
<i>Major laws and regulations</i> .....	13
<i>Human resources for OH&amp;S</i> .....	17
<i>Compliance with regulatory actions</i> .....	22
Indicators of working conditions .....	25
<i>Physicochemical factors</i> .....	26
<i>Ergonomic factors</i> .....	27
<i>Psychosocial factors</i> .....	27
<i>Working times</i> .....	28
<i>Health-related lifestyles</i> .....	29
Indicators of occupational and work-related health .....	29
<i>Occupational accidents</i> .....	29
<i>Occupational diseases</i> .....	31
<i>Work-related health problems</i> .....	33
<i>Periodic medical examinations</i> .....	33
<b>Chapter 2 Prevention and compensation approaches to work-related health problems</b> .....	38
Compensation for occupational diseases in Finland .....	38
Work-related musculoskeletal disorders .....	39
Cardiovascular disorders .....	40
Work-related stress and psychosocial risks .....	41
<b>Chapter 3 Future priorities</b> .....	44
Survey among the main actors in OH&S .....	44
Values in OH&S .....	44
Problems of OH&S .....	44
Strengths and weaknesses in OH&S .....	46
The economic aspects of OH&S .....	46
Tripartite collaboration .....	47
Challenges for OH&S .....	48
<b>Chapter 4 Conclusion and lessons</b> .....	50
Lessons .....	51
<b>References</b> .....	53
<b>Annex 1. Web sites of research and other institutions related to OSH in Finland</b> .....	56
<b>Annex 2. History of the Finnish OHS system</b> .....	57
<b>Annex 3. Implementation of the WHO Global Plan of Action on Workers' Health in Finland</b> .....	58

# Contributors and acknowledgements

## Contributors

### Editor:

Rokho Kim, WHO Regional Office for Europe

### Authors:

Suvi Lehtinen, Finnish Institute of Occupational Health

Jorma Rantanen, Professor Emeritus, Chair of the Board, University of Jyväskylä, Finland

### National contributors:

Kristiina Mukala, Finnish Ministry of Social Affairs and Health, WHO National Focal Point on Workers' Health

Harri Vainio, Director General, Finnish Institute of Occupational Health

## Acknowledgements

This document was prepared under the leadership of the WHO Regional Office for Europe's European Centre for Environment and Health, Bonn, Germany and in collaboration with a project team led by Professor Yangho Kim of Ulsan University with the financial support of the Occupational Safety and Health Agency, Republic of Korea.

We are also grateful to the interns of the WHO Regional Office for Europe for their assistance in the preparation of this document: Mahdu Babu, Göttingen University; Eun-young Choi, Yonsei University; Daniel Grünes, Maastricht University; Nagnouma Nanou Kone, Cologne University; Hojoon Daniel Lee, Hanyang University; Jungwon Yoon and Sujin Sung, Seoul National University; Zheng Zheng, Lund University, and Jinwon Noh, Johns Hopkins University.

## List of abbreviations

Akava	Confederation of Unions for Academic Professionals in Finland
ASA Register	register of employees occupationally exposed to carcinogens
BOHS	basic occupational health services
DI	Department for Insurance
DOSH	Department of Occupational Safety and Health
DPWH	Department for Promotion of Welfare and Health
EAC	East African Community
ECOSH	Economic dimensions of OSH
ECTS	European Credit Transfer and Accumulation System
EK	Confederation of Finnish Industries
EU	European Union
EU 15	15 Member States of the European Union as of December 31, 2003
FAII	Federation of Accident Insurance Institutions
FIOH	Finnish Institute of Occupational Health
GDP	gross domestic product
GPA	Global Plan of Action
HIV	human immunodeficiency virus
ICOH	International Commission on Occupational Health
ILO	International Labour Organization
ME	medium-sized enterprises
MoSAH	Ministry of Social Affairs and Health
MTK	Central Union of Agricultural Producers and Forest Owners
NanOEH	nanotechnologies in occupational and environmental health
NIHW	National Institute for Health and Welfare
OD	occupational disease
OECD	Organisation for Economic Co-operation and Development
OH&S	occupational health and safety
OHP	occupational health physician
OHS	occupational health services
OSH	occupational safety and health
PHC	primary health care
PRIMA-EF	Psychosocial Risk Management – Excellence Framework

PMWA	promotion and maintenance of working ability
SAK	Central Organization of Finnish Trade Unions
SC	Safety Committee
SEITTI	Occupational Health Service Development Programme in Finland
SSE	small-scale enterprises
SSI	social security institution
STTK	Finnish Confederation of Salaried Employees
STUK	Radiation and Nuclear Safety Authority
SWOT	strengths, weaknesses, opportunities and threats
TUKES	Safety Technology Authority
VTT	State Technical Research Centre
UF	Unemployment Fund
UIF	Unemployment Insurance Fund
WAI	Work Ability Index
WPF	Work Pension Fund



## Foreword

Workers represent half the population and are the major contributors to economic and social development in the WHO European Region. Health hazards and risks in the working environment are among the major social determinants of health, killing more than 300 000 workers every year and contributing to the health inequities within and between the countries of the Region. The workplace is also a setting for health promotion and essential public health interventions targeting communicable and noncommunicable diseases. This is why the health, working ability and well-being of the working population should be one of the priority areas of good governance pursuing health in all policies.

Considering that workers' health is determined not only by the working environment but also by social and individual factors and access to health services, it is crucial to adopt a holistic approach in developing an effective and efficient occupational health system at the national level. The Sixtieth World Health Assembly endorsed the Global Plan of Action on Workers' Health as a ten-year work plan for WHO and the Member States to protect and promote occupational safety and health and to prevent occupational diseases and work-related health problems.

In the Parma Declaration, adopted at the Ministerial Conference on Environment and Health, the Member States agreed to commit to act on the health risks to vulnerable groups posed by poor working conditions, health inequalities and the burden of noncommunicable diseases, which can be reduced through adequate policies on the working environment. The inequality in the development of occupational health systems in the Region is remarkable. Less than 10% of workers in the southern and eastern parts of the Region have access to occupational health services, whereas more than 90% of the employed population enjoy such access in some countries in the northern and western parts of the Region.

One of the goals of the new European health policy, Health 2020, being developed by the WHO Regional Office for Europe is to reduce the health inequalities within and between countries. The Regional Office worked with WHO collaborating centres to produce a series of national profiles of occupational health systems in selected countries as models of good governance for workers' health. The Finnish national profile, prepared in collaboration with the Finnish Ministry of Social Affairs and Health and the Finnish Institute of Occupational Health, is the first result of this effort. We are grateful to the Occupational Safety and Health Agency of the Republic of Korea for financial support for initiating this project.

Occupational health and safety is an important facet of modern public health, addressing one of the major social determinants of health and the health divide. We hope this document will help the Member States in developing more effective and efficient occupational health systems and in implementing the WHO Global Plan of Action and the Parma Declaration for the improvement of workers' health.

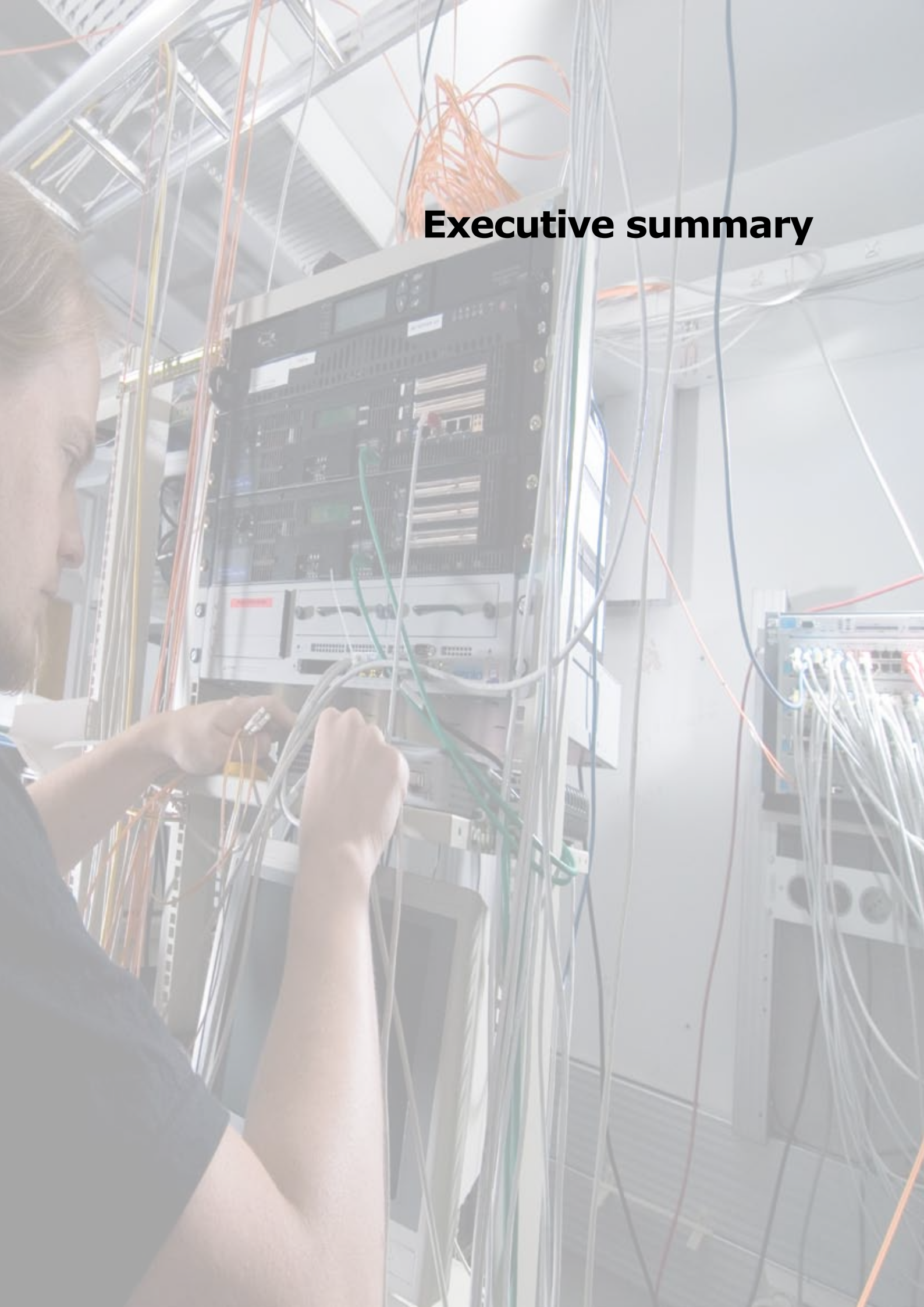
Dr Guénaël R. M. Rodier  
Director, Division of Communicable Diseases, Health Security and Environment  
WHO Regional Office for Europe

## Map of Finland



Source: *Situational base map, 2008*. Geneva, World Health Organization, 2008  
(<http://gamapserver.who.int/mapLibrary/Files/Maps/FI.png>, accessed 18 July 2011).

# Executive summary



A national occupational health system profile is an important instrument for policy-making and programme development at the national and international levels, as recommended by the WHO Global Plan of Action on Workers' Health (resolution WHA60.26) and the ILO Promotional Framework for Occupational Safety and Health Convention (ILO C. 187). This document provides an overall picture of the current status of governance for workers' health in Finland, focusing on the national policy framework, priorities for action, objectives and targets, mechanisms for implementation, and human and financial resources for the protection and promotion of workers' health. The purpose of this document is to facilitate the development of more effective and efficient occupational health systems and the implementation of the WHO Global Plan of Action for Workers' Health and the Parma Declaration in the Member States by disseminating models of good practice in the Region. The target audience includes policy-makers and their advisers as well as experts and other stakeholders in the area of occupational health and safety (OH&S) at the national and international levels.

## **Basic country information**

According to the Health for All database of the WHO Regional Office for Europe, Finland has a population of 5.339 million (2.618 million male, 2.721 million female) with life expectancy at birth of 80.19 years (76.74 years for men and 83.56 years for women) and an infant mortality rate of 2.65 per 1000 live births as of 2009. One of the biggest challenges facing Finnish society is the ageing of the population, which is the main cause of a foreseen labour shortage in the future. The need for young workers is obvious, and maintaining and promoting the working ability of ageing workers is crucial for maintaining and sustaining the key functions of society and ensuring sound socioeconomic development. The WHO estimate of expenditure on health was 8.4% of gross domestic product, amounting to PPP\$2979 per inhabitant as of 2008.

## **Health inequalities**

The National Action Plan to Reduce Health Inequalities outlines strategic policy definitions and the most important measures for reducing socioeconomic and health inequalities in Finland. This Action Plan is closely linked with the Government's health promotion policy programme. The Action Plan will also implement the relevant aims of the national "Health 2015" programme to reduce mortality differences by a fifth by 2015. The National Institute for Health and Welfare and the Finnish Institute of Occupational Health have had an important role in planning and preparing the Action Plan, which operates in priority areas: (a) social policy measures: improving income security and education and reducing unemployment and poor housing; (b) strengthening the prerequisites for healthy lifestyles: measures to promote healthy behaviour of the whole population with special attention to disadvantaged groups where unhealthy behaviour is common; and (c) improving the availability and quality of social and health care services for everyone.

## **Social security system**

The Finnish social security system covers the whole life cycle from pregnancy (maternal and child health) to death (funeral allowances). The employer is bound by law to ensure health and

safety at work. The Occupational Accidents Insurance Act has priority over other social insurance compensation systems. The occupational accident insurance system is financed through premiums paid by the employer. The scope of compensation by occupational accident insurance is very broad and the level of compensation is relatively high, resulting in almost 100% compensation of all costs caused by the accident or occupational disease and the loss of earnings plus, if needed, temporary or permanent loss of working capacity. The accident insurance institutions also provide advisory services for the prevention of accidents.

## Health system and public health services

The Ministry of Social Affairs and Health defines the course of social and health policy in Finland in its strategy and implements these policy lines through legislation, quality recommendations, programmes and projects. The goal of health care in Finland is to maintain and improve people's mental health and physical functional capacity through preventive and comprehensive health services. Health care services are divided into primary health care (PHC) and specialized medical and hospital care, arranged by municipal health centres and hospital districts, respectively. Occupational health services (OHS) are one of the six elements of public health services, as summarized in Table I.

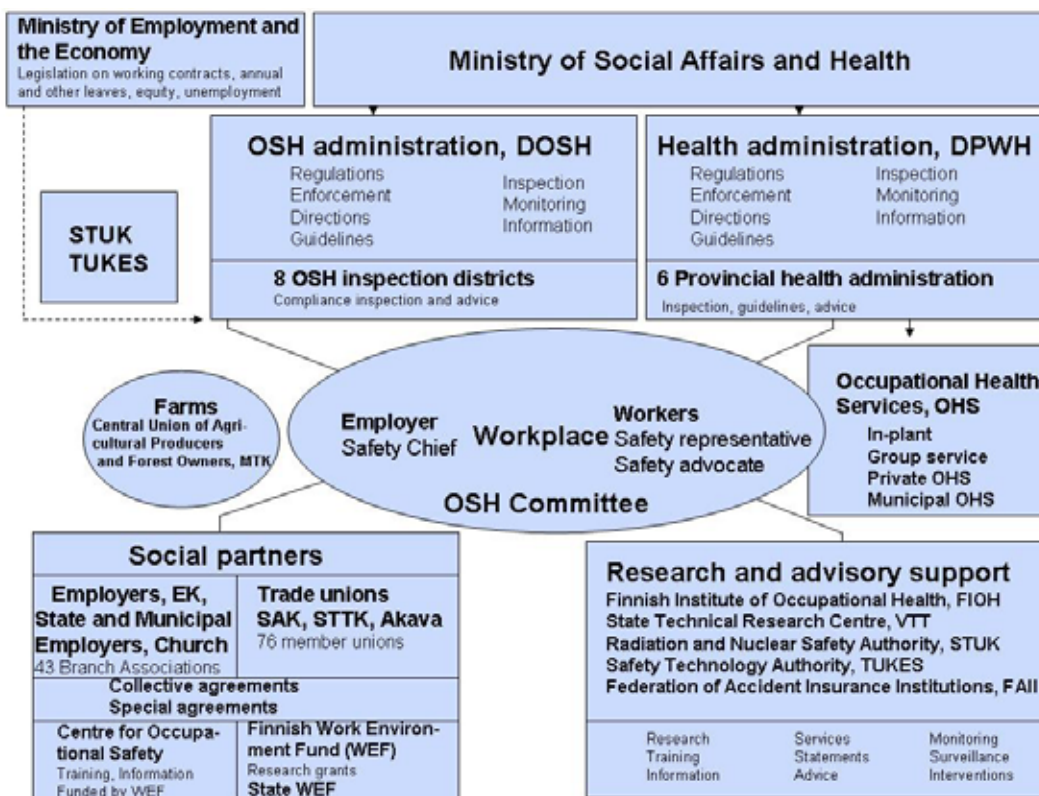
**Table I. Public health services**

<b>Access to health care</b>	Everyone residing in Finland is entitled to receive good-quality health care within set timeframes.
<b>Preventive services</b>	The primary goal of the Finnish health policy is disease prevention. Preventive services are provided by health centres, child health clinics, school health services, student health care and OHS.
<b>Primary health care</b>	Municipal health centre services include physical examinations, oral health, medical care, ambulance services, maternity and child health clinics, school and student health care and other basic services.
<b>Specialized medical care</b>	Specialized outpatient and institutional treatment is provided by hospital districts. Diseases requiring highly demanding treatment are handled by regional arrangements or centrally according to a specific decree. Each hospital district contains a central hospital and other specialized units. There are five university hospitals.
<b>Occupational health services</b>	Employers are responsible for providing employees with preventive health care and, as far as possible, medical care.
<b>Private health care</b>	Private health care is used to supplement public health services. Private doctors' and dentists' fees and examinations are partially reimbursed.

## Occupational safety and health (OSH) system

The country's first legislation on occupational safety and health (OSH) was passed in 1889, and the development of the occupational health service infrastructure started immediately following industrialization of the country. OSH and the working ability of employees have been of high priority, partly due to democratic development and a longstanding tradition of social dialogue. Currently, one of the key factors in the development of Finnish society is to ensure longer careers for all working people. This means more emphasis on improving working conditions and lengthening working life in general, through a higher standard of occupational health, safety and well-being at work. Fig. I summarizes the overall structure and key players in the Finnish OSH system.

Fig. I. OSH organizations in Finland



Notes: DOSH=Department of Occupational Safety and Health, DPWH=Department for Promotion of Welfare and Health, EK=Confederation of Finnish Industries, MTK=Central Union of Agricultural Producers and Forest Owners, OHS=Occupational health services, SAK=Central Organization of Finnish Trade Unions, STTK= Finnish Confederation of Salaried Employees; STUK=Radiation and Nuclear Safety Authority, TUKES=Safety Technology Authority.

## Government structure and responsible officers

The leading OSH authority is the Department of Occupational Safety and Health of the Ministry of Social Affairs and Health. It is responsible for policy-making under the supervision of the Minister of Social Affairs and Health. Several institutions carry out OSH research in Finland. The Centre for Occupational Safety organizes a great deal of training on occupational safety in Finland.

## Major laws and regulations

The major laws on OSH are:

- The Occupational Safety and Health Act (738/2002);
- The Act on Occupational Safety and Health Enforcement and Cooperation on Occupational Safety and Health at Workplaces (44/2006);
- The Act on Occupational Health Services (1383/2001); and
- legislation on occupational accidents and occupational diseases:
  - The Occupational Accidents Insurance Act (608/1948; 681/2005);
  - The Act on Occupational Diseases (1343/1988; 1317/2002).

The Occupational Safety and Health Act (738/2002) sets out the duties and responsibilities of the employer in detail. In general, the employer is obliged to ensure employees' safety and health at work, considering and covering all aspects of work and working conditions and the work environment as well as the personal prerequisites of the employee, including professional skills, experience, age, gender and other relevant aspects. The following principles must be followed as far as possible: primary prevention; elimination of hazards and, when not possible, replacement with less hazardous alternatives; collective safety and health measures ahead of individually targeted ones; and application of the best available technology. The Act on Occupational Health Services (1383/2001) obliges employers to organize and pay for preventive services for all workers, covering both public and private sectors, regardless of the size or nature of the enterprise or workplace.

## Coverage of OHS

The development trend in OHS was strongly supported by the commitment of the Government and social partners to developing OHS according to the lines of ILO Convention No. 161 and Recommendation No. 171, which Finland ratified in 1986. A national programme for the development of OHS was presented to Parliament in 1989 in the National Programme for the Development of Occupational Health Services. An evaluation of the implementation of the Programme in 1997 showed that most of the objectives plus a number of new developments had been achieved. The new OHS legislation was passed in 2001 and a new government ordinance has been adopted. At present, more than 90% of engaged employees are covered by services through four models of access (Fig. II and III).

## Human resources for OH&S

Well-educated and well-trained personnel such as occupational health physicians, occupational health nurses and occupational hygienists comprise the key expert group for the development of OH&S. Almost 6900 people work in the Finnish OHS system, including 2369 physicians and 2634 nurses. There are 113 occupational hygienists and 700 safety engineers. The inspectors have the power to inspect the compliance of employers with the requirements of the Act on Occupational Health Services. The focus of OH&S inspection has been shifted so that it increasingly focuses on essential OH&S priorities. There are approximately 450 OH&S inspectorate personnel responsible for OH&S supervision.

Fig. II. Coverage of employees by OHS in Finland

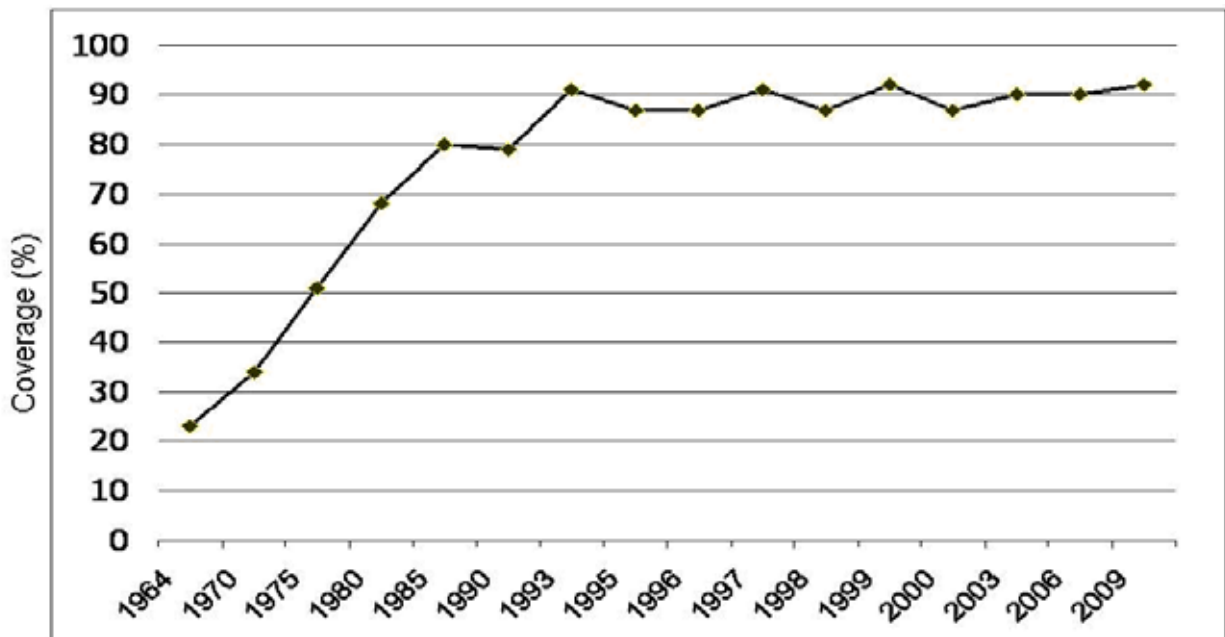
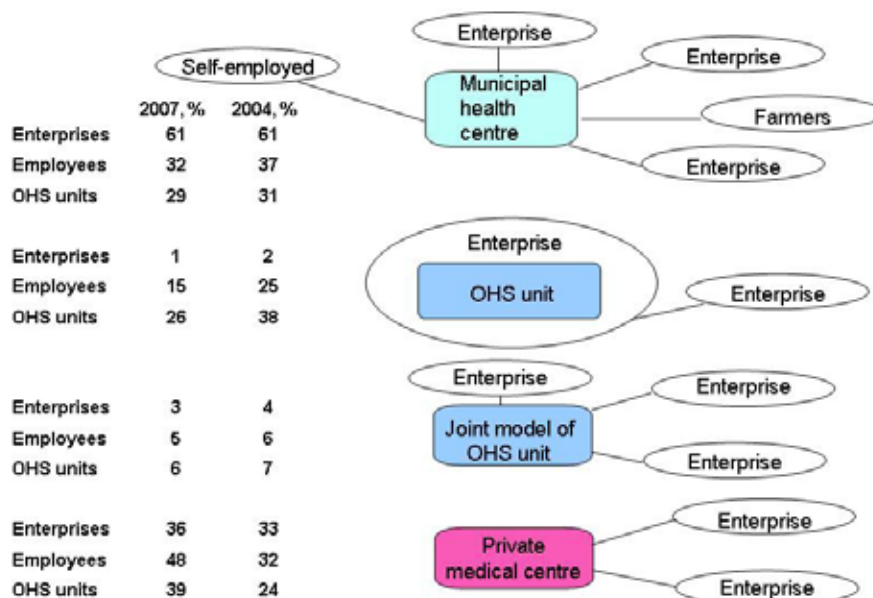


Fig. III. Finland's four models of occupational health service provision and their shares of enterprises and employees





## Compliance with regulatory actions

The Occupational Safety and Health Authority oversees compliance with the regulations. Workplaces are ranked in priority order on the basis of risks and inspected according to that order. A substantial part of the OSH legislation has been reformed in recent years to focus on systematic prevention.

## Indicators of working conditions

The Finnish Institute of Occupational Health carries out a comprehensive computer-assisted telephone interview survey every three years. The Work and Health Interview Survey includes physicochemical factors, ergonomic factors, psychosocial factors, working hours and lifestyles.

## Indicators of occupational and work-related health

The number of occupational accidents at Finnish workplaces has declined over the past 30 years, although the trend has levelled off over the past 15 years. According to the WHO Health for All database, the fatality rate due to work-related accidents in Finland was consistently lower than the European Union (EU) average between 1979 and 2007 (Fig. IV).

Fig. IV. Fatal accidents at work per 100 000 employees, 1979–2007, Finland and EU



The Act on Occupational Diseases (1343/1988) defines an occupational disease as a disease caused by any physical factor, chemical substance or biological agent encountered in the course of work. In principle, any disease or adverse health outcome meeting the above criteria is cause for compensation provided the disease is contracted as a consequence of exposure at work under an employment contract with a private employer, in public service or in public office.

A part of occupational morbidity, which is not recognized as an occupational disease but is classified as work-related, is not covered by occupational disease compensation. If such a work-related outcome results in inability to work, compensation is made through general disability schemes. The Ministry of Social Affairs and Health and the Finnish Institute of Occupational Health have published a guidebook for health examinations in OHS. This so-called “Blue Book” contains a description of exposures in 12 specific professions or sectors of the economy and guidance on carrying out health examinations.

The Finnish working-age population is under health surveillance for both public health and occupational health purposes. The OHS carry out specific health examinations of the working population, divided into the following categories according to the Act on Occupational Health Services:

- pre-employment
- special examinations for workers in hazardous jobs
- when returning to work after a long sick leave
- for the assessment of working ability
- after retirement from particularly hazardous jobs, e.g. asbestos work.

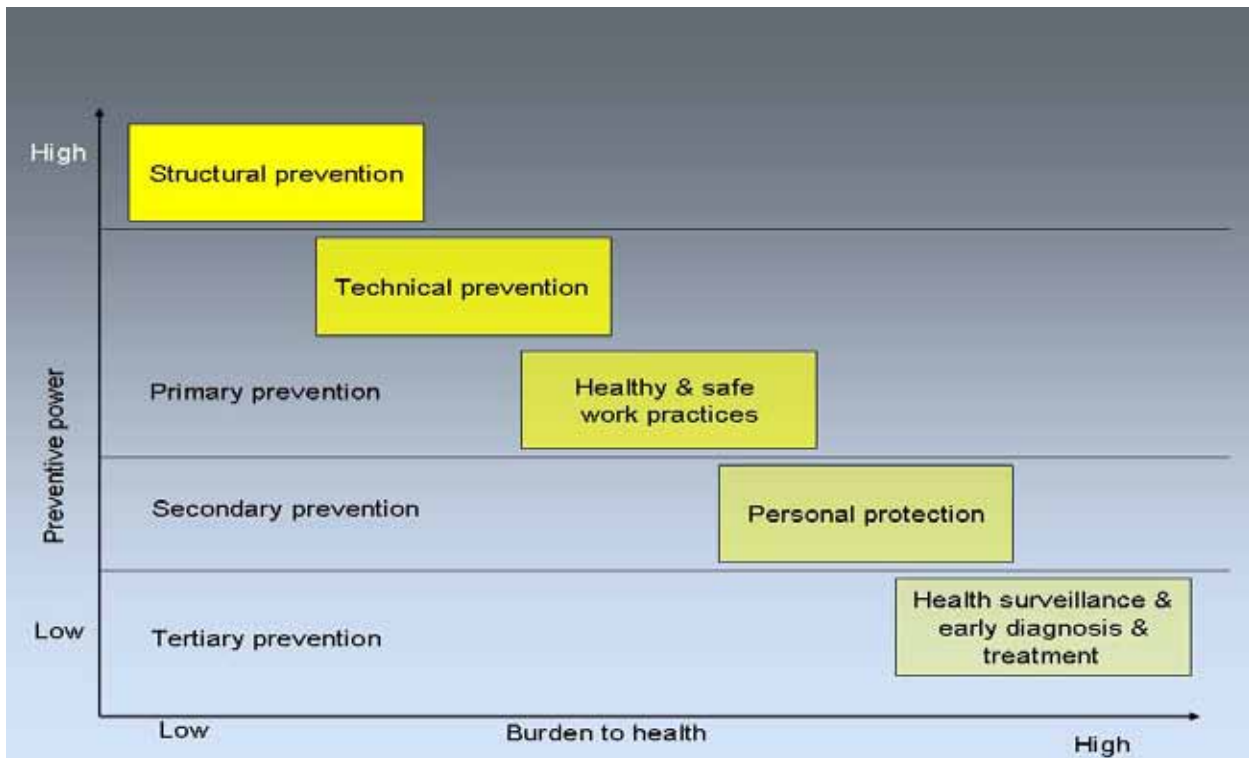
In international comparisons, Finnish sick leave rates are around the European average. In evaluations and studies, the vast majority of sick leave has been found to be justified and abuse is rare. The rates vary widely depending on the factors listed above. They are currently increasing slightly (~2% a year), probably due to the ageing working population and intensified job demands. The number of sick leave days in 2008 was on average 6.3 per worker. Female workers on average take two days more sick leave than male workers, and blue-collar workers two days longer than white-collar workers. The most common causes of sick leave are musculoskeletal disorders (36%), mental health disorders (22%) and injuries and poisonings (13.6%).

Working ability and its maintenance has been the topic of active debate in Finland, owing to a predicted shortage of labour and expected problems in the sustainability of social security. Actions for the promotion and maintenance of working ability have been made a legitimate task of OHS. The effective retirement age has increased over the current decade: the pension legislation has been amended to extend the upper retirement age to 68 years.

## **Prevention and compensation approaches to work-related health problems**

All occupational accidents and diseases are, in principle, preventable. Therefore, structural and primary prevention are the most important starting points for all OH&S activities. Fig. V shows the preventive power of various measures to be considered in all policies in each country. OH&S aspects should be looked at in all decisions, including sectors that are not under the jurisdiction of the Ministry of Health and the Ministry of Labour.

Fig. V. Hierarchy of prevention



## Compensation for occupational diseases in Finland

Compensation practice for occupational diseases is based on the Act on Occupational Diseases (1343/1988) and its amendments (1643/1992; 1315/2002; 1366/2004) as well as the Decree on Occupational Diseases (1347/1988) and its amendments (1315/2002; 252/2003). When an occupational disease is diagnosed, the workplace is routinely requested to undertake measures to prevent new cases from occurring. Disability benefits are based on medical criteria of disability, which are drawn up under the leadership of the Ministry of Social Affairs and Health. The Federation of Accident Insurance Institutions (FAII) coordinates the criteria and principles used by insurance companies in practical decisions on compensation cases, thus standardizing the compensation policies and reducing variation between individual companies.

## Work-related musculoskeletal disorders

More than a million workers have a chronic musculoskeletal disorder, and another million suffer from acute musculoskeletal disorders related to work. The sickness absenteeism caused by musculoskeletal disorders has been on the increase in the 2000s. The costs caused by musculoskeletal disorders consist of premature retirement costs and loss of work input, amounting to close to €2 billion a year. The National Programme for the Prevention of Musculoskeletal Disorders was launched in 2008 and will continue until 2015. In 2008, it had a total of 16 participant institutions and nongovernmental organizations.

## **Cardiovascular disorders**

As a general public health trend, the past 30 years have shown a positive development in the reduction of cardiovascular disorders (80% reduction from the level of 1970). Cardiovascular disorders cause long periods of sickness absenteeism, and constitute the third largest cause of work disability pensions after mental health disorders and musculoskeletal disorders. The cardiovascular health of working-age people is a part of the National Action Plan for Finnish Heart Health for the Years 2005–2011, and the occupational causes of cardiovascular morbidity are recognized in the programme.

## **Work-related stress and psychosocial risks**

The Ministry of Social Affairs and Health has established a national programme, the Masto Project (to reduce depression-related work disability), whose aim is to foster good practices for well-being at work, prevention of depression, good treatment and rehabilitation (including continuing at work and a smooth return to work) and reducing the number of people on disability pensions due to depression. The main contents of the project are: (a) promotion of well-being and mental health at work (working-age population); (b) activities aiming at preventing depression (risk groups); (c) early recognition and treatment of depression (people who have become ill); and (d) rehabilitation and return to work (people recovering from depression).

## **Future priorities**

A survey was conducted in 2006 among the 16 organizations involved in OH&S, covering all the key stakeholders (including three ministries) and all the key social partner organizations and associations of OH&S professionals. The survey identified the central values, problems and priorities of these organizations for OH&S, and formulated the strengths and weaknesses of OH&S in Finland, as well as the most important development targets in the future. Coping with work, stress, mental well-being, musculoskeletal disorders and occupational accidents/diseases were the top five urgent problems in OH&S in Finland. All respondents assessed that the tripartite collaboration has been beneficial and successful during the past years. It was noted that the initiative for new ideas and a proactive approach often lies with the trade unions and that psychosocial well-being was one of the biggest challenges.

## **Conclusion and lessons**

The Finnish occupational health system is comprehensive and dynamic, responding to changing priorities effectively with multisectoral cooperation and coordination led by the Ministry of Social Affairs and Health. Nevertheless, owing to major challenges posed by the traditional health and safety hazards, new problems related to the rapid development of global economies, technologies and demographic change, and new types of work organization and employment patterns, much remains to be done in further developing occupational health in Finland. With its well-developed OH&S policies, modern legislation, social dialogue, infrastructures and human resources, the Finnish occupational health system has good prospects for generating new responses and solutions to the problems and challenges that lie ahead.

## SWOT analysis

The situation of the Finnish system can be summarized as follows.

Its strengths are:

- comprehensive and modern OHS legislation;
- government policy programme positively addressing OH&S;
- wide consensus on national key strategic objectives in OH&S;
- well-trained OH&S officials, inspectors and employers' and workers' representatives;
- positive trends in the past three decades in safety and health;
- successful actions for safety, health and working ability of ageing workers;
- strong research support to OH&S administration and workplace-level activities;
- wide coverage of OH&S with a modern content; and
- active international and Nordic collaboration in policies, governance activities, research, training and information.

Its weaknesses are:

- difficulties in keeping abreast with rapid changes in working life and the emergence of new risks;
- lack of coverage of about 200 000 entrepreneurs who are not covered by OH&S legislation;
- levelling off of the declining trends of occupational accidents during the past few years (residual risk);
- lack of coverage of the smallest enterprises by OH&S and OHS services;
- difficulties in controlling the working conditions and employment contracts of guest and migrant workers, mobile workers and informal workers;
- declining interest of employees in serving as safety and health representatives;
- reconciliation of working life and family life, particularly for parents of small children and of workers with dependants (e.g. older family members); and
- less successful outcomes from attempts to manage job insecurity, stress and long working hours.

Its opportunities are:

- effective implementation of new OH&S legislation;
- development of working conditions conducive to working ability and coping with work (particularly among ageing workers);
- high renewal of workforce in the next 10 years with new skills, competence and attitudes;
- development of new managerial cultures and modern leadership giving high value to OH&S and well-being at work;
- understanding OH&S as a factor for improved well-being, job motivation, productivity, quality, innovation and competitiveness; and
- effective use of new technologies for safer and healthier workplaces.

Its threats are:

- risks can increase as a consequence of weakening control of working conditions;
- exclusion of ageing workers through imbalance between capacity and demands;
- disappearance of the tacit knowledge of OH&S owing to retirement;
- decline of innovation under too high short-term demands;
- threat of global pandemic and risks of frontline workers in several sectors of working life (frontier guards, travel occupations, international workers, health care workers);
- new, unexpected risks of new technologies and substances; and
- new occupational hazards related to terrorism.

## Lessons

The development of the occupational health system and related infrastructures is a long-term societal process in a country, which is often related to cultural and sociopolitical aspects. If a country wants to take lessons from the Finnish system, it is very important to take into account the whole cycle of policy development and to involve all relevant stakeholders (including social partners) in the process, even at the earliest stage of development. The factors shown in Fig. VI can be identified as lessons for other countries from the Finnish system in the order of their development.

The following prerequisites are identified as a minimum set of OH&S infrastructure supporting the Finnish occupational health system:

- legislation on social security and social insurance
- The Act on Occupational Diseases
- list of occupational diseases
- service infrastructure – basic occupational health services (BOHS) for all employees
- training for occupational health physicians and occupational health nurses
- secondary- and tertiary-level support services, including multidisciplinary support
- notification and registration system of occupational accidents and diseases
- feedback to the workplace built into the occupational health system for primary prevention of occupational diseases and accidents.

The factors and order for the development of OSH are shown in Fig. VI.

Fig. VI. Factors and order for the development of OSH







# Chapter 1



# Indicators of occupational safety and health

## Basic country information

According to the Health for All database of the WHO Regional Office for Europe, Finland has a population of 5.339 million (2.618 million male, 2.721 million female) with life expectancy at birth of 80.19 years (76.74 years for men and 83.56 years for women) and an infant mortality rate of 2.65 per 1000 live births as of 2009. The Swedish-speaking population is 5.5% of the total (2007) and consequently, Finland is constitutionally bilingual (Finnish and Swedish). The geographical area of the country is 338 000 km<sup>2</sup>, giving a population density of 16 per km<sup>2</sup>.

According to the Health for All database of the WHO Regional Office for Europe, the birth rate is 11.32 per 1000 population and the death rate 9.35 per 1000 population. Population growth is 4.9 per 1000 in 2009 (1). The distribution of the population into various fractions in 2008 is shown in Fig. 1.1.

Fig. 1.1. Population and working population in Finland, 2008

<b>Total population 5 326 314</b> 100%		
<b>Population of working age (15–74 years) 4 014 000</b> 75.4% of total population		<b>&lt; 15 years</b> 891 000 16.7%
		<b>&gt;75 years</b> 419 000 7.9%
<b>Labour force 2 670 000</b> 50.1% of total population		<b>Persons 15–74 years not in labour force 1 344 000</b> 25.2% of total population
<b>Employed 2 509 000</b> 47.1% of total population		<b>Unemployed 161 000</b> 3.0% of total population
<b>Agri-culture</b> 115 000 2.2% of total population	<b>Industry &amp; construction</b> 625 000 11.7% of total population	<b>Services</b> 1 769 000 33.2% of total population

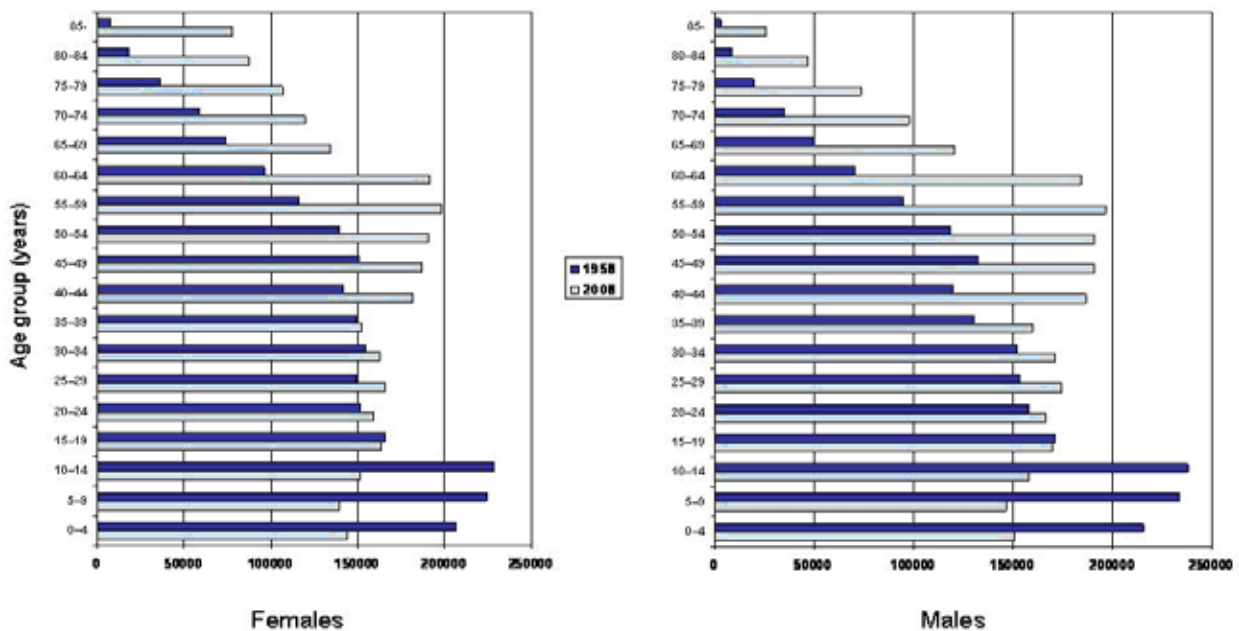
Source: The Finnish Ministry of Social Affairs and Health (2).

## Indicators of socioeconomic development

### Population and age distribution

The age distribution of the population in 1958 and 2008 is shown in Fig. 1.2, which indicates one of the biggest challenges facing Finnish society, i.e. the ageing of the population.

Fig. 1.2. Age distribution of the population in Finland, 1958 and 2008



Source: Statistics Finland (1).

Mainly owing to the ageing of the population, a shortage of labour is foreseen in the future (Fig. 1.3). The need for young workers is obvious, and maintaining and promoting the working ability of older workers is crucial for maintaining and sustaining the key functions of society and ensuring sound socioeconomic development.

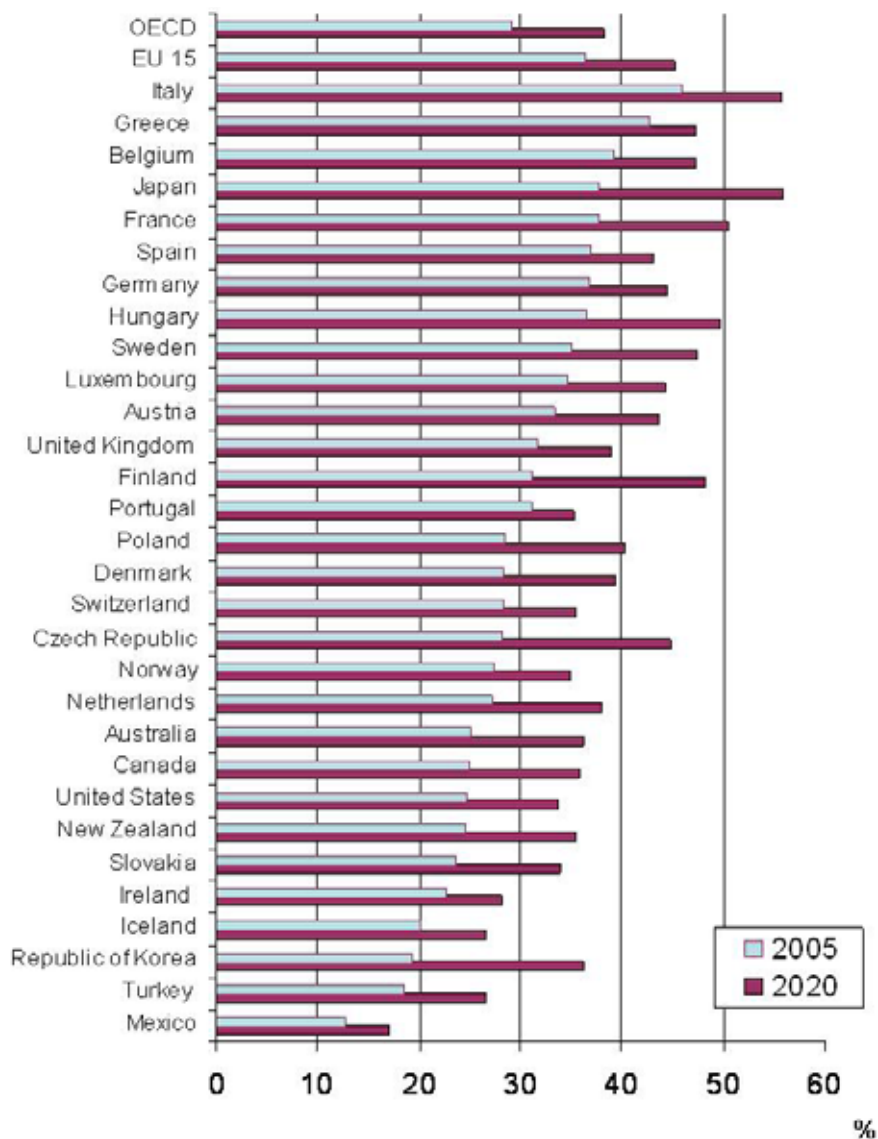
### GDP per capita

In spite of the global economic recession, Finland's economic situation so far has been relatively stable, although the prognosis for recovery is still uncertain. The recent economic crisis may change this situation. GDP growth slowed rapidly towards the end of 2008 (Table 1.1).

### Health expenditure

The WHO estimate of expenditure on health was 8.4% of gross domestic product, amounting to PPP\$2979 per inhabitant as of 2008.

**Fig. 1.3. Ratios of people aged 65+ years to the total labour force in 2005 and 2020 in 30 OECD countries**



OECD = Organisation for Economic Co-operation and Development, EU 15 = 15 Member States of the European Union as of December 31, 2003

Source: Organisation for Economic Co-operation and Development (3).

### Gender equality

Gender equality has long been a core value in Finland. It is enshrined in the Constitution and, more specifically, in the Act on Equality between Women and Men (Equality Act). An independent authority, the Ombudsman for Equality, also monitors and oversees compliance with legislation concerning gender equality.

The Ministry of Social Affairs and Health plays a key role in promoting gender equality by:

- preparing legislation
- monitoring the situation of gender equality nationwide
- coordinating the development of gender equality activities
- promoting the Government's equality policy objectives.

**Table 1.1. Gross domestic product at market prices**

Year	At current prices		At reference year 2000 prices
	€ billion	€ per inhabitant	€ billion
2000	132.2	25 541	132.2
2005	157.1	29 946	149.6
2006 <sup>a</sup>	167.0	31 713	157.0
2007 <sup>a</sup>	179.7	33 970	163.6
2008 <sup>a</sup>	184.7	34 769	165.3

Source: Statistics Finland (1).

<sup>a</sup> Preliminary data.

The main themes of Finnish gender equality promotion are:

- gender mainstreaming
- equality in working life
- equal pay
- equality in training
- women and decision-making
- the reconciliation of work and family life
- preventing violence against women
- men and equality.

The principles of equality in Finland are the same for everyone, regardless of age, origin, language, religious belief or health. The Ministry of Social Affairs and Health is responsible for implementing equality in workplaces via the network of OH&S inspectorates. Overall, equality matters in Finland are the responsibility of the Ministry of the Interior.

Every four years, the Ministry of Social Affairs and Health together with Statistics Finland publishes the Equality Barometer, which reports on the state of gender equality and the gendered division of work and power relations in different areas of life. The latest barometer was published in 2008 (4). It summarizes equality in working life as follows.

- The majority of full-time employees believe that equality has been achieved at their workplaces. More men than women consider conditions at workplaces to be more equal than before.
- Around one third of women have experienced gender disadvantage at work with respect to pay, career advancement and appreciation of professional ability. Men experience gender disadvantage at work much less often than women.
- Women also experience disadvantages caused by gender more often than men when it comes to fringe benefits and information, access to training, distribution of workload, continuity of employment contract, assessment of work results and independence at work.
- Experiences of gender equality at the workplace have not changed significantly over the past ten years.

## Health inequalities

There are large differences in health according to economic and educational status, and between the regions of the country. The National Action Plan to Reduce Health Inequalities (5) outlines proposals for strategic policy definitions and the most important measures to reduce socioeconomic health inequalities in Finland. A separate action plan was deemed necessary, since inequalities persist despite the efforts undertaken through health and social policy. Narrowing health gaps has

been the objective of Finnish health policy since the 1980s. This objective has not been achieved, however, and inequalities have even grown to some extent.

The National Action Plan is closely linked with the Government's Health Promotion Policy Programme. The Action Plan will also partially implement the aims of the national "Health 2015" programme to reduce mortality differences by a fifth by 2015. Members of the TEROKA project, which is being carried out together by the National Institute for Health and Welfare and the Finnish Institute of Occupational Health, have had an important role in planning and preparing the Action Plan.

The objective of the Action Plan is to reduce social inequalities in working ability and functional capacity, self-rated health, morbidity and mortality by levelling up. Narrowing of the inequalities will have a positive effect on public health and help to secure the services as the population ages, raise the employment rate and restrain costs.

Changes in the health status of entire population groups often take a long time to materialize. Persistent, multisectoral work is needed to reduce health inequalities. Social determinants of health and the processes behind the inequalities must be addressed. To pursue the objective of reduction in health inequalities, the Action Plan mainly operates in the following three priority areas:

- social policy measures: improving income security and education and reducing poor housing and unemployment;
- strengthening the prerequisites for healthy lifestyles: measures to promote healthy behaviour of the whole population, with special attention to disadvantaged groups where unhealthy behaviour is common; and
- improving the availability and quality of social and health care services for everyone.

## **Unemployment**

The current unemployment rate is 7.6% and is increasing (2009). Special problems are youth unemployment and long-term unemployment of older workers. Special intervention programmes have been launched for improving the employability of unemployed young people and are enjoying promising results (6).

## ***Social security system***

### **General**

The Finnish social security system covers the whole life cycle from pregnancy (maternal and child health) to death (funeral allowances). There are more than 100 legal provisions on social security and social benefits, covering universal social security needs and the needs of various special groups.

### **Accident insurance and workmen's compensation**

The employer is bound by law to ensure health and safety at work. A part of the realization of this principle is the duty to compensate for loss of earnings, health care costs, and disability due to

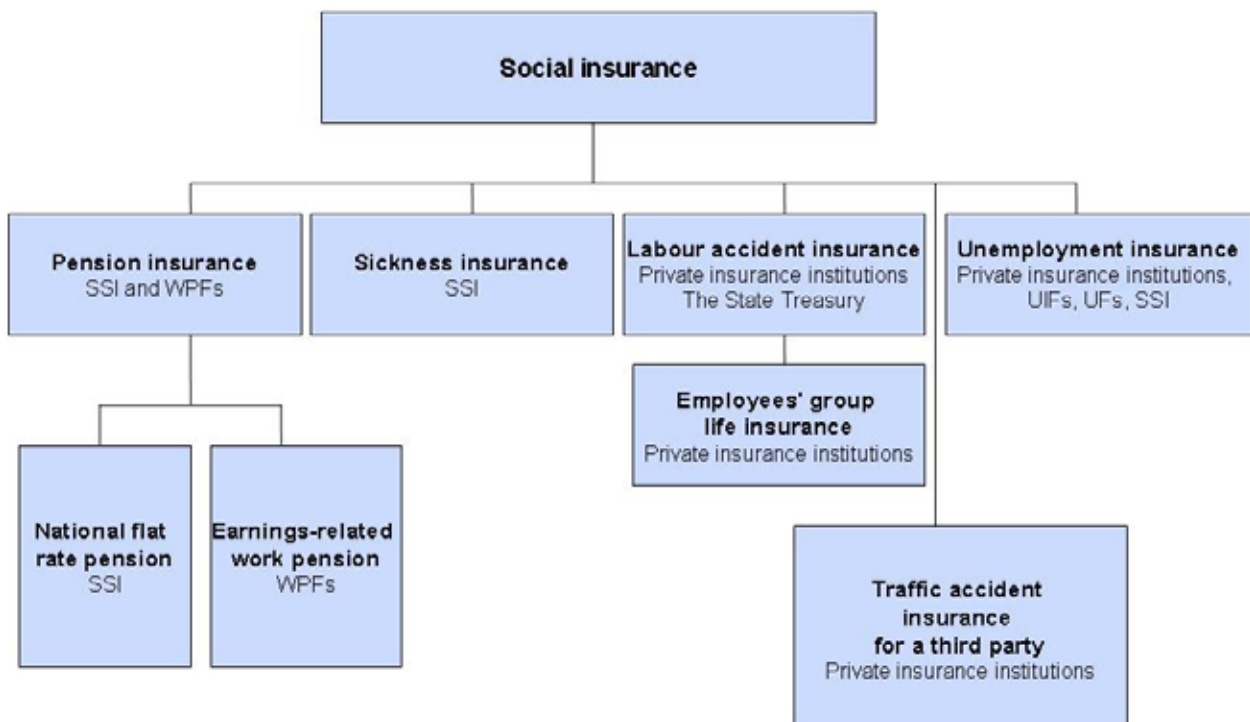
an occupational accident or disease. In order to bear this responsibility, employers are obliged to insure their employees against these.

The Occupational Accidents Insurance Act has priority over other social insurance compensation systems. The real monetary value of the compensation is ensured with the help of a special salary and wage index, which is periodically adjusted to be in line with developments in costs and salaries.

### Structure

As part of the social insurance system (Fig. 1.4), the Finnish system of occupational accident insurance is controlled by the Ministry of Social Affairs and Health, which has a special Insurance Department. The Ministry controls the activities of insurance institutions that deal with occupational accidents and diseases. The insurance companies must have a licence granted by the Government. In practice, the companies operate very independently and the control of the Ministry focuses on the economic stability of the companies, on the legal aspects of their operation and on the legal aspects and fairness of compensation. Another control system dealing with individual cases and with the protection of legal rights of the insured and the injured is provided by the appeal system described below.

Fig. 1.4. Social security system in Finland



Source: The Finnish Ministry of Social Affairs and Health (2).

Notes. SSI = social security institution; WPF = work pension fund; UIF = unemployment insurance fund; UF = unemployment fund.

## **Federation of Accident Insurance Institutions (FAII)**

The FAII is a coordinating body for insurance institutions dealing with statutory accident insurance. Membership is obligatory for the institutions. At present, the FAII has 14 insurance company members plus the Farmers' Social Insurance Institution and the State Treasury, which is responsible for the compensation of occupational accidents and diseases in the Government sector. The FAII is governed by a General Assembly and Board, with membership from the insurance institutions and the organizations of the social partners.

The FAII's activities are:

- the collection and maintenance of statistics on work accidents and occupational diseases;
- tasks connected with strengthening the principles governing insurance premiums;
- providing guidance on handling claims;
- developing legislation;
- supervision;
- certain types of compensation;
- forming agreements for arranging medical care with nursing institutions;
- maintaining a system of free medications obtainable;
- dealing with issues involving the implementation of international social security affairs; and
- processing, collecting and remitting agreements of unemployment insurance premiums and central funds of the unemployment fund system.

A special government decree defines the tasks and the composition of the Occupational Accident Compensation Board under the auspices of the FAII. The Board coordinates and harmonizes the compensation practices of the institutions. The members of the Board represent the Ministry of Social Affairs and Health (chair), competence in insurance law, social partners and the medical disciplines relevant to accidents and occupational diseases.

According to the law, employers are free to choose which insurance company they wish to work with to meet the legal insurance obligations. On the other hand, insurance protection must meet the requirements defined by legislation and controlled by the Ministry of Social Affairs and Health. Thus the organization of insurance services is relatively free and flexible, but the particular protection provided by the insurance is stipulated in detail by law, and is relatively strictly controlled.

The occupational accident insurance system is financed on the basis of premiums paid by the employer. The amount of the premium depends on salaries and wages paid. It also depends on the average accident risk of the industrial sector to which the company belongs. It is determined by the Ministry on the basis of the average accident risk of the industry concerned (pooling collective risk of the branch). For large companies paying more than the preset limit premium, the level of the premium is defined on the basis of the accident rates of the individual company (experience-based tariffing). For smaller companies paying smaller premiums than the preset limit premium, it is based on the average risk of the branch. Thus, in the larger companies, accident insurance costs of the company are dependent on the accident risks and level of safety in the company itself.



## **Activities of the insurance system**

### *Compensation*

The Occupational Accidents Insurance Act covers the following events.

- A. Occupational accidents occurring:
  - 1. on the job
  - 2. in conditions resulting from the job
    - (a) at the workplace or in an area belonging to the workplace
    - (b) on the way to or from work
    - (c) when the employee is running an errand for his employer
  - 3. if the employee attempts to protect or save his employer's property or human lives in connection with his work.
- B. Occupational diseases defined by the Act on Occupational Diseases.
- C. Injuries caused by specially defined physical strain or other unfavourable ergonomic conditions at work.

The scope of compensation by occupational accident insurance is very broad, and the level of compensation is relatively high, practically resulting in full 100% compensation of all costs caused by the accident or occupational disease and the loss of earnings and, if needed, also the temporary or permanent loss of working capacity. The appropriate diagnosis and treatment, as well as rehabilitation for occupational injuries and occupational diseases are compensated. Pensions for loss of working ability will be paid to the insured employee and, in the case of fatal injuries and diseases, to the survivors.

### *Prevention*

The accident insurance institutions also provide advisory services for the prevention of accidents and may, if needed, provide consultations for employers on how to improve safety. Particularly for employers with high numbers of workers, the experience-based premium tariffing provides an incentive for prevention.

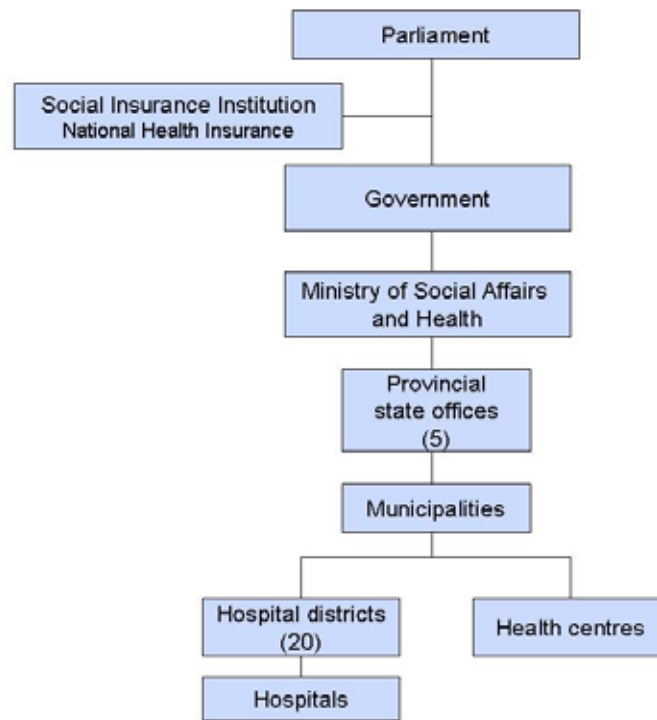
## **National health system**

The goal of health care in Finland is to maintain and improve people's mental health and physical functional capacity. The system is based on preventive health care and well-run, comprehensive health services. The national health system comprises public universal health care supplemented by private-sector outpatient clinics. The universal sickness insurance also partly compensates private services (Fig. 1.5).

Public health services are divided into PHC and specialized medical and hospital care, arranged respectively by municipal health centres and hospital districts. Each municipality belongs to a particular hospital district (Table 1.2).

The overview of the health and OSH systems in Finland is described in Fig. 1.6 and the whole Finnish health system is described in detail in the Finland health system review (7).

**Fig. 1.5. The Finnish health care system**



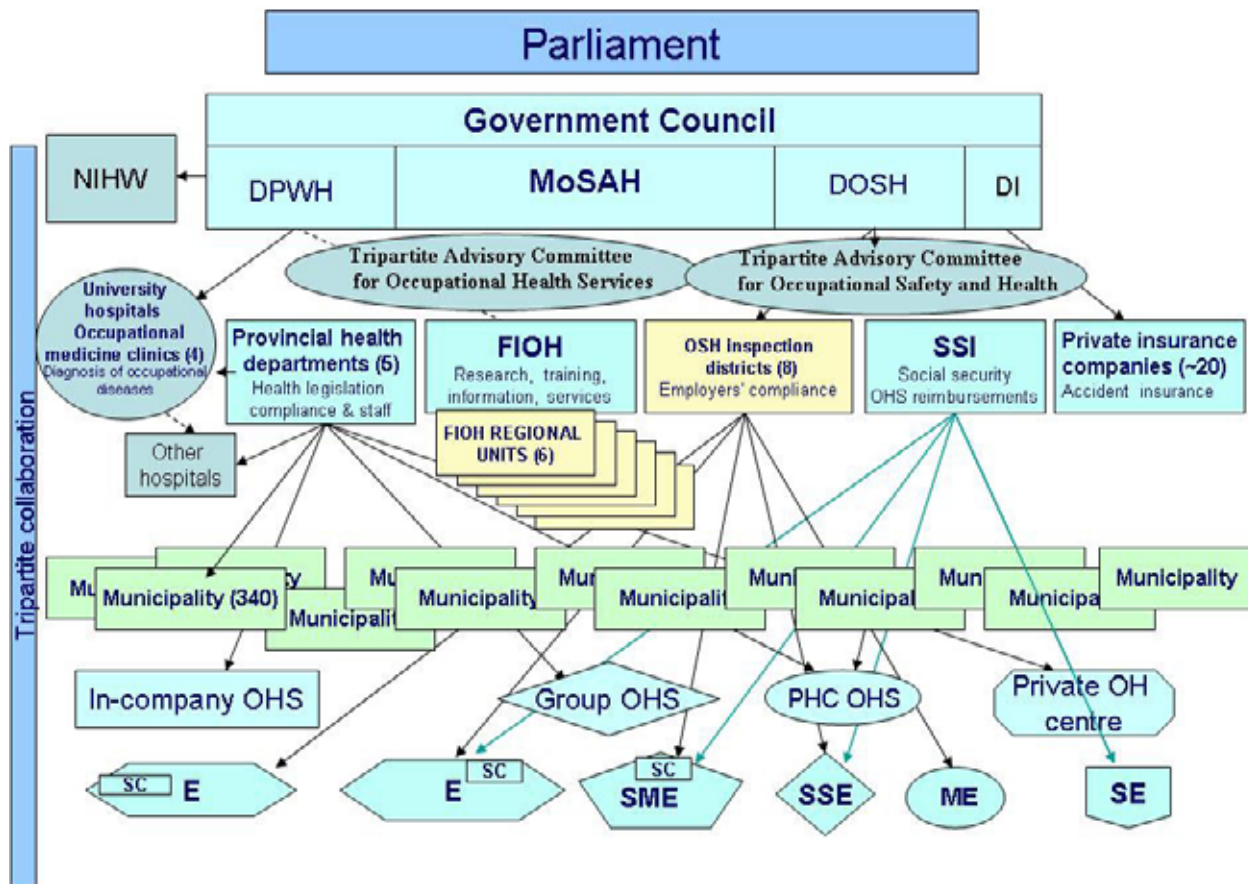
Source: Järvelin (8).

**Table 1.2. Public health services**

<b>Access to health care</b>	Everyone residing in Finland is entitled to receive good-quality health care within set timeframes. Status and rights of patients (9).
<b>Preventive services</b>	The primary goal of the Finnish health policy is disease prevention. Preventive services are provided by health centres, child health clinics, school health services, student health care and OHS. Health promotion (10).
<b>Primary health care</b>	Municipal health centre services include physical examinations, oral health, medical care, ambulance services, maternity and child health clinics, school and student health care and other basic services.
<b>Specialized medical care</b>	Specialized outpatient and institutional treatment is provided by hospital districts. Diseases requiring highly demanding treatment are handled by regional arrangements or centrally according to a specific decree. Each hospital district contains a central hospital and other specialized units. There are five university hospitals.
<b>Occupational health services</b>	Employers are responsible for providing employees with preventive health care and, as far as possible, medical care.
<b>Private health care</b>	Private health care is used to supplement public health services. Private doctors' and dentists' fees and examinations are partially reimbursed.

Source: *Health services [web site]*. The Finnish Ministry of Social Affairs and Health, 2011 ([http://www.stm.fi/en/social\\_and\\_health\\_services/health\\_services](http://www.stm.fi/en/social_and_health_services/health_services), accessed 12 December 2011).

Fig. 1.6. Overview of the health and OSH systems in Finland



Source: Rantanen, unpublished data, 2010.

Notes: DI = Department for Insurance, DOSH = Department of Occupational Safety and Health, DPWH = Department for Promotion of Welfare and Health, E = enterprises, ME = medium-sized enterprises, MoSAH = Ministry of Social Affairs and Health, NIHW = National Institute for Health and Welfare, OD = occupational disease, SC = Safety Committee; SE = small enterprises, SME = small and medium sized enterprises, SSE = small-scale enterprises, SSI = social security institution.

## Health care reform and development

The Ministry of Social Affairs and Health defines, in its strategy, the course of social and health policy in Finland and it implements these policy lines through legislation, quality recommendations, programmes and projects. Every four years, the Ministry compiles a development programme for social and health care, setting out the main points of emphasis of policy aims, activity and oversight, as well as the reforms, legislative programmes, guidelines and recommendations needed to implement them.

Comprehensive health care legislation is in the process of renewal. The whole health service infrastructure is also being reorganized, aiming at fewer, larger and better-equipped service provision units.

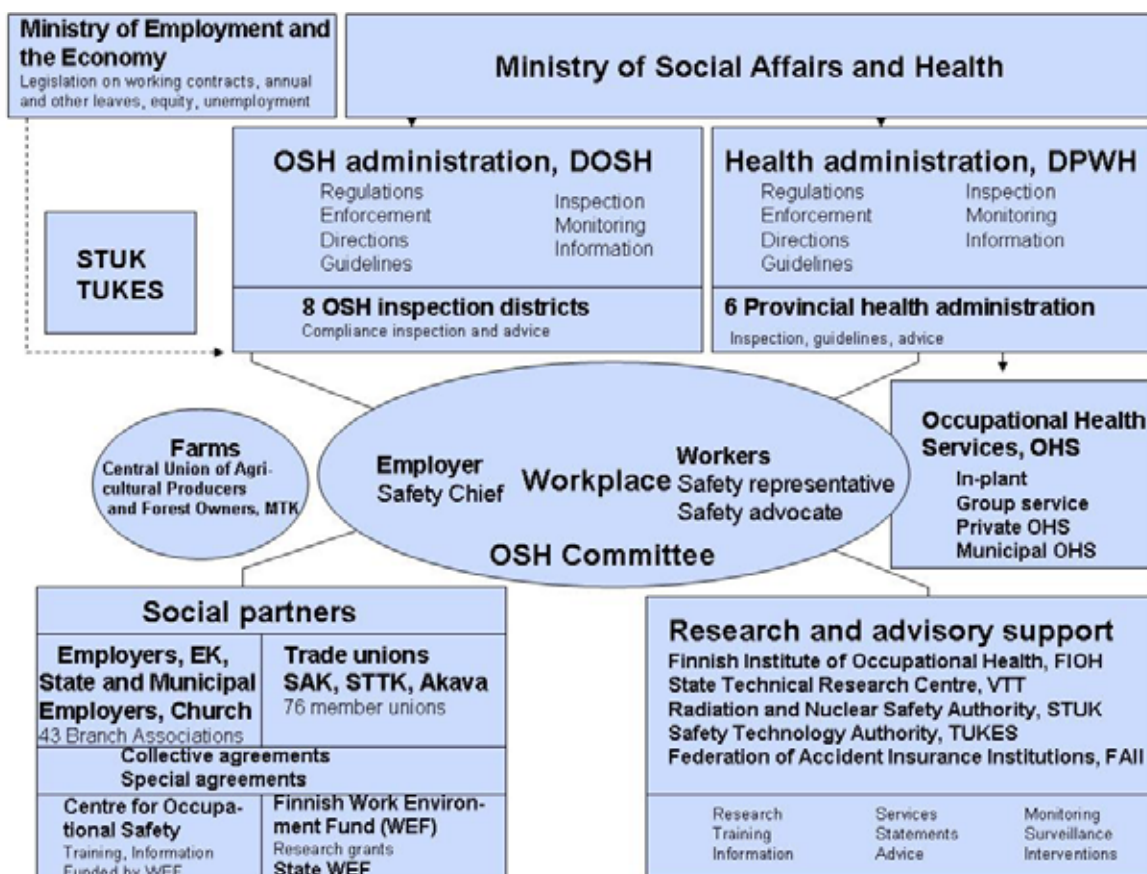
## Occupational safety and health system

### Government structure and responsible officers

The leading OSH authority is the Department of Occupational Safety and Health of the Ministry of Social Affairs and Health. It is responsible for policy-making under the supervision of the Minister of Social Affairs and Health.

The coordination of policies and activities at the national level takes place in ministerial groups at the government level: the ministers of neighbouring sectors coordinate their policy-making. The OSH Department of the Ministry coordinates its activities, primarily in two advisory committees (Advisory Committee on Occupational Safety and Health and Advisory Committee on Occupational Health Services), which constitute a broad consultative mechanism with social partners and other relevant stakeholders. Ad-hoc negotiations with other ministries and social partners may also be needed. The coordination mechanisms cover the whole OSH sector shown in Fig. 1.7. The workplace is considered the main focus and arena of OSH activity.

Fig. 1.7. Occupational safety and health organizations in Finland



Notes: DOSH = Department of Occupational Safety and Health, DPWH = Department for Promotion of Welfare and Health; OHS = Occupational health services, STUK = Radiation and Nuclear Safety Authority, TUKES = Safety Technology Authority, MTK = Central Union of Agricultural Producers and Forest Owners, EK = Confederation of Finnish Industries, SAK = Central Organization of Finnish Trade Unions, STTK = Finnish Confederation of Salaried Employees.

Source: The Finnish Ministry of Social Affairs and Health (2).

## Occupational health and safety institutions

The various institutions carrying out OH&S research in Finland are listed in Table 1.3. In addition, the Centre for Occupational Safety organizes a great deal of training on occupational safety in Finland, particularly for various branches of the economy.

**Table 1.3. OH&S research institutions and their main research orientation**

Research institute	Main focus in OSH research
Finnish Institute of Occupational Health <sup>a</sup> <a href="http://www.ttl.fi">http://www.ttl.fi</a>	Comprehensive, multidisciplinary research structure and programme covering all fields of OH&S
State Technical Research Centre, VTT Automation <a href="http://www.vtt.fi">http://www.vtt.fi</a>	Safety technology, risk assessment and management
Radiation and Nuclear Safety Authority (STUK) <sup>b</sup> <a href="http://www.stuk.fi">http://www.stuk.fi</a>	Research, regulation, enforcement and services in the field of radiation safety
Safety Technology Authority (TUKES) <sup>b</sup> <a href="http://www.tukes.fi">http://www.tukes.fi</a>	Safety-promoting research and development activities
Tampere University of Technology, Occupational Safety Engineering <a href="http://www.tut.fi">http://www.tut.fi</a>	Safety technology
University of Kuopio, Department of Environmental Science <a href="http://www.uku.fi/english">http://www.uku.fi/english</a>	Occupational and environmental hygiene
University of Oulu, Work Science <a href="http://www.oulu.fi/english/index.html">http://www.oulu.fi/english/index.html</a>	Ergonomics, safety systems
Helsinki University of Technology, Laboratory of Work Psychology and Leadership <a href="http://www.helsinki.fi/university">http://www.helsinki.fi/university</a>	Organization of work, leadership, psychosocial aspects of work and work organizations
Lappeenranta University of Technology <a href="http://www.it.lut.fi/index_eng.html">http://www.it.lut.fi/index_eng.html</a>	Safety technology research
Work Research Centre at the University of Tampere <a href="http://www.uta.fi/laitokset/yti/english/wrc/index.html">http://www.uta.fi/laitokset/yti/english/wrc/index.html</a>	Research on working life and its structural changes, and social aspects of work
Tampere School of Public Health at the University of Tampere <a href="http://www.uta.fi/english/index.html">http://www.uta.fi/english/index.html</a>	Occupational health, musculoskeletal disorders and ergonomics
UKK Institute for Health Promotion Research <a href="http://www.ukkinstituutti.fi/en/">http://www.ukkinstituutti.fi/en/</a>	Promotion of physical working ability and general functional capacity at work

Source: The Finish Ministry of Social Affairs and Health (2).

<sup>a</sup> To a small extent, the activities comprise government agency functions.

<sup>b</sup> A substantial part of STUK and TUKES activities comprise government agency functions.

## Major laws and regulations

The major laws on OSH are:

- The Occupational Safety and Health Act (738/2002);
- The Act on Occupational Safety and Health Enforcement and Cooperation on Occupational Safety and Health at Workplaces (44/2006);
- The Act on Occupational Health Services (1383/2001); and
- legislation on occupational accidents and occupational diseases:

- The Occupational Accidents Insurance Act (608/1948; 681/2005)
- The Act on Occupational Diseases (1343/1988; 1317/2002).

A summary of the main content of the legislation is given below (2).

Finland has ratified most of the central ILO Conventions concerning OSH, including Convention No. 155 on Occupational Safety and Health, No. 161 on Occupational Health Services and No. 187 on Promotional Framework for Occupational Safety and Health.

### **The Occupational Safety and Health Act**

The Occupational Safety and Health Act, originating from 1958 and amended recently (738/2002), sets out in detail the duties and responsibilities of the employer (Table 1.4).

**Table 1.4. Content of the Occupational Safety and Health Act**

#### **General obligations of the employer**

The general obligation is to ensure the safety and health of employees at work, considering and covering all aspects of work and working conditions and the work environment, as well as the personal prerequisites of the employee, including professional skills, experience, age, gender and other relevant aspects.

In the planning of safety and health measures, the following principles must be followed as far as possible (2):

- primary prevention;
- elimination of hazards and, when not possible, substitution with less hazardous alternatives;
- collective safety and health measures ahead of individually targeted ones;
- the development of technology and other available means must be considered (best available technology principle);
- the working environment, the state of the working community and the safety of working practices must be continuously followed up;
- the impact of the implemented measures on safety and health must be evaluated, including physical and mental health and safety and the functioning of social relations at the workplace, plus aspects of possible harassment as well as inappropriate behaviour; and
- safety and health measures must be considered at all levels of the organization (integration of safety and health in the overall activities of the enterprise).

#### **Specific obligations of the employer**

**The action plan may include the following aspects:**

- the principle of predictive safety and health;
- evaluation and follow-up of the need to develop the working environment;
- consideration of development needs in the planning and implementation of the company's activities;
- a description of the arrangement of safety activities and OHS;
- a description of methods for following up the OH&S objectives, and organization of the follow-up of working conditions and internal inspections;
- a description of the role of OH&S authorities and OHS as experts in the OH&S activities of the company; and
- principles of information and training in OH&S, and the role of OH&S in the guidance and instruction of new employees.

---

### **Identification and assessment of hazards and risks**

The following aspects are considered:

- risk of accidental injury or other detriment to health;
- registered accidents, occupational and work-related diseases, and hazardous conditions;
- age, gender, professional skills and other personal prerequisites of the employee;
- workload;
- possible risk for reproductive health (both female and male);
- especially dangerous (high-risk) jobs; and
- hazards to pregnant women or to the fetus.

The results of the assessment must be documented, updated, and repeated when the conditions of work essentially change.

### **Planning the working environment**

- planning safe work tasks and working environments;
- consideration of handicapped and otherwise vulnerable employees;
- responsibilities of the planners (internal or external); and
- good planning practice.

### **Planning of work**

- considering the physical and psychological capacities of the employees;
- particular attention to physical and mental workload; and
- use of external experts.

### **Training and guidance for employees**

- sufficient guidance and instruction for new employees;
- training and guidance in the prevention and avoidance of hazards and risks;
- instructions on how to act in exceptional situations, such as maintenance work or disturbances in production processes; and
- updating or complementing training and instructions when needed.

### **Provision of personal protective equipment and work aids**

- provision of a secondary safety measure;
- special requirements for effectiveness, safety and usability;
- purchasing and costs handled by the employer;
- selection and suitability for use;
- protective clothing and work clothing; and
- provision of work aids.

Detailed requirements are to be found in the government decree.

### **Employer's substitute**

- criteria for a person who can represent and be responsible for the legal obligations of the employer in OH&S matters.

### **Collaboration between employers and employees**

- special provisions of the Act on Occupational Safety and Health Enforcement and Cooperation on Occupational Safety and Health at Workplaces;
  - provision of information concerning safety and health and other aspects related to working conditions at work (right to know), assessments, investigations and plans;
  - discussion of the above matters with employees and their representatives;
  - duty of employees to collaborate in OH&S activities with the employer, and
  - right of the employee to take initiatives and make proposals related to OH&S.
-

In addition to basic safety and health aspects, the Act obliges the employer to consider several general aspects of work: predictive safety analysis; psychological stress and other psychological and psychosocial aspects; adjustment of the work to the worker's capacity; paying special attention to young and ageing workers, chronically ill and handicapped persons and pregnant women; and hazards to the reproductive health of workers. The Act also covers the need for training, information and guidance of workers exposed to particular safety and health hazards.

The employer is obliged to draw up an OSH policy that includes objectives for the promotion of safety and health and the maintenance of employees' working ability. The need to develop the working environment and the impact on safety and health of factors in the working environment must be taken into consideration. These objectives are to be taken into account in planning and developing the workplace and in drawing up of an OSH action plan.

### **The Act on Occupational Health Services**

The Act on Occupational Health Services obliges employers to organize and pay for preventive services for all workers, covering both public and private sectors, regardless of the size or branch of the economy of the enterprise or workplace (Table 1.5).

**Table 1.5. Main features of the Act on Occupational Health Services**

<b>Obligations</b>	Employer organizes Financing employer/subsidized Coverage for all employees Use of health personnel Voluntary for the self-employed
<b>Content</b>	Essentially preventive Curative services allowed Risk-oriented Only core activities stipulated Subsidies conditioned by content Action programme requested
<b>Organization</b>	Flexible, several alternatives Full coverage aimed for Municipality always responsible for service provision
<b>Collaboration and participation</b>	OSH Committee evaluates the programme and report Subsidies conditioned by the OSH Committee's statement
<b>Personnel</b>	Special training requested Complementary training requested Only health personnel stipulated Multidisciplinary team possible but not requested

Source: The Finnish Ministry of Social Affairs and Health (2).

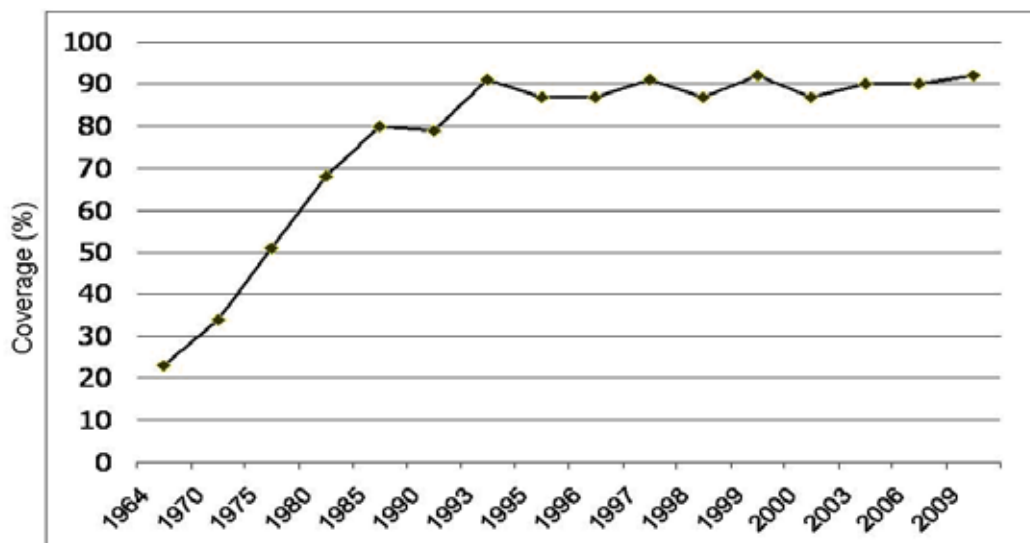


## Coverage of OHS

The development of OHS was strongly influenced by the commitment of the Government and social partners to develop OHS along the lines of ILO Convention No. 161 and Recommendation No. 171, which Finland ratified in 1986. A national programme for such development was presented by the Government to Parliament in 1989 in the National Programme for the Development of Occupational Health Services. The Programme included 18 specific development objectives for further strengthening the OHS system. The implementation of the Programme was evaluated in 1997, and it was noted that most of the objectives plus a number of new developments had been achieved. Along with the implementation of the Programme, the OHS moved on to a new stage with the passing of further OHS legislation in 2001, and a new Government Resolution has been adopted for guiding the implementation of the amended Act (Occupational Health 2015) (11).

Development since the Act came into force has been highly positive as regards both the coverage (Fig. 1.8) and the content of the services. At present, 90% of engaged employees are covered by services. Occupational health service provision models are seen in Fig. 1.9. Almost 6900 people work in the Finnish OHS, of whom 2369 are full- or part-time occupational health physicians and 2634 are occupational health nurses.

Fig. 1.8. Coverage of employees by OHS in Finland

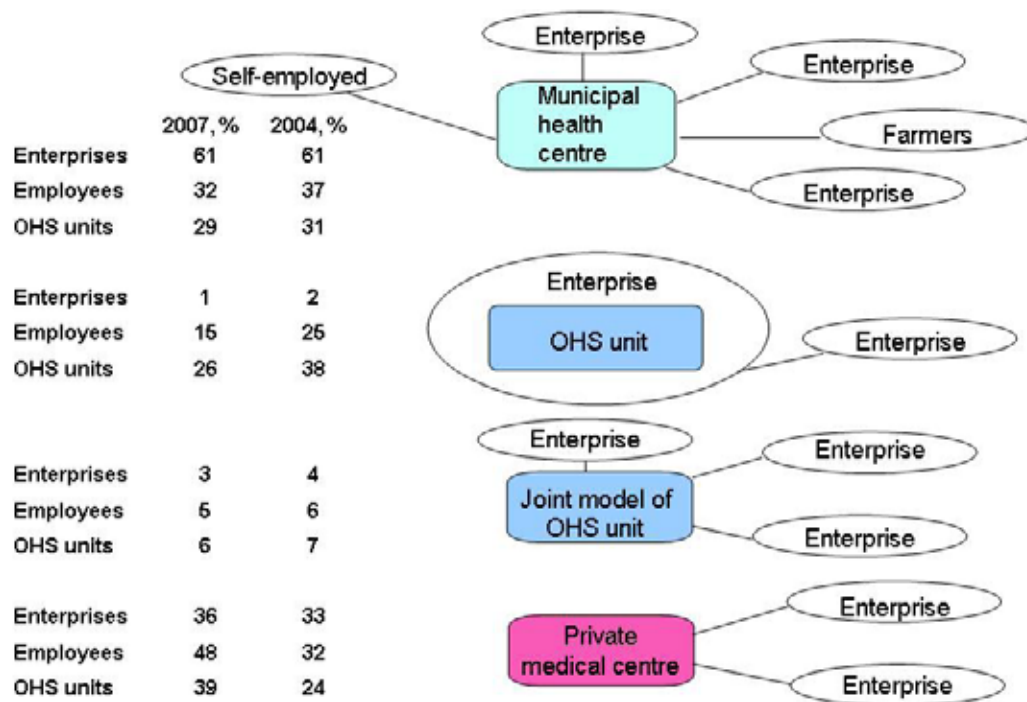


Source: The Finnish Ministry of Social Affairs and Health (2).

## Human resources for OH&S

Well-educated and well-trained personnel comprise the key expert group for the development of OH&S. The numbers of staff in various occupational health service units, at workplaces and in the OH&S inspectorates are shown in Tables 1.6, 1.7, 1.8, and 1.9, respectively.

Fig. 1.9. Finland's four models of OHS provision and their shares of companies and employees



Source: Manninen et al. (12).

Table 1.6. OSH and OH&S professionals in Finland

Profession	Municipal OHS	Private OHS centre	In-company service	Group service	Total
Occupational health physicians	578	1 309	351	131	2 369
Occupational health nurses	823	1220	444	147	2 634
Physiotherapists	232	348	137	34	751
Psychologists	103	176	33	4	316
Assistant staff	281	328	140	50	799
<b>Total OH&amp;S staff</b>	<b>2 017</b>	<b>3 281</b>	<b>1 105</b>	<b>366</b>	<b>6 869</b>
Occupational hygienists <sup>a</sup>			113		113
Safety officers and engineers <sup>b</sup>			700		700
<b>Total OH&amp;S staff + hygienists and engineers</b>					<b>7 682</b>

Source: Rantanen, unpublished data, 2009.

<sup>a</sup> Members of the Finnish Occupational Hygiene Association.

<sup>b</sup> Members of the Association of Finnish Safety Managers.

**Table 1.7. OSH and OH&S professionals in Finland in 2004 and their density<sup>a</sup>**

Expert	Number	Person years	Density (workers/person year)
Occupational health physicians	2 295	1 095	1 662
Occupational health nurses	2 355	1 934	941
Physiotherapists	752	398	4 572
Psychologists	287	78	23 333
<b>Total</b>	<b>5 689</b>	<b>3 505</b>	<b>519</b>

Source: Manninen et al. (12).

<sup>a</sup> In addition, occupational hygienists, technical experts, agricultural experts, ergonomists, nutritionists, physical exercise counselors, logotherapists and ophthalmologists/optometrists were available to 13–84% of the OHS units, depending on the type of expert and OHS unit. Densities are available only for data on human resources in OHS in 2004.

**Table 1.8. Human resources in OSH at workplaces in 2005**

Category	Number
Safety chiefs (employer's representative)	12 439
Workers' safety representatives	9 581
Workers' deputy safety representatives	14 317
Salaried employees' safety representatives	4 794
Salaried employees' deputy safety representatives	7 145
Safety agents	10 102
Members of OSH Committees	6 481
<b>Total</b>	<b>64 859</b>

Source: The Finnish Ministry of Social Affairs and Health (2).

**Table 1.9. Number of personnel in OSH inspectorates in 2005**

Number of personnel	Density 1: total workforce per OSH staff member	Density 2: employees per OSH staff member	Density 3: OSH staff per total workforce/employees <sup>a</sup>
475	4 979	4 339	0.20/0.23

Source: The Finnish Ministry of Social Affairs and Health (2).

<sup>a</sup> Workforce = 2.365 million, employees = 1.8 million.

## Specialized training for OSH professionals

Specialized training, consisting of both theory and clinical practice, is required for all OSH professionals in Finland.

### *Occupational health physician*

An overview of the training of occupational health physicians in Finland is given in Table 1.10.

**Table 1.10. Training of occupational health physicians**

Course and period of training
1. Basic qualifications training, two years (24 months): at least nine months at a municipal health centre and at least six months at a hospital, and at least nine months of elective training (of which maximum six months elsewhere, e.g. in occupational health services rather than a municipal health centre or hospital)
2. Specialized qualification training, four years (48 months) <ul style="list-style-type: none"><li>• Occupational health service segment – two years (24 months)</li><li>• Clinical service in other fields of specialization – one year (12 months)</li><li>• Segment on assessment of work ability and rehabilitation – ½ year (six months)</li><li>• Segment at the Finnish Institute of Occupational Health – ½ year (six months)</li></ul> Course-type training (120 hours)
<b>National Specialist Examination National Certification Board for Specialists</b>
3. Advanced specialist studies in occupational medicine Finnish Institute of Occupational Health Theoretical training and resident service, two years
<b>Advanced Specialist Examination National Certification Board for Specialists</b>

Source: Räsänen, personal communication, 2008.

### *Specialist examination*

A government ordinance specifies specialist education and provides rules for the specialist examination. The Ministry of Education, following consultation with the Ministry of Social Affairs and Health, defines the curricula for each university. Curricula for occupational health are available in all five medical faculties. Those who complete the specialist course of study sit the national specialist examination, and the medical authority grants those who pass the right to work as a specialist. After the specialist examination in OHS, one can continue to study to further specialize in occupational medicine, aiming at competence in senior level (clinical) occupational medicine positions. These further studies require a two-year residence and theoretical studies at the Finnish Institute of Occupational Health.

### *Curricula*

Table 1.10 shows the latest version (2007–2009) of the specialist training curriculum in occupational health at the University of Kuopio. In principle, the curricula are the same at all five Finnish universities training occupational health physicians, as agreed on in a coordination group comprising professors and lecturers in occupational medicine from all five universities.

Table 1.10 summarizes the six-year training contents. There are some alternative models to completing the segment at the Finnish Institute of Occupational Health or at the University of Kuopio. Slightly different arrangements may also be applied at the other universities, but otherwise the contents are the same.

#### *Log book*

Each university has its own log book to be completed by the trainee. The log book is in accordance with the training curriculum but until now has not included any specific quantitative measures to evaluate the different tasks the trainee has completed during his/her training period (except theoretical course-type training of 100 + 20 hours during the six-year period, in-service training of 160 hours during the occupational health segment of two years and 80 hours during the clinical service of one year).

However, a task force has recently unified the requirements of the log book and some quantitative measures have been included, such as how many work site assessments with reports or health examinations of different types the trainee should complete under the supervision of the trainer. The coordination group for occupational health specialization training has accepted the new log book. The task group finalized the book during the spring of 2008 and it came into use in the autumn semester of 2008 in all five universities. It was also decided that training in the proper use of the log book be organized for all tutors and physicians in specialist training during the last part of 2008.

#### *Research project or thesis*

During the segment at the Finnish Institute of Occupational Health, the trainee usually participates in some kind of project work, the contents of which can vary greatly (participating in and reporting on a research project; participating in the preparation of a web-based learning course at the virtual university; literature reviews, etc.). Although it is recommended that students participate in such activities, they are not obligatory.

#### *Occupational health nurse*

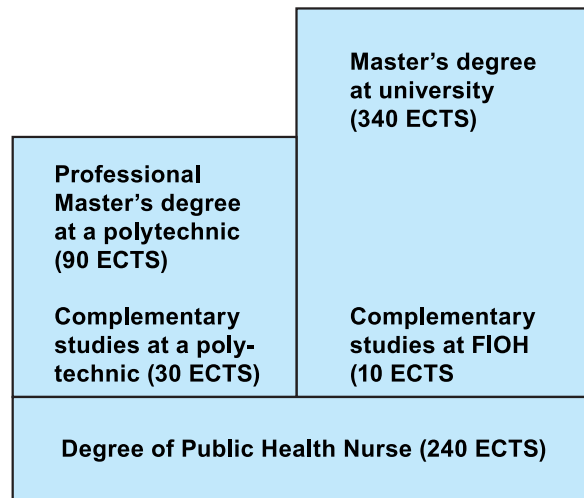
Occupational health nurses undergo the basic training of a public health nurse. The studies of a public health nurse include theory and practice in OHS. The complementary studies needed to work in OHS are available at polytechnics and at the Finnish Institute of Occupational Health. These studies provide the competence to work in OHS.

The education and training of an occupational health nurse in Finland is shown in Fig. 1.10.

The main contents of the complementary training cover the OHS system; legislation on OHS and OSH; risk assessment; occupational hygiene (exposure to chemical, physical and biological factors); occupational medicine; psychosocial factors at work; ergonomics; health promotion; national OSH strategies; and planning of OHS.

The role of occupational health nurses is crucial: they coordinate the services and work as a core group with occupational health physicians in the Finnish OHS system.

**Fig. 1.10. Occupational health nurse training scheme in Finland**



Source: Rautio, unpublished data, 2007.

Note. One academic year corresponds to 60 ECTS (European Credit Transfer and Accumulation System) credits, equivalent to 1500–1800 hours of study in all countries irrespective of standard or type of qualification, and is used to facilitate transfer and progression throughout the EU.

### *Occupational hygienist*

Occupational hygienists undergo basic university education and training in chemistry or physics, which takes on average five years. Complementary training is organized while working at the Finnish Institute of Occupational Health. The specialist examination is taken after a certain number of years of work experience and organized training.

## **Compliance with regulatory actions**

The Occupational Safety and Health Authority oversees compliance with the regulations. Workplaces are ranked in priority order on the basis of risks and inspected according to the ranking order. Sanctions cover warnings, requests for correction, conditional imposition of a fine that is proportional to the urgency and severity of the risk, immediate closing of the plant, and legal proceedings. Only a very minor proportion of inspections lead to a lawsuit.

Section 23 of the Act on Occupational Health Services states that employees have the right to refuse work that may cause serious danger to their life or health or that of any other employee. The employer or the employer's representative must be informed as soon as possible of the employee's refusal to work. The right to refuse work remains until the employer has eliminated the hazard or in some other way ensured that the work can be safely performed. Refusal to work must not restrict working to a greater extent than is necessary to ensure safety and health. The eventual risk arising from refusal must also be as low as possible. If an employee refuses work on the basis of Section 23, he or she will not be liable for any damages arising from the refusal.

Any worker can complain about harassment at work, and the employer must immediately take measures to examine the case and take any necessary action.

Every worker is entitled to notify the Occupational Safety and Health Authority of hazardous or unhealthy working conditions and of the absence or malfunctioning of the OHS.

### **Scope of sectoral coverage of inspection and enforcement**

The law dealing with working conditions, including OH&S, applies to all persons with a contract of employment. With a few exceptions, responsibility for its enforcement lies with the Occupational Safety and Health Administration. Inspection coverage thus extends to all sectors and all branches of the economy, including private and public sectors, cooperatives and nongovernmental organizations. The inspection of mines is the task of the Safety Technology Authority. The Radiation and Nuclear Safety Authority, with a staff of about 50, is responsible for monitoring OH&S standards in nuclear power stations and all other sectors of industry involving the use of ionizing radiation. It also provides a monitoring service for the Occupational Safety and Health Inspectorate if the latter suspects the presence of radon gas, particularly in connection with tunnelling operations. Health and safety in the field of transport, including that of employees on ships, rests with the Occupational Safety and Health Administration. Safety matters connected with the design, construction and maintenance of the vessels themselves, rather than with their operation, lie with the Ministry of Employment and the Economy.

### **Scope of enforcement powers**

According to the Act on Occupational Safety and Health Administration (16/1993) the OSH authorities shall promote safety and health at work by:

- developing (and promoting) safety and health at work;
- supervising through inspections and investigations compliance with OSH regulations, within the legal mandate of the Occupational Safety and Health Administration;
- carrying out planning and development activities for OSH;
- carrying out advisory, information, research, and training and education activities for OSH;
- providing instructions, advice and statements on the implementation of OSH regulations;
- providing instructions, advice and training on OSH for the self-employed, and planning and developing OSH for their needs;
- collaborating actively with employers' and workers' organizations in the field of OSH;
- performing all the other functions and tasks specially delegated to the Occupational Safety and Health Authority.

The inspectors also have the power to inspect employers' compliance with their duty to organize OHS according to the Act on Occupational Health Services.

The OSH authorities are independent in their supervisory and inspection activities.

The powers given to inspectors are set out in the Act on Occupational Safety and Health Enforcement and Cooperation on Safety and Health at Workplaces (44/2006) and include the power of entry into any place of work at any reasonable time of day or night to carry out inspections and make enquiries, by:

- questioning employers and employees on OSH and other matters concerned with working conditions (this does not extend, however, to requiring them to make a written statement);
- calling for and examining all registers and other documents required to be kept by law;
- taking samples of materials and products for analysis;
- taking photographs and measurements;
- issuing an inspection protocol or improvement notice that identifies the law that is being broken, describes the nature of the deficiency, may suggest how the deficiency can be rectified, and stipulates a time limit within which the employer must respond to the inspector on the action he has taken;

- issuing a legally binding enforcement notice under the authority of the Head of Inspectorate if the inspection protocol has not had the desired effect, setting out a time limit within which the required work must be completed and possibly (though this is not obligatory) setting a fine that must be paid if the deadline is not met; and
- issuing a prohibition notice in cases where an inspector believes there is an imminent risk to life or health; the notice comes into force immediately.

In cases of wilful intent or negligence, and normally after an accident, an inspector may draw up a report for the public prosecutor, who will initiate an investigation by the police. Any prosecution that ensues may lead to the offender being fined or sent to prison. The action will be taken against an individual or individuals within the company, since there is no facility in the law for the company itself to be prosecuted.

A substantial proportion of OSH legislation has undergone reform in recent years. The legislative changes and the practical execution of the national OSH strategy in the administrative sector of the Ministry of Social Affairs and Health have also brought changes into OSH inspection. The focus of OSH inspection has been shifted so that it is increasingly targeted at the essential OSH priorities. As the focus of the Occupational Safety and Health Act is on systematic prevention, i.e. the identification and assessment of hazards and risks, workplace inspections are increasingly directed toward supervising the systems contributing to safety and health at workplaces rather than tackling single defects. Instead of solitary defects in working conditions, the focus of inspection is increasingly shifting toward checking the functioning of workplace assessments and plans (Table 1.11). Hence the knowledge of OSH inspectors has improved, and the growing demands have been taken into account when recruiting new inspectors.

**Table 1.11. OSH supervision activities in numbers**

<b>Workplace inspections</b>	<b>1998</b>	<b>2000</b>	<b>2002</b>	<b>2004</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
Number of inspections	26 415	24 533	23 393	17 016	17 514	19 771	20 477	19 916
Number of inspected objects	19 984	16 704	15 634	11 207	12 082	13 485	14 717	14 618
Total duration of inspections (hours)	60 594	54 312	55 772	43 594	38 969	41 629	42 265	40 593
Average duration of one inspection (hours)	2.3	2.2	2.4	2.6	2.2	2.1	2.1	2.0
<b>Coercive means</b>								
Number of coercive measures	72	69	45	44	111	280	207	–
Prohibitions of use confirmed by the Inspectorate	50	29	16	19	20	34	39	40
Prohibitions of use not confirmed by the Inspectorate	2	6	6	8	4	5	14	6
Binding decisions	22	40	29	27	80	146	168	184



<b>Notifications and reports</b>								
Notifications to the police/prosecutors	117	191	136	225	339	330	331	366
Reports to the police/prosecutors	201	179	183	354	408	599	331	366
Reports on occupational accidents	189	266	249					
<b>Requests for services</b>								
Contacts from clients	132 633	137 289	130 650	109 860	102 087	96 122	85 027	78 103
– matters relating to employment	82 647		71 720	59 461	56 658	56 094	45 350	44 638
– matters relating to working conditions	41 684		38 310	38 820	38 938	35 040	33 833	26 736
– other requests	8 302		20 620	11 579	6 261	5 061	6 036	5 679
Inspections performed on request	9 517	9 077	8 542	4 206	3 695	3 717	3 357	2 766
Reports on ex-ante supervision	1 432	1 290	1 151	591	389	311	–	–
Number of training sessions requested by clients	1 090	1 032	1 098	609	532	448	–	–
Training requested by clients (hours in total)	86 854	78 715	106 495	45 512	53 115	64 199	33 211	19 137
<b>Investigations of occupational accidents and diseases</b>								
Occupational accidents investigated	699	832	632	624	782	797	856	700
Occupational diseases investigated	58	99	84	57	35	46	47	29
<b>Licence administration of OSH inspectorates</b>								
Asbestos authorizations	39	21	28	31	23	37	31	25
Exemption orders relating to working hours	17	25	22	159	186	190	204	195
<b>Personnel in person-years</b>								
Department for Occupational Safety and Health	84	84	90	88	87	78	75.8	70.6
OSH inspectorates	428	427	426	425	443	449	448	446

Source: The Finnish Ministry of Social Affairs and Health (13).

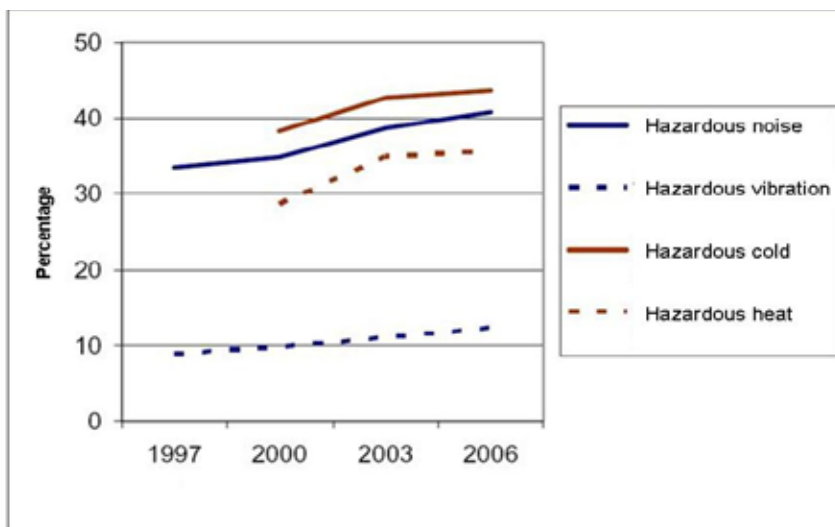
## Indicators of working conditions

Every three years, the Finnish Institute of Occupational Health carries out a comprehensive computer-assisted telephone interview survey representing the whole Finnish working life. The following trends in exposures are from the surveys carried out in 1997, 2000, 2003 and 2006. The 2009 survey has recently been published.

The occurrence and trends in the main exposure categories are shown in Fig. 1.11–1.17.

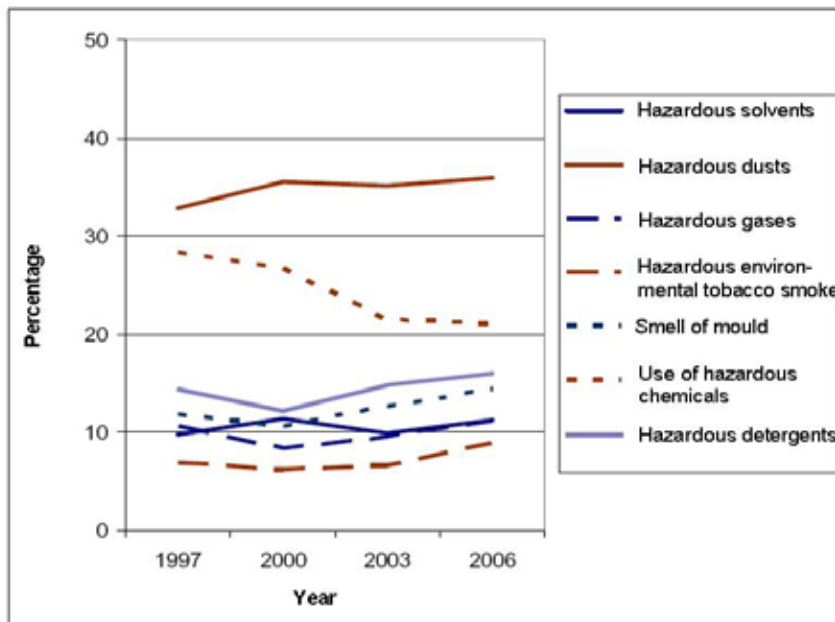
### **Physicochemical factors**

**Fig. 1.11. Exposure to physicochemical agents in the surveys in 1997, 2000, 2003 and 2006 as a percentage of those employed (slightly, rather or very hazardous)**



Source: Perkiö (14).

**Fig. 1.12. Exposure to chemical agents in the surveys in 1997, 2000, 2003 and 2006 as a percentage of those employed (slightly, rather or very hazardous; smell of mould present)**



Source: Perkiö (14).

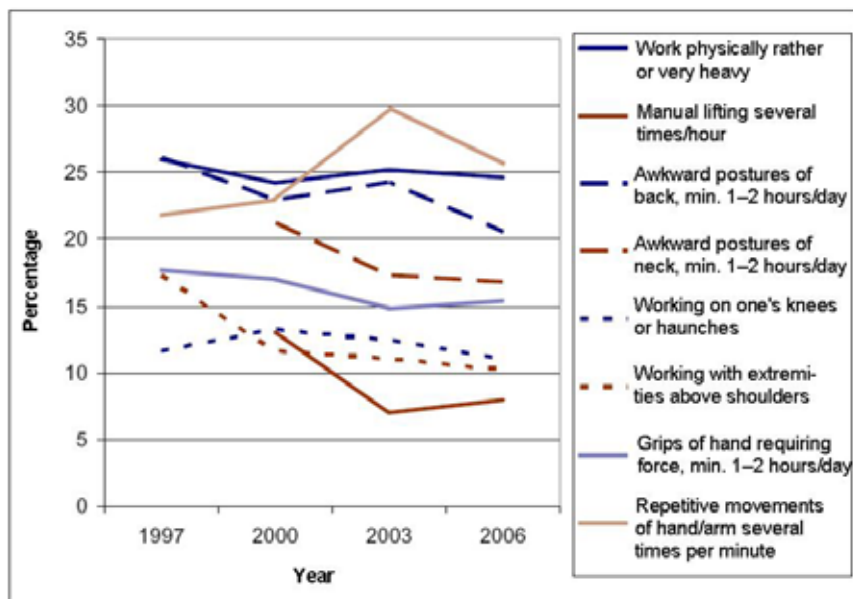
### **Register of employees occupationally exposed to carcinogens (ASA Register)**

Since 1979, under the aegis of the Ministry of Social Affairs and Health, the Finnish Institute of Occupational Health has maintained a register of workers at risk of exposure to carcinogenic

substances and processes. In 2007, a total of 23 346 such workers were registered, amounting to 1.1% of the Finnish working population. The most common sources of cancer risk were chromium (VI) compounds (7171), tobacco smoke (6986) and nickel and its inorganic compounds (6736) (15).

## Ergonomic factors

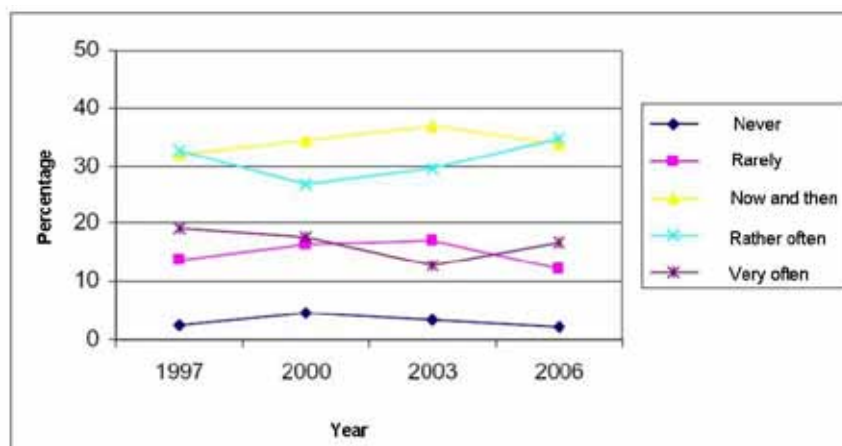
Fig. 1.13. Trends in various ergonomic hazards in 1997, 2000, 2003 and 2006 as a percentage of those employed



Source: Perkiö (14).

## Psychosocial factors

Fig. 1.14. Time pressure at work in 1997, 2000, 2003 and 2006 as a percentage of those employed<sup>a</sup>

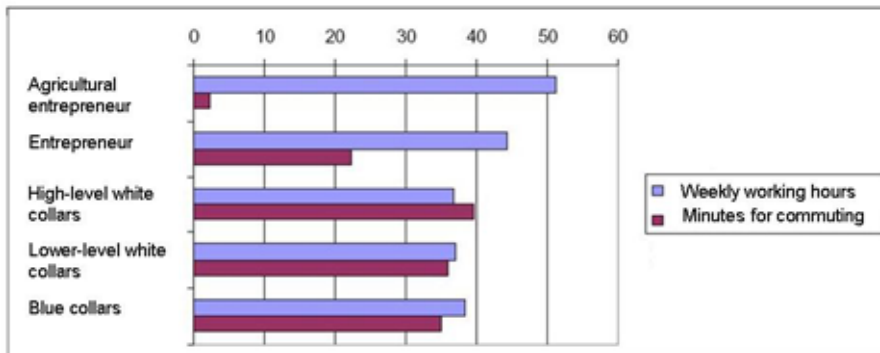


Source: Perkiö (14).

Replies to the question: How often do you need to rush in order to get your work done?

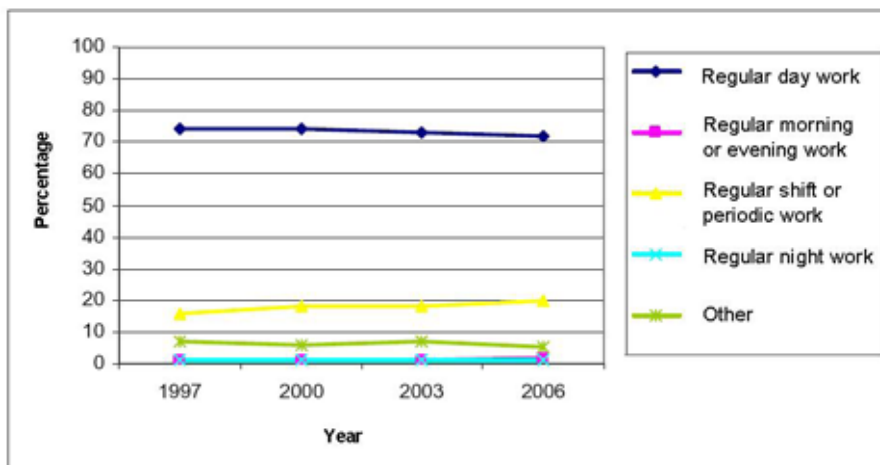
## Working times

Fig. 1.15. Working hours and time for commuting according to socioeconomic status in the 2006 survey



Source: Perkiö (14).

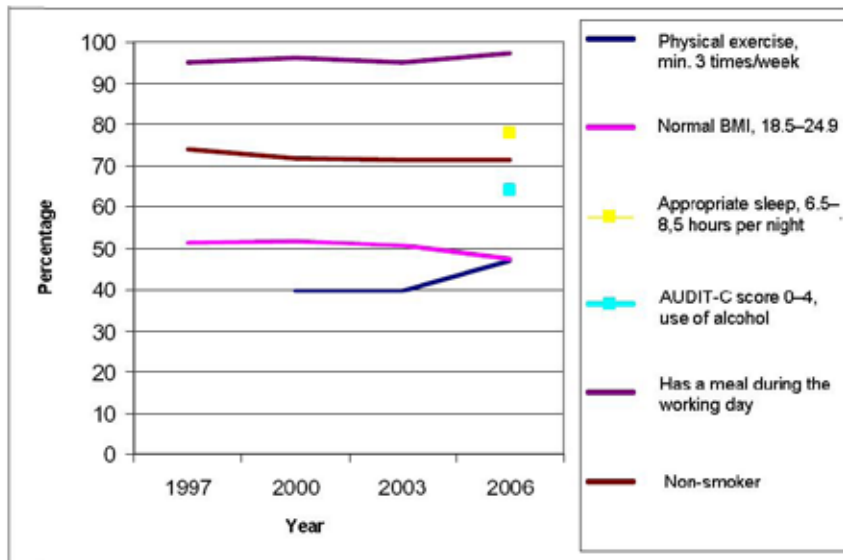
Fig. 1.16. Work time patterns in 1997, 2000, 2003 and 2006 as a percentage of those employed



Source: Perkiö (14).

## Health-related lifestyles

Fig. 1.17. Health-related lifestyles in 1997, 2000, 2003 and 2006 as a percentage of those employed



Source: Perkiö (14).

## Indicators of occupational and work-related health

### Occupational accidents

The number of occupational accidents at Finnish workplaces has declined over the last 30 years, although the trend has levelled off over the last 15 years (Fig. 1.18). The data in Fig. 1.19 cover both accidents at the workplace and traffic accidents when on duty.

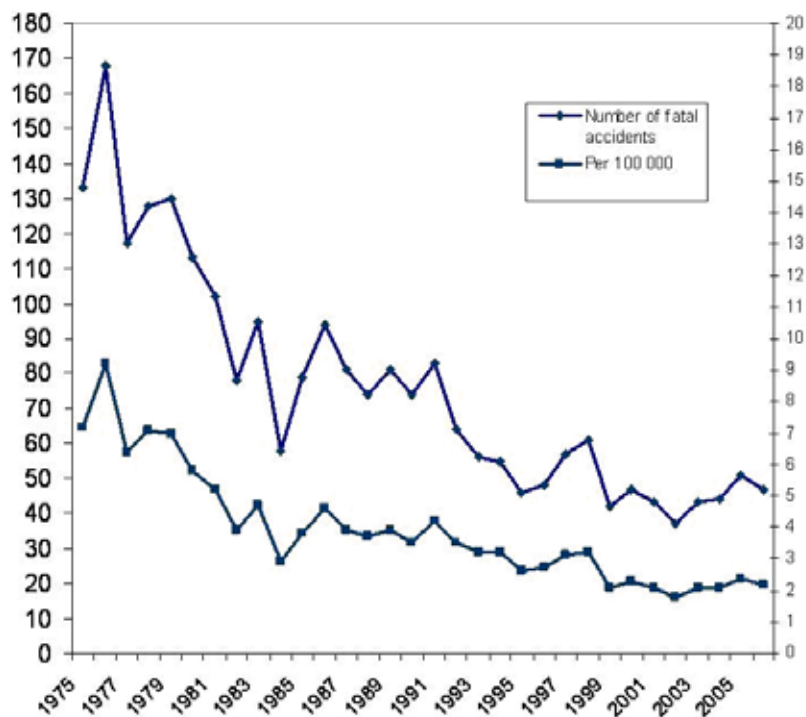
According to the WHO European Health for All database, fatalities due to work-related accidents in Finland were consistently lower than the EU average during the period of 1979–2007 (Fig. 1.20).

Fig. 1.18. Occupational accidents at Finnish workplaces 1976–2006



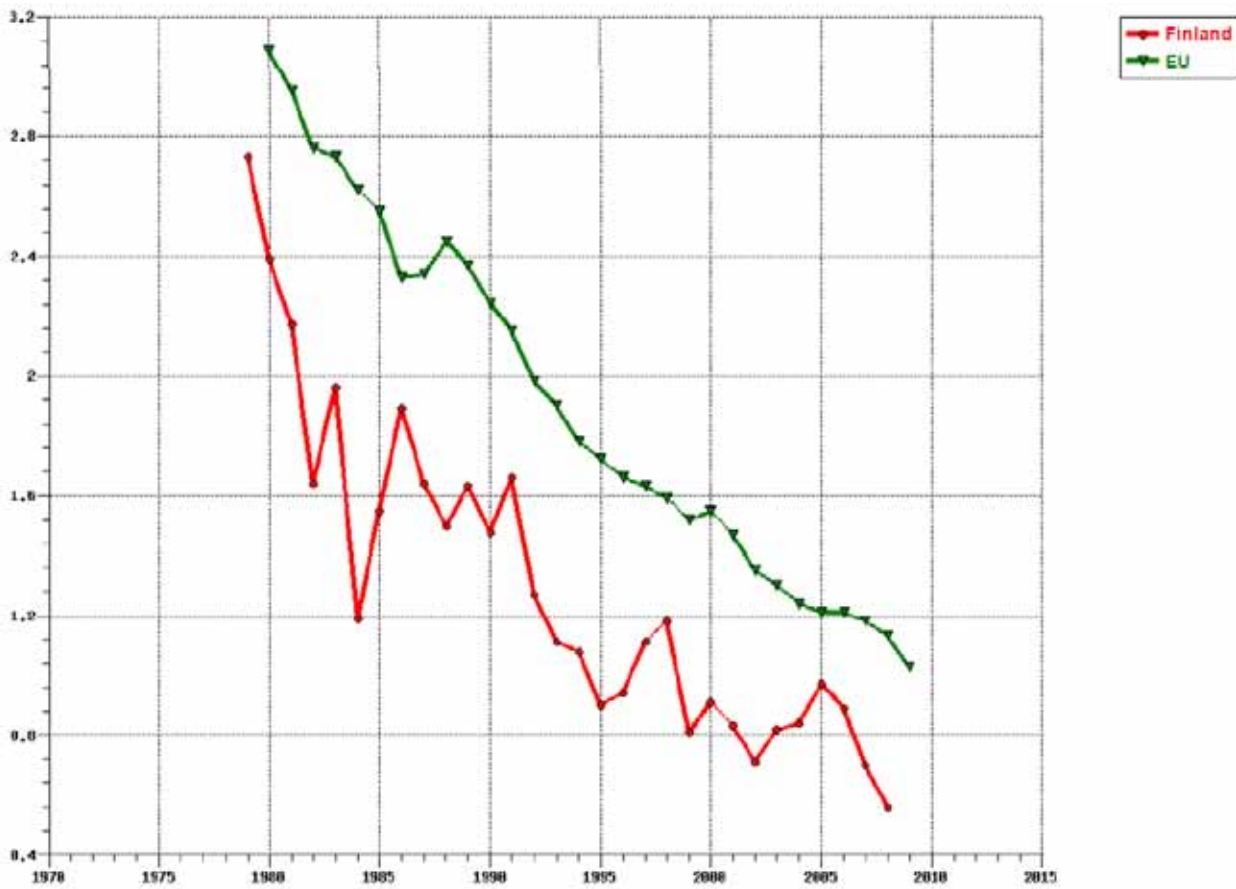
Source: Statistics Finland. Work accidents (1).

Fig. 1.19. Fatal occupational accidents 1975–2006



Source: Statistics Finland. Work accidents (1).

Fig. 1.20. Fatal occupational accidents per 100 000 employees, Finland and EU, 1979–2007

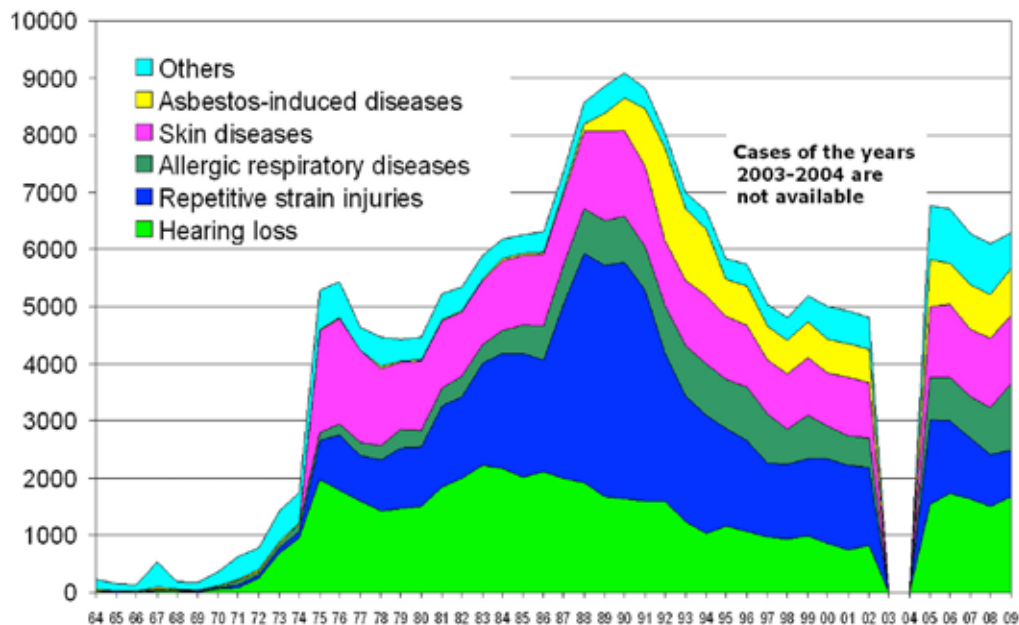


Source: WHO Regional Office for Europe (16).

## Occupational diseases

The Act on Occupational Diseases defines an occupational disease as one caused by a physical, chemical or biological agent at work. The occupational exposure must be the main cause of the disease and the probability of association between the exposure and outcome must be proven. In principle, anybody contracting a disease or adverse health outcome meeting the above criteria is entitled to compensation, provided it is contracted as a consequence of exposure at work under the employment contract with a private employer, in public services or public offices. As the Act defines the concept and criteria for the disease, compensation is made according to accident insurance legislation. Agricultural entrepreneurs are also entitled to compensation on the basis of their specific accident insurance legislation. The number of notified occupational diseases in Finland is presented in Fig. 1.21.

**Fig. 1.21. Notified occupational diseases in Finland, 1964–2009**



Source: Palo (17).

The Decree on Occupational Diseases (1347/1988) lists examples of various physical, chemical and biological factors and typical forms of disease. Although many occupational diseases are covered by the Act on Occupational Diseases, some outcomes caused by work are not exclusively diagnosed as diseases or accidents. These are compensated for on the basis of the Statute on Certain Injuries Compensable as Occupational Accidents (852/1948), which stipulates that the following conditions are to be compensated for in the same manner as occupational diseases or accidents, i.e., if they are caused by work factors:

- sores
- lesions caused by a corrosive substance
- lesions due to inhalation of a dangerous gas
- lesions due to considerable fluctuations in air pressure
- lesions attributable to extreme temperatures, such as frostbite or sunstroke
- inflammation of the patella or elbow due to repeated or unusual pressure
- pain in a muscle or tendon (tendonitis) due to repetitive movement.

Occupational diseases may be diagnosed by any medical doctor. Patients presenting with the most difficult cases are referred by the insurance system for thorough examination to the Centre for Occupational Medicine at the Finnish Institute of Occupational Health.

All occupational diseases need to be prevented. The Finnish Institute of Occupational Health therefore trains occupational health physicians and other OHS personnel to take measures at the workplace level to improve working conditions to prevent new cases.

Finland has a referral system for diagnostics of occupational diseases. The primary level (OHS, municipal health care or general practitioner) can refer complicated cases to the occupational medicine polyclinics of four university hospitals. The Occupational Medicine Clinic of the Finnish



Institute of Occupational Health serves as a national referral point. By law, the cost of such consultations must be covered by insurance, even in cases that do not lead to the diagnosis of an occupational disease.

### ***Work-related health problems***

Some occupational morbidity that is not recognized as an occupational disease, but is classified as work-related, is not covered by occupational disease compensation but under general disability schemes.

There is research evidence that the work-related component of several common diseases is high. Estimates from 49 different diagnostic groups found that 7% of deaths in the population of working age were attributable to work factors (18). In view of the occupational health policy, work-related morbidity as a whole (occupational diseases and other work-related health outcomes) constitutes the main target for preventive programmes (musculoskeletal, cardiovascular, mental health, and allergies).

The Ministry of Social Affairs and Health and the Finnish Institute of Occupational Health have published a guidebook (the so-called Blue Book) for health examinations in OHS (19). The earlier decision of the Ministry stipulating health examinations in especially hazardous jobs has been replaced by this guidebook. It prescribes health examinations in OHS, and contains a great deal of detailed information and guidance on the need for specific health examinations in various occupations. Musculoskeletal disorders are included. The guidebook contains a description of exposures in 12 professions or sectors of the economy and guidance for carrying out health examinations.

### ***Periodic medical examinations***

The Finnish working-age population is kept under surveillance for both public health and occupational health purposes. OHS carry out specific health examinations of the working population, divided into the following categories according to the Act on Occupational Health Services:

- pre-employment
- for workers in hazardous jobs
- when returning to work after a long period of sick leave
- for assessment of work ability
- after retirement from especially hazardous jobs, e.g. asbestos work.

### **Sickness absenteeism**

Rates of sickness absenteeism depend on several factors: the sector of the economy, occupation, type of work, workload, quality of working conditions, working hours, size of company, season, and several individual factors such as age, gender, family relations and type of working contract.

In Finland, sickness absenteeism is compensated for in two different ways.

1. Employees in most sectors of the economy will be reimbursed their full salary by the employer according to the collective agreement made for the sector. The duration of employer-paid compensation varies among sectors between 30 and 90 days. In some agreements the compensation may be reduced to 70%, or even lower, if absence continues longer. If sickness absenteeism has continued for one year, the worker moves to either a permanent or time-limited disability pension.
2. Every citizen, irrespective of type of employment, is covered by sickness insurance, which compensates for loss of earnings if the employer does not pay the salary for sick days until the one-year period has expired. If the employer has paid a higher salary than the stipulated sickness insurance daily allowance, the insurance pays the allowance to the employer. If the employer's compensation is lower than the daily allowance of sickness insurance, the insurance pays the difference to the worker.

Finnish rates of sickness absenteeism have traditionally been reasonable. In international comparisons, Finnish sick leave rates are at the European average. In evaluations and studies, the vast majority of sick leave has been found to be justified and misuse is rare. The rates vary widely, depending on the factors listed above. Currently the rates are slightly increasing (~2% a year) probably owing to the ageing working population and intensified job demands. The average number of days of sick leave in 2008 was 6.3 per worker per year. Women take on average two days more sick leave per year than men, and blue-collar workers two days more than white-collar workers.

The average number of days of sick leave increases almost linearly with age among both sexes, being about twice as common in the 55–64-year age group than in the 15–24-year group. The highest rates are recorded in paper industries (shift work), construction (heavy work, often outdoors) and property maintenance and cleaning work (heavy physical work). The most common causes of sick leave are musculoskeletal disorders (36%), mental health disorders (22%) and poisonings and injuries (13.6%) (20).

### **Working ability and disability**

Working ability and its maintenance has been the topic of active debate in Finland because of a predicted shortage of labour and expected problems in the sustainability of social security. The steady decline in the average working ability index among 47-year-old working Finns has been shown to be approximately 10%, i.e. 0.16% a year. During the same period, the percentage of workers with full working capacity drops by 30% on average.

Intensive action to maintain and promote working ability has been initiated through the National Programme for Ageing Workers (21) and by recognising this as a legitimate task of OHS. The long-term objective is to lengthen working careers, and the legislation on work pensions has been amended to extend the upper retirement age to 68 years (22).

Owing to several policy measures, including those mentioned above, the effective retirement age has increased over the current decade. Between 2000 and 2008, the effective retirement age increased by a good six months. In 2008, the average effective retirement age for those over 50 years of age was 61.4 years. This figure does not include those who retired before the age of 50,

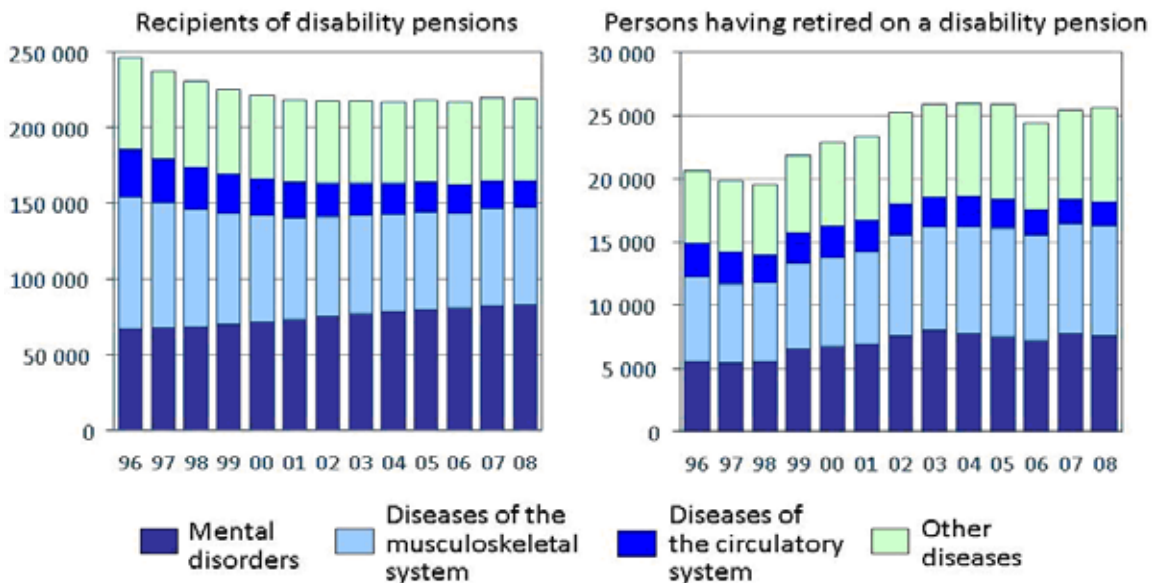
who mainly draw a disability pension. Disability pension rates have declined over the long term (by about 10% since 1996). In the public sector, the effective retirement age has continued to increase steadily. “Baby boomers” are now approaching retirement age. The first of those in this age group reached the lower age limit for retirement of 63 years in 2008. The number of new retirees is therefore increasing and the extension of working careers is highly topical (23).

Finland has a double disability pension system based on:

- a flat-rate “people’s pension” to which every citizen in a relevant age group is entitled; and
- a work-related pension dependent on one’s working history and level of earnings. Disability pension is payable after one year on sick leave compensated by sickness insurance.

Some 5% of working-age Finnish women and 7% of men are on disability pension. The pension level is calculated by using the estimated earnings that the person would have accumulated by working continuously until the predicted normal retirement age if the disability had not occurred. The trends and causes of disability pension are shown in Fig. 1.22.

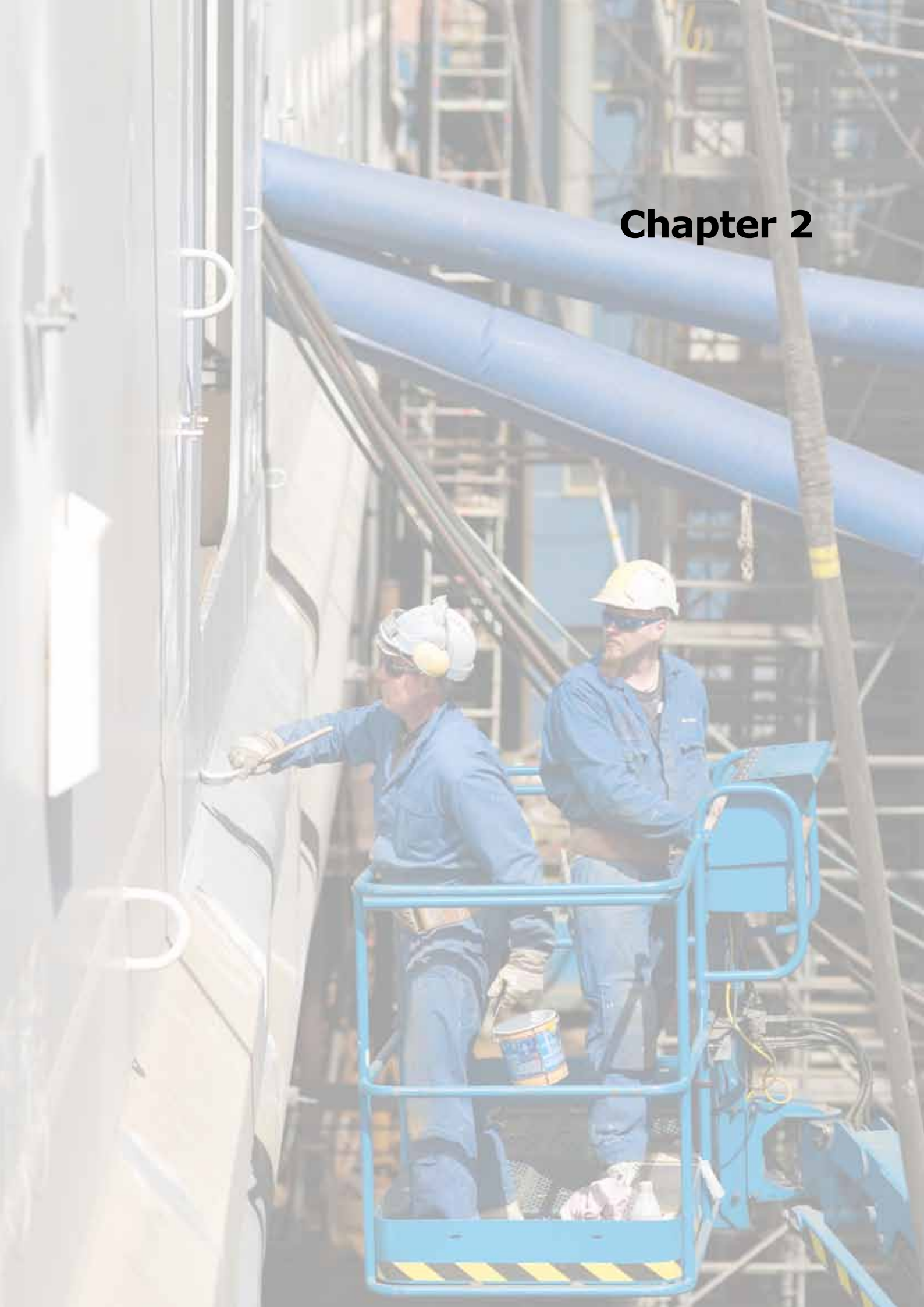
**Fig. 1.22. Trends in disability pensions among Finnish workers by main cause, 1996–2008**



Source: Finnish Centre for Pensions (24).



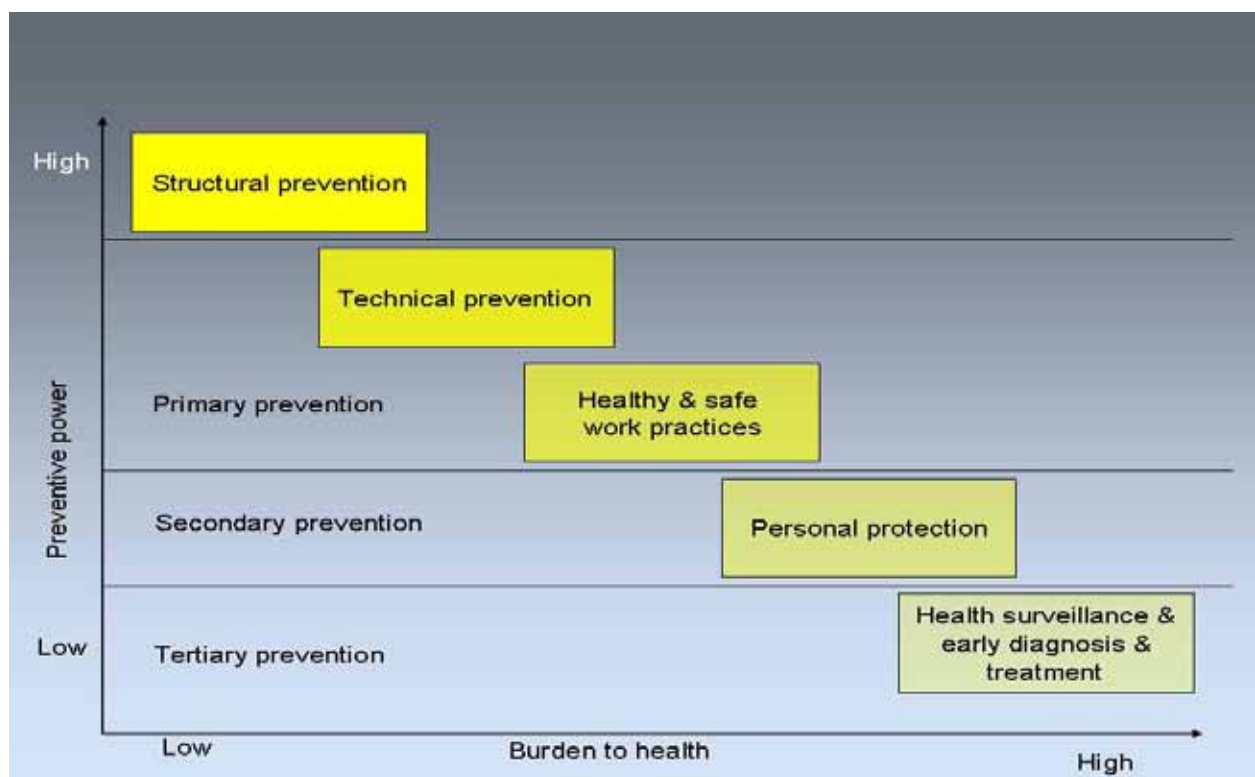
## Chapter 2



## Prevention and compensation approaches to work-related health problems

All occupational accidents and diseases are, in principle, preventable, and structural and primary prevention therefore constitute the most important starting point for all OH&S activities. Fig. 2.1 shows the preventive power of various measures. It should be utilized in all policies in every country. This means that OH&S aspects should be looked at in all decisions, even in sectors that are not under the jurisdiction of the health or labour ministry in a country.

Fig. 2.1. Hierarchy of prevention



Source: Rantanen, unpublished data, 2009.

Effective prevention, in addition to it being the most effective strategy for reducing the burden of occupational and work-related morbidity among the working population, has also been found to be most beneficial in terms of productivity and the economy. Finnish evaluation studies show that the benefits derive from two sources:

- control of unnecessary loss from diseases and injuries; and
- increased productivity owing to reduced disturbance of production.

### Compensation for occupational diseases in Finland

Compensation practice for occupational diseases is based on the Act on Occupational Diseases (1343/1988) and its amendments (1643/1992, 1315/2002 and 1366/2004) and the Decree on Occupational Diseases (1347/1988) and its amendments (1315/2002 and 252/2003). As stipulated

in the Act, an occupational disease is “... a disease caused by any physical factor, chemical substance or biological agent encountered in the course of work done under a contract of employment, in a public service or in public office or as [an] agricultural entrepreneur ...”. The Decree specifies in greater detail the criteria for evidence of a causal relationship between the exposure factor and the disease. Diseases other than those caused by the physical, chemical and biological factors specified in the Decree also qualify as occupational diseases if it can be proved that they were caused by the factors in question.

The FAII coordinates the criteria and principles used by insurance companies in practical decisions on compensation cases, thus standardizing the compensation policies by reducing variation between individual companies. Compensation practice is not always determined by purely medical criteria; for many diseases it has been established in accordance with the observed legal praxis, such as rulings made by the Insurance Court.

### **Forms of compensation**

When an occupational disease is diagnosed, it is a routine that the workplace is requested to take measures to prevent new cases from occurring.

Compensation for occupational diseases is specified by the Occupational Accidents Insurance Act (608/1948, amendment 526/1981). The forms of compensation are: medical treatment costs, daily allowance, occupational disability pension, disability benefit, survivor's pension, funeral expenses, invalid care allowance and compensation for damaged disability aids. The level of compensation for accident insurance is higher than general health insurance or pension insurance, the former aiming at 100% compensation of earnings lost. Rehabilitation benefits follow the same principle. The right to rehabilitation is guaranteed by law if the need for it is due to an occupational disease. This facilitates rapid initiation of rehabilitation measures after the occupational disease has been diagnosed. Workers' compensation can be used to compensate any loss of income, provided that the income is less than that previously earned.

Any justifiable examination costs incurred in confirming the existence of an occupational disease are covered by insurance, even where the disease is subsequently found not to be an occupational disease eligible for compensation. The examination must, however, be based on the diagnosis of a physician specialized in OHS or occupational medicine and on information on the working conditions of the employee being examined. Physicians not specialized in OHS or occupational medicine can, in practice, also refer the patient for examinations or conduct occupational disease examinations in cases where exposure is obvious on the basis of the occupation in question (e.g. “baker's asthma”).

Disability benefits are based on medical criteria of disability. The criteria are drawn up under the aegis of the Ministry of Social Affairs and Health.

## **Work-related musculoskeletal disorders**

Musculoskeletal disorders comprise from time to time one of the biggest causes of pain, reduction of functional capacity, work disability and early retirement. More than one million Finns have a chronic musculoskeletal disorder and another million suffer from temporary musculoskeletal disorders. The sickness absenteeism caused by musculoskeletal disorders has been on the increase

in the 2000s. The costs caused by musculoskeletal disorders consist of premature retirement costs and loss of work input, which amounts to close to €2 billion a year (25).

The National Programme for the Prevention of Musculoskeletal Disorders was launched in 2008 and will continue until 2015. In 2008, it had a total of 16 participating institutions and nongovernmental organizations, including the Finnish Institute of Occupational Health.

## **Cardiovascular disorders**

There has been a positive trend in cardiovascular disorders over the last 30 years (an 80% reduction from the 1970 level) but further measures are sorely needed in order for the trend to continue. Cardiovascular disorders cause long periods of sickness absenteeism and constitute the third largest cause of pensionable work disability after mental health disorders and musculoskeletal disorders.

There are several factors in working life and life in general that are counterproductive to cardiovascular health. The cardiovascular health of the working-age population is part of the national Action Plan for Finnish Heart Health for the Years 2005–2011 (26). In addition, the occupational causes of cardiovascular morbidity are recognized in the Programme.

Recommendations for improving the cardiovascular health of the working-age population include:

- supporting the maintenance and promotion of a strategy on working ability and ensuring that activities promoting heart health are implemented as a part of this strategy;
- guaranteeing a well-functioning OHS that includes health promotion, surveys of cardiovascular disease risks and the prevention and prompt treatment of cardiovascular diseases, and the expansion of this work to psychosocial risk factors;
- guaranteeing the opportunity to eat healthy meals during the working day for as many working people as possible, and increasing the demand for such meals;
- encouraging and improving opportunities for physical activity among commuters;
- increasing the amount of physical activity during working hours and getting employers to encourage their employees to exercise;
- adopting current guidelines on smoking cessation as a routine practice in health care and the OHS, and intervening in passive smoking;
- supporting early intervention with regard to the excessive use of alcohol;
- maintaining and promoting the health and working ability of the unemployed by including such themes in courses and training provided to the unemployed and by encouraging them to participate in activities organized by various associations and organizations;
- guaranteeing the right treatment at the right time; and
- increasing women's knowledge about the risk factors of cardiovascular diseases, and supporting the know-how of health care professionals regarding the special characteristics of women's heart health.

The goal of the Finnish Heart Association is that, in 20 years' time, cardiovascular disease will no longer be a significant health problem among Finns of working age and that people will have more healthy and active years during the course of their lives. More information on cardiovascular issues is available at: <http://www.sydanliitto.fi/home>.



## Work-related stress and psychosocial risks

The Ministry of Social Affairs and Health has established a national programme, the Masto Project to reduce depression-related work disability. Its aim is to foster good practices for well-being at work, the prevention of depression, good levels of treatment and rehabilitation, the possibility of continuing to work or to have a smooth return to work, and a reduction in the number of disability pensions due to depression (27). The Programme is scheduled to run from 1 November 2007 to 31 May 2011 and is targeted at the whole working-age population. The main contents of the Programme are:

- promotion of well-being and mental health at work (working-age population);
- activities aimed at preventing depression (risk groups);
- early recognition and treatment of depression (people who have become ill); and
- rehabilitation and return to work (people recovering from depression).

The adverse health outcomes associated with work stress have been extensively studied in Finland and other European countries. Examples of a well-established association between work stress and disease, derived from epidemiological studies by Finnish researchers either in Finland or in collaboration with others, are as follows:

- elevated risk of coronary heart morbidity and mortality among workers with high level of stress (28);
- elevated risk of mental health disorders among workers exposed to work stress, time pressure, low control of one's own work, bullying at work, a poor working atmosphere, injustice at work and risk of being laid off (29–31);
- increased risk of burnout among PHC personnel and social workers with high job demands, poor work management, poor working atmosphere, and high amount of work and lack of sufficient staff (32);
- elevated risk of being pensioned off for depression-related work disability among workers with a high level of work with clients and exposure to human-human interaction (33);
- elevated risk of accidents among workers with a reduced sense of coherence (34);
- increased probability of being prescribed antidepressant medication among temporary workers (35);
- elevated overall mortality among temporary workers (36);
- elevated risk of hypertension and coronary heart disease among shift workers (37); and
- other (38–40).



## Chapter 3



## **Future priorities**

### **Survey among the main actors in OH&S**

A survey was conducted in early 2006 among the 16 organizations involved in OH&S in Finland for the purposes of the National Occupational Safety and Health Profile (2006). The study covered all the key stakeholders in OH&S, including three ministries, all the key social partners organizations and associations of OH&S professionals. The response rate was 100%. The respondent organizations were:

- the Ministry of Social Affairs and Health
- the Ministry of Labour
- the Ministry of Education
- the Confederation of Finnish Industries
- the State Employer in Finland
- the Local Authority Employers in Finland
- the Central Organization of Finnish Trade Unions
- the Finnish Confederation of Salaried Employees
- the Confederation of Unions for Academic Professionals in Finland
- the Central Union of Agricultural Producers and Forest Owners
- the Finnish Association of Occupational Health Physicians
- the Finnish Association of Occupational Health Nurses
- the Finnish Occupational Hygiene Association
- the Finnish Association of Safety Chiefs
- the Federation of Accident Insurance Institutions
- the Centre for Occupational Safety.

The aim of the survey was to discover the central values, problems and priorities of these organizations for OH&S, and to disclose the strengths and weaknesses of OH&S in Finland as well as the most important development targets to be achieved by 2010.

Although these organizations came up with a long list of priorities, it could be seen that their main priorities were largely the same.

### **Values in OH&S**

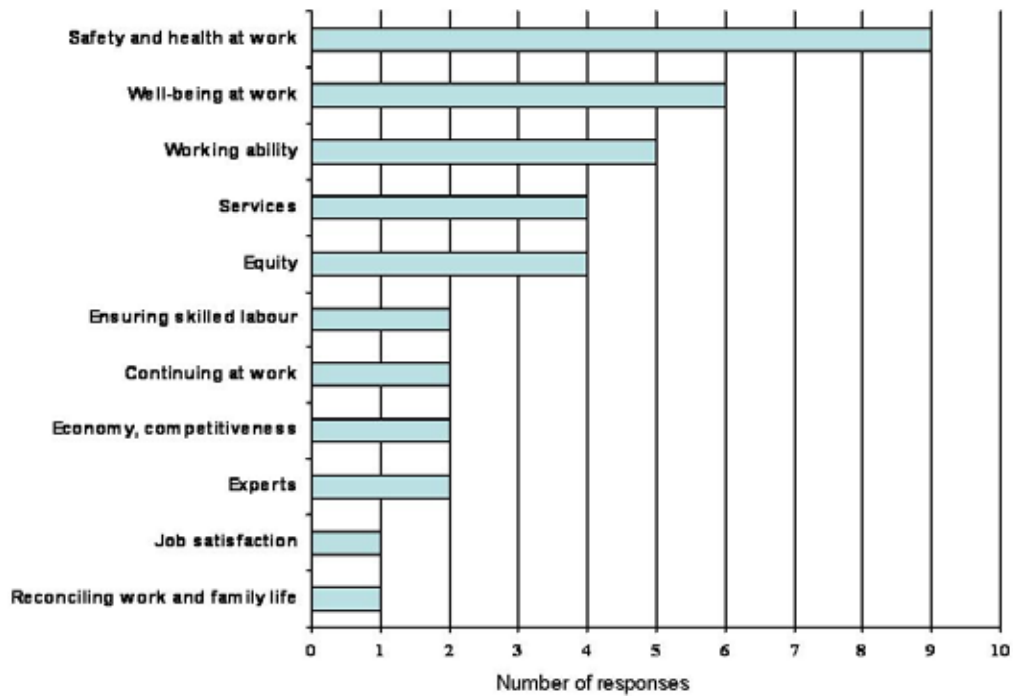
The first question of the survey dealt with the most important values in OH&S that each of the organizations considered reflected its own values. A clear majority of respondents recognized the a-priori value and pro-health mission of occupational health as justification for the development and maintenance of the occupational health system. The material values were also recognized, but at much lower rates than the substantive mission (Fig. 3.1).

### **Problems of OH&S**

The second question addressed the most urgent OH&S problems in Finland according to the 16 organizations active in the field. The results reflected the broad spectrum of problems still prevailing in Finnish working life. It seems clear from the replies that stress and mental well

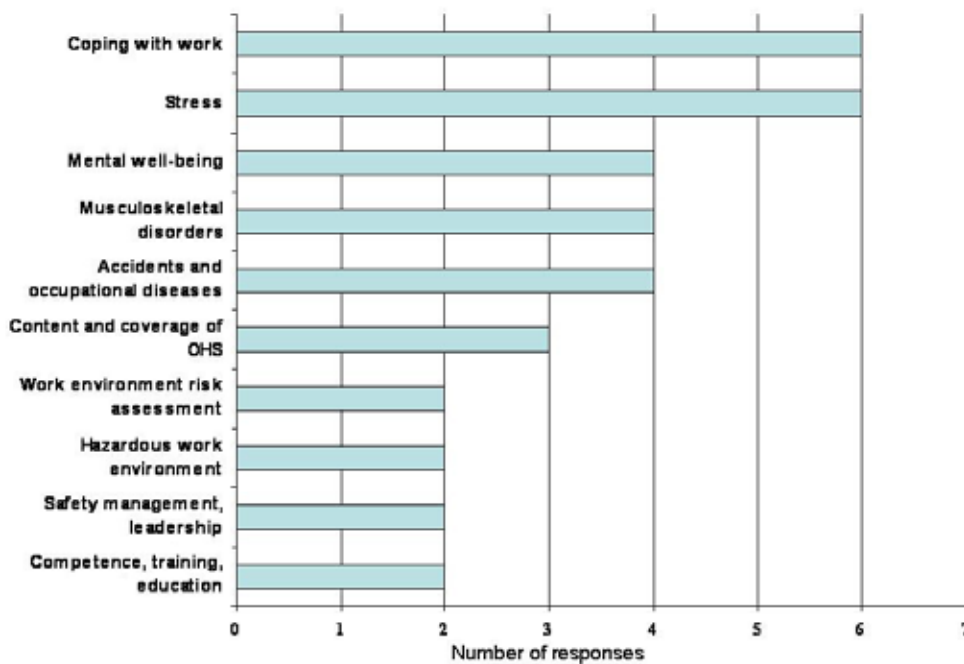
being are among the most significant problems (Fig 3.2). Safety and accident prevention are nevertheless still topical issues, possibly due to the fact that the vast majority of Finnish companies and workplaces are small.

**Fig. 3.1. Values inherent in OH&S activity in Finland as expressed by the 16 organizations taking part in the survey**



Source: The Finnish Ministry of Social Affairs and Health (2).

**Fig. 3.2 Problems of OH&S in Finland at present**

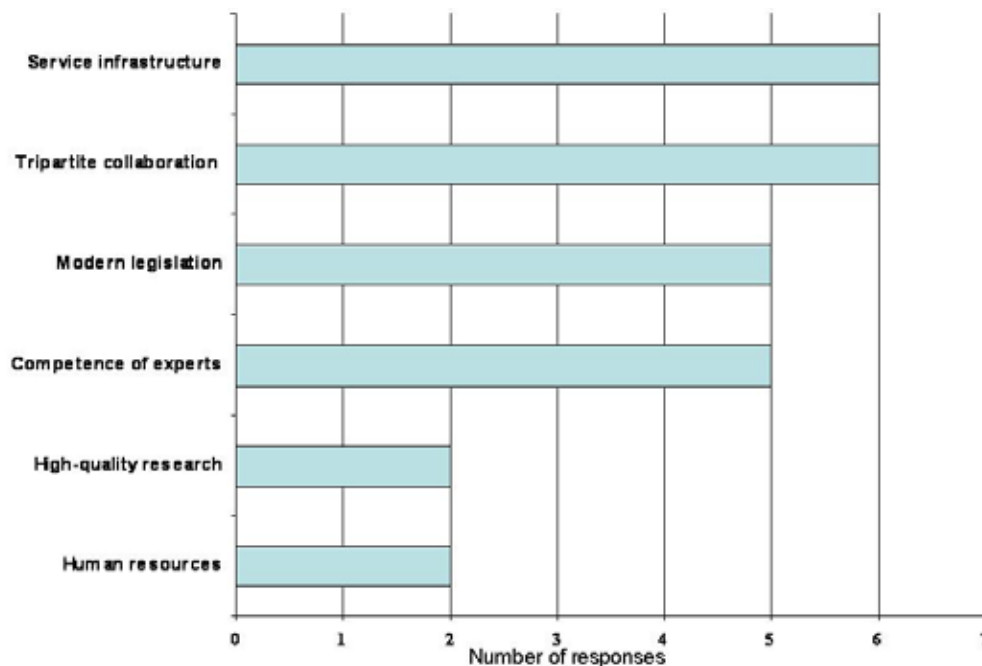


Source: The Finnish Ministry of Social Affairs and Health (2).

## Strengths and weaknesses in OH&S

The third and fourth questions dealt with the strengths and weaknesses of the Finnish OSH system. The infrastructure of services was deemed to be well developed (Fig. 3.3). Also, the tripartite collaboration and the consensus society were well placed. The respondents found the legislation on OH&S and OHS to be up-to-date and to correspond well with the requirements and demands of working life. Also, the competence and training of OH&S experts was perceived to be good.

Fig. 3.3 Main strengths of OH&S in Finland



Source: The Finnish Ministry of Social Affairs and Health (2).

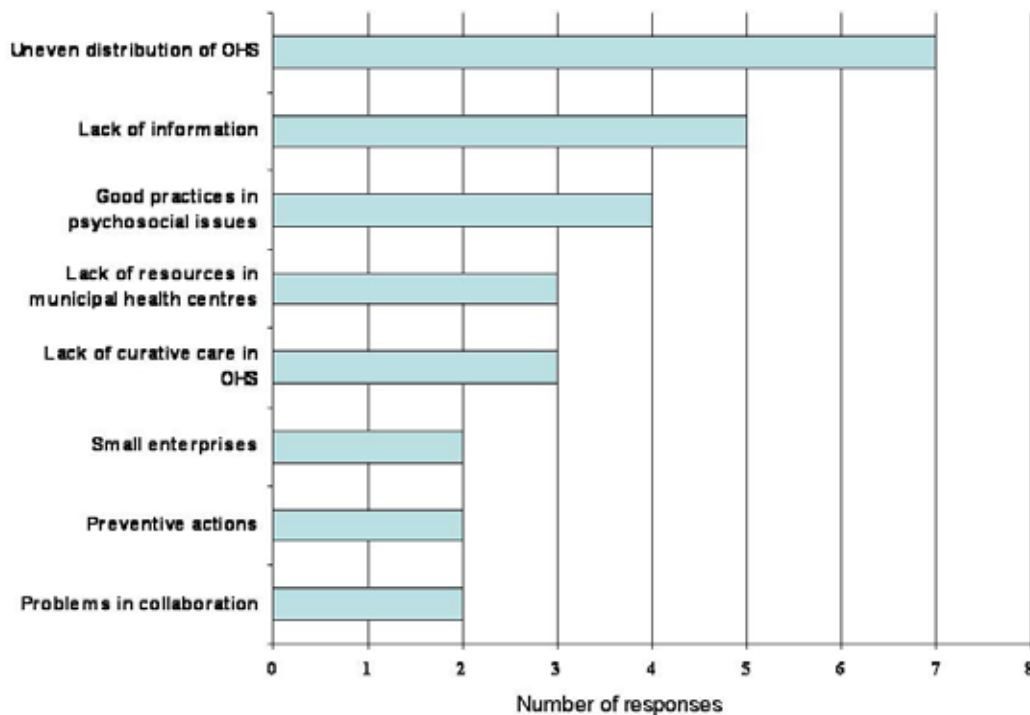
The weakness most often mentioned was the uneven distribution of OHS among companies, workplaces, sectors of the economy and workers. Also, the rather poor ability of municipal health care centres to provide services, especially for small companies and the self-employed, was also mentioned (Fig. 3.4).

## The economic aspects of OH&S

The fifth question addressed the views of the responding organizations about the possible economic aspects and efficiency of OH&S activities. It turned out that the respondents expected economic benefits from OH&S work at all levels: the national economy, the company economy, social security and social economy, and the individual worker. The benefits for the national economy were deemed to be the following: preventing economic losses at the level of the national economy, such as reduction of sick leaves, occupational accidents and diseases, declining premature retirement, and better work ability and staying on at work (promotion of extension of work careers to older ages). These same features were also seen to have an impact on better productivity at the company level. The effects on social security can be seen as reduced health care costs. Also, the state of

health of the workers was believed to have a serious effect on the attitudes and motivation of younger workers starting their working careers. Individual workers would benefit from OH&S activities through improved working conditions and better organization of work. This, in turn, would encourage employees to continue to work longer and consequently lead to a better life after retirement.

**Fig. 3.4 Main weaknesses of OH&S in Finland**



Source: The Finnish Ministry of Social Affairs and Health (2).

Understanding the relationship between the need for OH&S activities and better productivity requires improved professional competence of the occupational health personnel. Although the importance of the economic dimension was recognized, it was deemed important not to compromise health issues to business objectives. Also, bringing OH&S within the reach of small workplaces was mentioned as a special challenge.

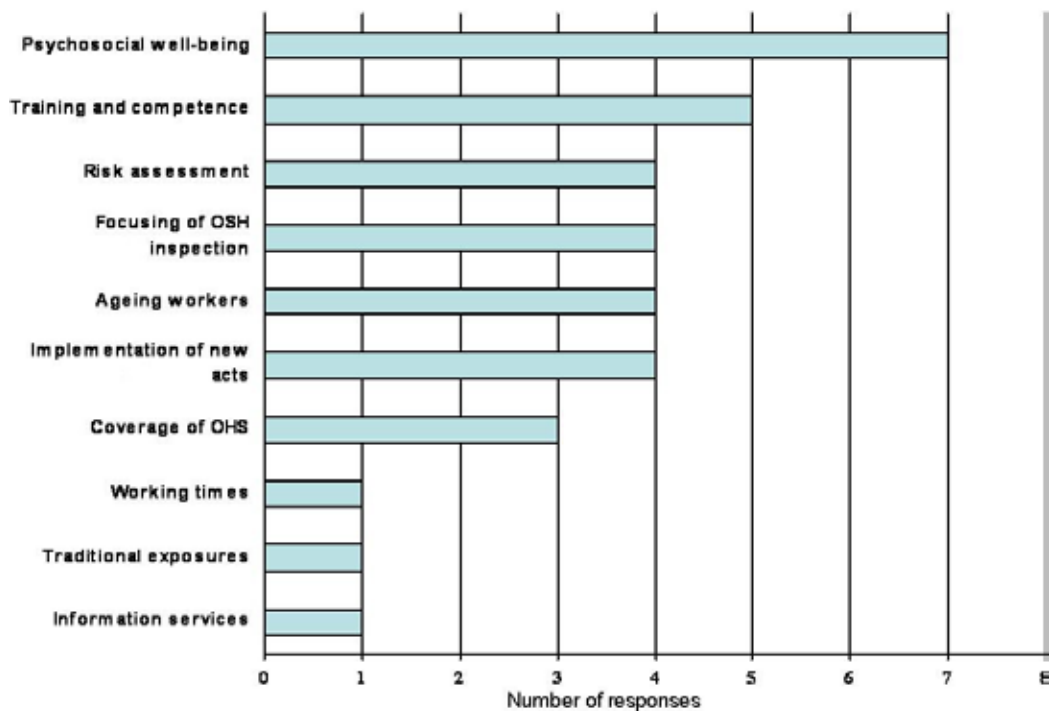
## **Tripartite collaboration**

The sixth question of the survey dealt with the importance of tripartism in the development of the Finnish working life. All respondents assessed that the tripartite collaboration has been beneficial and successful over the past years. In general, it was considered that the initiative for new ideas and a proactive approach often lay with the trade unions. Some respondents found it important to expand the participation of some organizations such as some research institutions. The challenge of reconciling the time spans in the objectives of the various partners and, for example, agreeing on the time perspectives for calculating the costs of occupational health were also matters discussed by the respondents.

## Challenges for OH&S

The respondent organizations also presented their views on the short- and longer-term challenges of OH&S in Finland. There were a few topics that received a lot of emphasis. The longer-term perspectives emphasized the importance of the further development of OH&S infrastructures, such as OHS, training of personnel and the development of models to help enforce legislation effectively. The main challenges are shown in Fig. 3.5.

Fig. 3.5. The main challenges of OH&S in Finland



Source: The Finnish Ministry of Social Affairs and Health (2).



## Chapter 4



## Conclusion and lessons

In general, the basic safety and health issues are relatively effectively managed and show a positive trend in Finland, while the rapid changes in the structure of working life, in work organization, in employment patterns, in job demands and in the demands of growing competition and productivity challenge safety, health, and well-being at work. There are several opportunities to respond to the new challenges, which, however, will need new approaches to the overall social dimension of working life, including safety and health cultures.

Table 4.1 summarizes the strengths, weaknesses, opportunities and threats in the development of the Finnish occupational health system.

**Table 4.1. Situation analysis of Finnish occupational health and safety**

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Comprehensive and modern legislation on OSH</li> <li>• Government policy programme positively addresses OSH</li> <li>• Wide consensus on national key strategic objectives in OSH</li> <li>• Well-trained OSH officials, inspectors, and employers' and workers' representatives</li> <li>• Positive trends in the past three decades in safety and health</li> <li>• Successful action for the safety, health and working ability of ageing workers</li> <li>• Strong research support to OSH administration and workplace activities</li> <li>• Wide coverage of OHS with a modern content</li> <li>• Active EU, Nordic and international collaboration in policies, authorities' activities, research, training and information</li> </ul>	<ul style="list-style-type: none"> <li>• Difficulties to keep abreast with the rapidly changing working life and the emergence of new risks</li> <li>• Some 200 000 entrepreneurs are not covered by OSH legislation</li> <li>• Levelling off of the declining trends of occupational accidents during the past few years (residual risk)</li> <li>• Lack of coverage of OSH and OHS of the smallest companies</li> <li>• Difficulties in controlling the working conditions and employment contracts of guest and migrant, mobile and informal workers</li> <li>• Declining interest among employees in serving as safety and health representatives</li> <li>• Reconciliation of working life and family life, particularly for parents of small children and of workers having other dependants (e.g. older family members)</li> <li>• Less successful outcomes from attempts to manage job insecurity, stress and unreasonable working hour</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>• Effective implementation of new OSH legislation</li> <li>• Development of working conditions conducive to working ability and coping with work (particularly among ageing workers)</li> <li>• High rate of renewal of the workforce in the next 10 years with new skills, competences and attitudes</li> <li>• Development of new managerial cultures and modern leadership, giving high value to OSH and well-being at work</li> <li>• Understanding OSH as a factor for improving well-being, job motivation, productivity, quality, innovation and competitiveness</li> <li>• Effective use of new technologies for safer and healthier workplaces</li> </ul>	<ul style="list-style-type: none"> <li>• Risks will start to increase as a consequence of weakened control of working conditions</li> <li>• Exclusion of ageing workers through imbalance between capacity and demands</li> <li>• Disappearance of the tacit knowledge of OSH through retirement of "baby boomers"</li> <li>• Decline of innovation under too high short-term demands</li> <li>• Threat of global pandemics and risks to frontline workers in several sectors of working life (frontier guards, travel occupations, international workers, health care workers)</li> <li>• New, unexpected risks of new technologies and substances</li> <li>• New occupational hazards related to terrorism</li> </ul>

Finland, with its well-developed OSH policies, modern legislation, social dialogue, infrastructures and human resources, has good prospects for generating new responses and solutions to the problems and challenges. Nevertheless, major challenges from traditional health and safety hazards, together with new problems related to the rapid development of global economies, technologies and demographic changes plus new types of work organizations and employment patterns, mean that much remains to be done in further developing occupational health in Finland.

**Fig. 4.1. Factors and order for the development of OSH**



## Lessons

There is no way of transferring the OSH system of one country to another. The development of infrastructures is based on long-term societal development that takes cultural developments into consideration. Thus it is extremely important that the whole developmental cycle is thought through and discussed in collaboration with all relevant stakeholders in a stepwise manner.

The factors shown in Fig. 4.1 can be identified as lessons for other countries from the Finnish system in the order of their development.

The prerequisites for a basic OSH infrastructure can be listed as:

- legislation on social security (insurance);
- legislation on occupational diseases;
- list of occupational diseases;
- service infrastructure – basic occupational health services;
- training for occupational health physicians and occupational health nurses;
- secondary- and tertiary-level support services, including multidisciplinary support;
- notification and registration system for occupational accidents and occupational diseases; and
- feedback to the workplace to prevent occupational diseases and accidents through the removal of causes.

## References

1. Labour force statistics (2008), National accounts (2008), Population (2009), Work accidents (2006) [web site]. Helsinki, Statistics Finland ([http://www.stat.fi/index\\_en.html](http://www.stat.fi/index_en.html), accessed 1 June 2010).
2. *National occupational safety and health profile of Finland. Analytical report.* Helsinki, Ministry of Social Affairs and Health, 2006 ([http://www.stm.fi/en/publications/publication/\\_julkaisu/1072371#en](http://www.stm.fi/en/publications/publication/_julkaisu/1072371#en), accessed 18 July 2011).
3. *OECD factbook 2005. Economic, environmental and social statistics.* Paris, Organisation for Economic Co-operation and Development, 2005 ([http://www.oecd-ilibrary.org/economics/oecd-factbook-2005\\_factbook-2005-en](http://www.oecd-ilibrary.org/economics/oecd-factbook-2005_factbook-2005-en), accessed 27 August 2011).
4. Nieminen T. *Gender equality barometer 2008.* Helsinki, Ministry of Social Affairs and Health, 2009.
5. *National Action Plan to Reduce Health Inequalities 2008–2011.* Helsinki, Ministry of Social Affairs and Health, 2008.
6. Vuori J et al. Towards working life: effects of an intervention on mental health and transition to post-basic education. *Journal of Vocational Behaviour*, 2008, 72:67–80.
7. Vuorenkoski L. Finland: health system review. *Health Systems in Transition*, 2008, 10(4): 1–168 ([http://www.euro.who.int/\\_data/assets/pdf\\_file/0007/80692/E91937.pdf](http://www.euro.who.int/_data/assets/pdf_file/0007/80692/E91937.pdf), accessed 18 July 2011).
8. Järvelin J. *Health care systems in transition: Finland.* Copenhagen, European Observatory on Health Care Systems, 2002 ([http://www.euro.who.int/\\_data/assets/pdf\\_file/0008/80693/E74071.pdf](http://www.euro.who.int/_data/assets/pdf_file/0008/80693/E74071.pdf), accessed 18 July 2011).
9. *Act on the Status and Rights of Patients.* Helsinki, Ministry of Social Affairs and Health, 1993.
10. *Quality recommendation for health promotion.* Helsinki, Ministry of Social Affairs and Health, 2009.
11. *Government Resolution: Occupational Health 2015. Development strategy for occupational health care.* Helsinki, Ministry of Social Affairs and Health, 2004 ([http://www.stm.fi/c/document\\_library/get\\_file?folderId=28707&name=DLFE-3947.pdf&title=Government\\_Resolution\\_\\_Occupational\\_Health\\_2015\\_en.pdf](http://www.stm.fi/c/document_library/get_file?folderId=28707&name=DLFE-3947.pdf&title=Government_Resolution__Occupational_Health_2015_en.pdf), accessed 18 July 2011).
12. Manninen P et al. *Työterveyshuolto Suomessa vuonna 2007 ja kehitystrendi 1997–2007* [Occupational health services in Finland in 2007 and trends in 1997–2007]. Helsinki, Finnish Institute of Occupational Health and Ministry of Social Affairs and Health, 2009.
13. *Annual Reports of the OSH Administration.* Helsinki, Ministry of Social Affairs and Health, 1998–2007.
14. Perkiö M. *Työ ja terveys haastattelututkimus 2006* [Work and health interview survey 2006]. Helsinki, Finnish Institute of Occupational Health, 2006 ([http://www.ttl.fi/fi/verkkokirjat/tyo\\_ja\\_terveys\\_suomessa/Documents/yhteenveto\\_työ\\_ja\\_terveys\\_suomessa\\_2009.pdf](http://www.ttl.fi/fi/verkkokirjat/tyo_ja_terveys_suomessa/Documents/yhteenveto_työ_ja_terveys_suomessa_2009.pdf), accessed 18 July 2011).
15. Saalo A et al. *ASA 2007 (A register of workers at risk of exposure to carcinogenic substances and processes).* Helsinki, Finnish Institute of Occupational Health, 2009.
16. WHO European Health for All database [online database]. Copenhagen, WHO Regional Office for Europe (<http://www.euro.who.int/en/what-we-do/data-and-evidence/databases/european-health-for-all-database-hfa-db2>, accessed 27 August 2011).
17. Palo L. *Notified occupational diseases in Finland in 1964–2009.* Helsinki, Finnish Institute of Occupational Health, Registry of Occupational Diseases, 2011.
18. Nurminen M, Karjalainen A. Epidemiologic estimate of the proportion of fatalities related to occupational factors in Finland. *Scandinavian Journal of Work, Environment & Health*, 2001, 27:161–213.
19. Taskinen H et al. *Terveystarkastukset työterveyshuollossa* [Health examinations in occupational health services]. Helsinki, Finnish Institute of Occupational Health and the Ministry of Social Affairs and Health, 2006.
20. *Finnish Institute of Occupational Health 2009.* Helsinki, Social Security Institution, 2008.
21. Ilmarinen J, Louhevaara V. *FinnAge – Respect for the Aging. Action programme to promote health, work ability and well-being of aging workers in 1990–96.* Helsinki, Institute of Occupational Health,

- 1999 (People and Work, Research Reports 26).
22. *The Veto Programme 2003–2007. National action programme on extending working life, well-being at work and rehabilitation.* Helsinki, Ministry of Social Affairs and Health, 2003.
  23. Gould R et al., eds. *Dimensions of work ability. Results of the Health 2000 Survey.* Helsinki, Finnish Centre for Pensions et al., 2008.
  24. *The Local Government Pensions Institution, State Treasury Pensioners and insured in Finland 2005 and 2008. Official Statistics of Finland Social Protection.* Helsinki, Finnish Centre for Pensions, 2007 and 2010.
  25. Rantanen J, Malmivaara A, eds. *Tuki- ja liikuntaelinsairaudet Suomessa* [Musculoskeletal disorders in Finland]. Helsinki, Ministry of Social Affairs and Health, 1996.
  26. *Action Plan for Finnish Heart Health for the Years 2005–2011.* Helsinki, Finnish Heart Association, 2005 (<http://www.sydanliitto.fi/finnish-heart-association>, accessed 18 July 2011).
  27. *Masto project to reduce depression-related work disability.* Helsinki, Ministry of Social Affairs and Health, 2009 ([http://www.stm.fi/c/document\\_library/get\\_file?folderId=39503&name=DLFE-10165.pdf](http://www.stm.fi/c/document_library/get_file?folderId=39503&name=DLFE-10165.pdf), accessed on 19 July 2011).
  28. Kivimäki M et al. Work stress in the etiology of coronary heart disease – a meta-analysis. *Scandinavian Journal of Work, Environment & Health*, 2006, 32:431–442.
  29. Kivimäki M et al. Organizational justice and health of employees: prospective cohort study. *Occupational and Environmental Medicine*, 2003, 60:27–34.
  30. Kivimäki M et al. Workplace bullying and the risk of cardiovascular disease and depression. *Occupational and Environmental Medicine*, 2003, 60:779–783.
  31. Ylipaavalniemi J et al. Psychosocial work characteristics and incidence of newly diagnosed depression: A prospective cohort study of three different models. *Social Science and Medicine*, 2005, 61:111–122.
  32. Koponen AM et al. Perusterveydenhuollon ja sosiaalitoimen henkilöstön työolot ja työuupumus neljässä kunnassa. Onko palvelutuotantotavalla väliä? [Psychosocial work environment and emotional exhaustion of primary health care and social sector personnel in four municipalities. Does a service provision model play a role?]. *Sosiaalilääketieteellinen Aikakauslehti*, 2007, 44:163–175.
  33. Pensola T, Gould R. *Ammatit ja masennusperusteiset työkyvyttömyyseläkkeet* [Elevated risk of depression-related work disability pension among workers with much work with clients and exposure to human-human interaction]. Helsinki, Finnish Centre for Pensions, 2009.
  34. Poppius E. *The sense of coherence and health.* Tampere, Tampere University Press, 2007 (Acta Universitatis Tamperensis 1241).
  35. Virtanen M et al. Temporary employment and antidepressant medication: a register linkage study. *Journal of Psychiatric Research*, 2008, 42:221–229.
  36. Kivimäki M et al. Temporary employment and risk of overall and cause-specific mortality. *American Journal of Epidemiology*, 2003, 158:663–668.
  37. Virkkunen H et al. Shift work, occupational noise, and physical workload with ensuing development of blood pressure and their joint effect on the risk of coronary heart disease. *Scandinavian Journal of Work, Environment & Health*, 2007, 33:425–434.
  38. Kivimäki M et al. Organizational downsizing and increased use of psychotropic drugs among employees who remain in employment. *Journal of Epidemiology and Community Health*, 2007, 61:154–158.
  39. Virtanen M et al. Long working hours and cognitive function: the Whitehall II Study. *American Journal of Epidemiology*, 2009, 169:596–605.
  40. Virtanen P et al. Labor market trajectory and health: a four year follow-up study of initially fixed-term employees. *American Journal of Epidemiology*, 2005, 161:840–846.

# Annexes



## **Annex 1. Web sites of research and other institutions related to OSH in Finland**

Ministry of Social Affairs and Health

[http://www.stm.fi/en/social\\_and\\_health\\_services/health\\_services](http://www.stm.fi/en/social_and_health_services/health_services)

Finnish Institute of Occupational Health

<http://www.ttl.fi>

State Technical Research Centre, VTT Automation

<http://www.vtt.fi/?lang=en>

Radiation and Nuclear Safety Authority, STUK

<http://www.stuk.fi>

Safety Technology Authority, TUKES

<http://www.tukes.fi/en>

Tampere University of Technology/Occupational Safety Engineering

<http://www.tut.fi/public/index.cfm?siteid=32>

University of Kuopio/Department of Environmental Science

<http://www.uku.fi/english>

University of Oulu/Work Science

<http://www.oulu.fi/english/index.html>

Helsinki University of Technology/Laboratory of Work Psychology and Leadership

<http://www.helsinki.fi/university>

Lappeenranta University of Technology

[http://www.it.lut.fi/index\\_eng.html](http://www.it.lut.fi/index_eng.html)

Work Research Centre at the University of Tampere

<http://www.uta.fi/laitokset/yti/english/wrc/index.html>

Tampere School of Public Health at the University of Tampere

<http://www.uta.fi/english/index.html>

UKK Institute for Health Promotion Research

<http://www.ukkinstituutti.fi/en/>

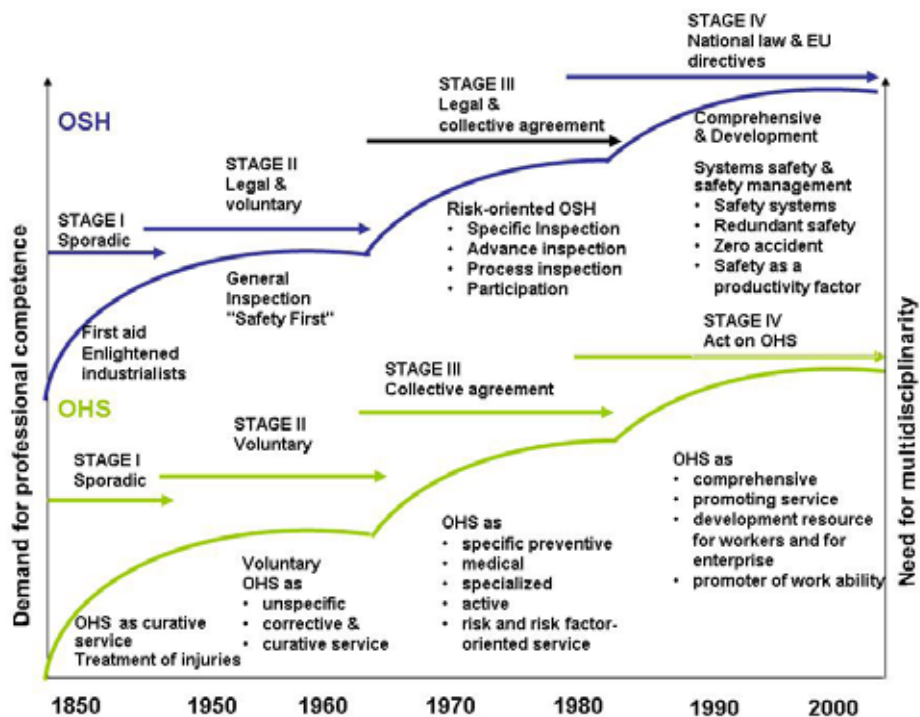


## Annex 2. History of the Finnish OHS system

From the early days of industrialization, i.e. from the beginning of the 19th century (and even long before that), the social dimension has traditionally been an important aspect of Finnish working life. The first law, passed in the second half of the 19th century, established the basic principles of the employer's liability for occupational accidents, the regulation of unreasonable working hours, the work of women and minors, the establishment of labour inspection and control, and compulsory accident insurance. These first laws were renewed in the 1920s and 1930s, when two new important aspects were added: workmen's compensation for occupational diseases and a universal old-age pension system for everyone.

Systematic prevention began sporadically in some large industries as early as the 1930s but universally only much later, along with the third stage of legal reform in the 1950s. Universal sickness insurance was established in the 1960s. The 1970s witnessed the reform of OSH administration and labour inspection in connection with the "Nordic work environment movement". Legislation on universal PHC and OHS was also passed.

The next major step was taken in the first half of the 1990s, when EU Directives were transposed into the Finnish OSH legislation. This transposition was not too difficult, owing to the high Nordic standard already prevailing in Finland as a result of evolution over the previous 150 years. Although the transposition was mainly formal, some important details, such as systematic risk assessment and the obligations of the employer to prepare an OSH policy for the enterprise, were seen as positive signals for Finnish OSH. On the other hand, the Finnish OHS system clearly exceeded the average level of the EU, and will be maintained and further developed to the highest standards.



Source: Rantanen J. Evolution of occupational health services in Finland. *Työterveyslääkäri*, 1998, 1:4-9.

## Annex 3. Implementation of the WHO Global Plan of Action on Workers' Health in Finland

Objectives of Global Plan of Action/ expected outputs	Developments in Finland	Developments and/or expected outputs 2010–2012
<b>GPA Objective 1: to devise and implement policy instruments on workers' health</b>		
<p><b>Priority 1.1</b> → Develop/update national profiles on workers' health and provide evidence base for development, implementation and evaluation of national action plans on workers' health</p>	<ul style="list-style-type: none"> <li>• Finnish National Occupational Safety and Health (OSH) Strategy 1999; Occupational Safety and Health Strategy: follow-up report 2008</li> <li>• Joint development of a country OSH profile outline document, 2001 in collaboration with FIOH, the WHO Regional Office for Europe and ILO</li> <li>• Preparation of 22 European country profiles, together with the countries, using the same OSH profile outline for all the countries, 2002</li> <li>• Preparation of sectoral/community OSH profiles, 2002–2005 (Estonia, Kenya, Nepal, the Philippines, South Africa, Sri Lanka, Thailand, United Republic of Tanzania, Viet Nam)</li> <li>• Preparation of the National Occupational Safety and Health Profile of Finland, 2006, on the request of ILO, to serve as a model in the implementation of ILO Convention No. 187 (Promotional Framework for Occupational Safety and Health)</li> <li>• Preparation of a more detailed analytical report for the Finnish National OSH Profile describing societal developments in parallel with OSH advancements</li> </ul>	<ul style="list-style-type: none"> <li>• Preparation of the Country Profile on Workers' Health in Finland together with the WHO Regional Office for Europe. Three other European countries to provide a similar profile using the same outline.</li> <li>• Organization of an international conference, "International Forum on Occupational Health and Safety: Policies, Profiles and Services", to be held on 20–22 June 2011, Espoo, Finland</li> <li>• In the north-western Russian Federation, an OSH profile in road transport has been prepared in collaboration with colleagues of the Medical Academy of Postgraduate Studies, St Petersburg, and FIOH</li> <li>• Three regional profiles (Republic of Karelia and Murmansk and Leningrad oblasts) were translated into English and published in 2010 in collaboration with local experts and the ILO Subregional Office in Moscow.</li> <li>• A framework for preparing sectoral OSH profiles (flower industry) has been prepared for the East African Community (EAC) countries in connection with the planning of the East African Regional Programme on Occupational Health and Safety, to be utilized in the implementation of the OSH activities</li> </ul>
<p><b>Outputs</b> → Comparative analysis of national strategies and action plans, national profiles, and reports on lessons learned</p>	<ul style="list-style-type: none"> <li>• The Finnish National OSH Strategy (<a href="http://www.stm.fi/c/document_library/get_file?folderId=53630&amp;name=DLFE-10001.pdf">http://www.stm.fi/c/document_library/get_file?folderId=53630&amp;name=DLFE-10001.pdf</a>)</li> <li>• The Finnish Occupational Safety and Health Strategy. Follow-up report (<a href="http://www.stm.fi/c/document_library/get_file?folderId=39503&amp;name=DLFE-7172.pdf">http://www.stm.fi/c/document_library/get_file?folderId=39503&amp;name=DLFE-7172.pdf</a>)</li> <li>• A guideline on Country Profile on Occupational Health and Safety 2001 (<a href="http://www.tti.fi/en/publications/Electronic_publications/Documents/Work_and_health_countryprofiles2001.pdf">http://www.tti.fi/en/publications/Electronic_publications/Documents/Work_and_health_countryprofiles2001.pdf</a>)</li> <li>• Country profiles of 22 European countries (<a href="http://www.tti.fi/en/publications/Electronic_publications/pilot_survey_2002/Pages/default.aspx">http://www.tti.fi/en/publications/Electronic_publications/pilot_survey_2002/Pages/default.aspx</a>)</li> <li>• <i>Proceedings of the Workshop on National and Local OH&amp;S Profiles and Indicators</i>. Helsinki, FIOH, 2002 (People and Work, Research Reports 55)</li> </ul>	<ul style="list-style-type: none"> <li>• Country Profile on Workers' Health in Finland, in collaboration with the WHO Regional Office for Europe, as a series of four European countries (Finland, France, Germany and the United Kingdom), to be published by the WHO Regional Office for Europe, in press</li> <li>• Several national OSH profiles and programmes will be described in connection with the International Forum on Occupational Health and Safety: Policies, Profiles and Services, held on 20–22 June 2011, Espoo, Finland.</li> <li>• Inventory of good practice tools, to be compiled in connection with the International Forum on Occupational Health and Safety: Policies, Profiles and Services, to be held on 20–22 June 2011, Espoo, Finland.</li> <li>• Publishing the Proceedings of the International Forum on Occupational Health and Safety: Policies, Profiles and Services, held on 20–22 June 2011, Espoo, Finland, late 2011.</li> </ul>

<ul style="list-style-type: none"> <li>• Proceedings of an international Follow-up Meeting, Local Occupational Health and Safety Profiles and Indicators. Helsinki, FIOH, 2004 (People and Work, Research Reports 64)</li> <li>• FinEst Bridge (<a href="http://www.tti.fi/en/publications/Electronic_publications/Documents/TheFinEst_Bridge.pdf">http://www.tti.fi/en/publications/Electronic_publications/Documents/TheFinEst_Bridge.pdf</a>)</li> <li>• Agricultural sectoral profile in Estonia, reference Twinning Report 2 (<a href="http://www.tti.fi/en/publications/Electronic_publications/Documents/Occupational_Health_Services_in_Estonia.pdf">http://www.tti.fi/en/publications/Electronic_publications/Documents/Occupational_Health_Services_in_Estonia.pdf</a>)</li> <li>• National Occupational Safety and Health Profile of Finland, 2006 (<a href="http://www.stm.fi/c/document_library/get_file?folderId=28707&amp;name=DLEF-3949.pdf">http://www.stm.fi/c/document_library/get_file?folderId=28707&amp;name=DLEF-3949.pdf</a>)</li> <li>• National Occupational Safety and Health Profile of Finland, Analytical Report, 2006 (<a href="http://www.stm.fi/c/document_library/get_file?folderId=64939&amp;name=DLEF-8008.pdf">http://www.stm.fi/c/document_library/get_file?folderId=64939&amp;name=DLEF-8008.pdf</a>)</li> <li>• Publication of a round-table discussion as a background document for an OSH profile in road transport in St. Petersburg and the Leningrad Region; <i>Occupational Safety and Health of Truck Drivers and Passenger Transport Drivers in Saint Petersburg and the Leningrad Region</i>. St Petersburg, SPb MAPS, 2009 (in English and Russian)</li> </ul>	<ul style="list-style-type: none"> <li>• Integrating the preparation of OSH profiles into collaborative programmes of FIOH with other countries</li> <li>• Disseminating information on the Finnish OSH profiles to facilitate work in other countries</li> <li>• Publishing popularized articles emphasizing the importance of OSH information in the country and utilizing regional newsletters for dissemination</li> </ul>
<p><b>Priority 1.2</b> → Develop and disseminate evidence-based prevention tools and raise awareness for the prevention of silica- and other dust-related diseases.</p> <p><b>Outputs</b> → Evaluation of national programmes, packages of essential interventions and good practices for dust control, exposure and diagnostic criteria for pneumoconiosis</p>	<ul style="list-style-type: none"> <li>• See point 3.1 – Utilization of BOHS guidelines for risk assessment</li> </ul> <ul style="list-style-type: none"> <li>• Participation in the development of a CD-ROM training course material on <i>Hazard prevention and control in the work environment: airborne dust</i>, piloted in South Africa in collaboration with Swedish colleagues, 2004</li> <li>• Providing these tools to be used by other colleagues (for example American colleagues have utilized the CD-ROM in training activities in the United Republic of Tanzania)</li> <li>• CD-ROM training course material on <i>Hazard prevention and control in the work environment: airborne dust</i>, WHO and Arbetslivsinstitutet, 2004</li> </ul>

**Priority 1.3** →

Develop and disseminate evidence-based tools and raise awareness for the elimination of asbestos-related diseases.

- National Programme on Prevention of Asbestos Hazards, 1987–1992, conducted by FIOH, containing health surveillance, training of medical personnel, and extensive information and awareness-raising campaign
- Establishing a wide-based National Asbestos Committee in Finland (involving six Ministries and all key stakeholders), 1989
- Legislation on total banning of new use of asbestos, 1994
- enforcement of legislation and licensing of asbestos demolition companies
- Notification and registering of asbestos-related occupational diseases
- Health surveillance and health counselling of asbestos-exposed workers

- Continuation of inspection of asbestos-related workplaces
- Continuation of licensing of asbestos demolition companies
- Health surveillance of asbestos-exposed workers

**Outputs** →

Estimates of the burden of asbestos-related diseases, review of good practices for substitution of asbestos and prevention of exposure to asbestos, health surveillance of exposed workers

- Contribution to asbestos policy design and implementation in international organizations (WHO, ILO, ICOH) and regionally
- Asbestos symposium for central and eastern European countries, December 1997, together with the Hungarian WHO Collaborating Centre in Occupational Health; country reports of 10 central and eastern European countries published (*Proceedings of the Asbestos Symposium for the Countries of central and eastern Europe*. Helsinki, FIOH, 1998 (People and Work, Research Reports 19)
- *Asbestos, Asbestosis and Cancer. Proceedings of an International Expert Meeting 20–22 January 1997*. Helsinki, FIOH, 1997 (People and Work, Research Reports 14)
- Consensus report: asbestos, asbestosis, and cancer: the Helsinki criteria for diagnosis and attribution. *Scandinavian Journal of Work, Environment & Health*, 1997, 23:311–316 ([http://www.sjweh.fi/show\\_abstract.php?abstract\\_id=226](http://www.sjweh.fi/show_abstract.php?abstract_id=226))
- *New Advances in Radiology and Screening of Asbestos-Related Diseases. Proceedings of the International Expert Meeting 9–11 February 2000*. Helsinki, FIOH, 2000 (People and Work, Research Reports 36)
- Proceedings of the Asbestos Symposium for Asian Countries, September 2002, together with the University of Occupational and Environmental Health, Kitakyushu, a who collaborating centre in occupational health; reports of 10 Asian countries and areas published. *Journal of JOEH*, 2002, 24(Suppl. 2):1–120

- Disseminating information and describing lessons learnt from design and implementation of a comprehensive asbestos prevention programme at the national level

<ul style="list-style-type: none"> <li>Asbestos Symposium for Latin American countries, 2005, together with FUNDACENTRO, Brazil, a who collaborating centre in occupational health; 4 country reports in Latin America and the Caribbean (<a href="http://www3.achs.cl/ws/wps/portal/!ut/p/c5/04_SB8K8xLLM9MSSzPy8Bz9CP0os3gJ89AwI09LYwP3IDcLA6Mw/Pwsn-92BziwMLL_1wkA7cKtznIPIGOICjgb6fR35uqn5Bdnnao6OigCC5tN9/dl3/d3/LOIDU0IKSWdrbUEHIS9JRFJBQJpQ2dBek15cXchLzRCR-Wo4bzBGEpdC1WHBRRUEHLzdfSUNGS0I2TzEwMEdCRD-BJMFE1Tk9BUFNFSdqvcU1RamY20TQYMDAwMQI!/?WCM_PORTLET=PC_7_ICFKB60100GBD010Q5NOAPSEH4000000_WCM&amp;WCM_GLOBAL_CONTEXT=/wps/wcm/connect/achs+-+internet/achs/biblioteca/publicaciones+achs/boletines+y+revistas/ciencia+y+trabajo/revista+ciencia+y+trabajo+27">http://www3.achs.cl/ws/wps/portal/!ut/p/c5/04_SB8K8xLLM9MSSzPy8Bz9CP0os3gJ89AwI09LYwP3IDcLA6Mw/Pwsn-92BziwMLL_1wkA7cKtznIPIGOICjgb6fR35uqn5Bdnnao6OigCC5tN9/dl3/d3/LOIDU0IKSWdrbUEHIS9JRFJBQJpQ2dBek15cXchLzRCR-Wo4bzBGEpdC1WHBRRUEHLzdfSUNGS0I2TzEwMEdCRD-BJMFE1Tk9BUFNFSdqvcU1RamY20TQYMDAwMQI!/?WCM_PORTLET=PC_7_ICFKB60100GBD010Q5NOAPSEH4000000_WCM&amp;WCM_GLOBAL_CONTEXT=/wps/wcm/connect/achs+-+internet/achs/biblioteca/publicaciones+achs/boletines+y+revistas/ciencia+y+trabajo/revista+ciencia+y+trabajo+27</a>)</li> </ul>	<p><b>Priority 1.4</b> → Conduct studies and develop evidence-based tools and information materials for the comprehensive protection and promotion of health for health care workers, emphasizing immunization against hepatitis B</p> <ul style="list-style-type: none"> <li>Conducting a National Action Programme for Improving Working Conditions, Workers' Health and Work Ability in the Health and Social Security Sector in Finland, 1999–2003</li> <li>Studies by Kivimäki, Virtanen and Vahtera on stress and its influence on health among health care workers</li> <li>Studies by Lindström et al. on impact of work organization on the health of health care workers</li> <li>Studies by Härmä et al. on impact of working times on the health of shift workers</li> <li>Cochrane Occupational Health Field</li> <li>Contributing to the ICOH-ISSA Declaration on Health Care Workers, 2004</li> </ul>	<ul style="list-style-type: none"> <li>Contribution to the Annual Meeting of the Baltic Sea Network on Occupational Health and Safety, 30 September–1 October 2010, with one theme of the meeting: Health of the health care workers, describing good practices from the Baltic Sea countries</li> <li>Cochrane Occupational Health Field</li> </ul> <p><b>Outputs</b> → Tools, guidance documents, assistance to countries for implementing and evaluating programmes, training on national programmes</p> <ul style="list-style-type: none"> <li>Numerous guidelines (in Finnish)</li> <li>Kivimäki M et al. Workplace bullying and the risk of cardiovascular disease and depression. <i>Occupational and Environmental Medicine</i>, 2003, 60:779-783 doi:10.1136/oem.60.10.779</li> <li>Lindström K. Work organization and well-being of Finnish health care personnel. <i>Scandinavian Journal of Work, Environment &amp; Health</i>, 1992, 18(Suppl. 2):90–93</li> <li>Härmä M et al. The effect of shift work, occupational noise, and physical workload on systolic blood pressure and risk of coronary heart disease. <i>Scandinavian Journal of Work, Environment &amp; Health</i>, 2007, 33:425–434</li> </ul>
---	--	--

- African Newsletter ([www.tl.fi/AfricanNewsletter](http://www.tl.fi/AfricanNewsletter)) – a special issue on occupational health of health care workers (Vol. 20, No. 1, 2010) and numerous individual articles for awareness-raising and training purposes
- Asian-Pacific Newsletter ([www.tl.fi/AsianPacificNewsletter](http://www.tl.fi/AsianPacificNewsletter)) – numerous individual articles for awareness-raising and training purposes
- Barents Newsletter ([www.tl.fi/BarentsNewsletter](http://www.tl.fi/BarentsNewsletter)) – numerous individual articles for awareness-raising and training purposes
- Systematic reviews by the Cochrane Occupational Health Field
- ICOH-ISSA Declaration (<http://ohtc.med.uoeh.-ac.jp/inform/ICOH-newsletter/ICOH%20newsletter%200H%20for%20HCW%206%202004.pdf>)

### GPA Objective 2: to protect and promote health at the workplace

#### Priority 2.1 →

Develop practical toolkits for the assessment and management of occupational health risks, with a focus on chemical, physical, biological and psychosocial risks

- Several toolkits available for prevention of all main exposures at work have been developed by FIOH (in Finnish)
- Assessing working ability, particular of ageing workers, utilizing the Work Ability Index (WAI) developed by FIOH (translated into 25 languages)
- Development of an occupational health paradigm: promotion and maintenance of working ability (PMWA), developing practical approaches and implementing them in OHS
- Extensive interventions and campaigns for PMWA and using it as an approach for the national Programme on Ageing Workers (1998–2002)
- Age management training organized for enterprises
- Utilizing the Questionnaire on Psychosocial Risk Factors
- Participating in and contributing to PRIMA-EF to prevent psychosocial risks at work
- Utilizing the TUTTAVA Programme (safety and order at the worksite)
- Organizing an international conference on “Towards Better Work and Well-being”, 10–12 February 2010, to get an updated overview of current state-of-the-art of research and practices, Helsinki, Finland

- A WAI portal to be established in 2010 (WAI.net) and a discussion forum (LinkedIn -group) to compile information on the use of WAI
- The WAI guidelines are being revised
- Collaborative projects with the National Institute of Occupational and Environmental Health, Viet Nam, a WHO collaborating centre in occupational health
- Organization of the International Forum on Occupational Health and Safety: Policies, Profiles and Services, 20–22 June 2011, in collaboration with the Finnish Ministry of Social Affairs and Health, the WHO Regional Office for Europe, WHO headquarters, ILO, the European Agency for Safety and Health at Work, the European Foundation on Living and Working Environments and the International Commission on Occupational Health.

<p><b>Outputs</b> → Tools, inventory, framework document, mapping of use and types of tools, evaluation, definition of common criteria of toolkits</p>	<ul style="list-style-type: none"> <li>WAI, translated into 25 different languages, being used in various parts of the world</li> <li><a href="https://verkkokauppa.tti.fi/Default.aspx?tabid=205&amp;&amp;Type=productinfo&amp;CatID=-1&amp;parentID=0&amp;ItemID=510&amp;Page=1&amp;language=fi-FI">https://verkkokauppa.tti.fi/Default.aspx?tabid=205&amp;&amp;Type=productinfo&amp;CatID=-1&amp;parentID=0&amp;ItemID=510&amp;Page=1&amp;language=fi-FI</a> (in Finnish)</li> <li>Ilmarinen J. <i>Towards a longer work life! Ageing and the quality of work life in the European Union</i>. Helsinki, FIOH and the Finnish Ministry of Social Affairs and Health, 2005</li> <li><i>Occupational Stress Questionnaire. User's instructions</i>. Helsinki, FIOH, 1992</li> <li><a href="http://prima-ef.org/default.aspx">http://prima-ef.org/default.aspx</a></li> <li>TUTTAVA guidebooks available also in English, French, Spanish and Russian; for more information, contact <a href="mailto:tuttava@tti.fi">tuttava@tti.fi</a></li> <li><i>Ergonomic workplace analysis</i>. Helsinki, FIOH, 1989</li> <li><i>Medical handbook for seafarers</i>. Helsinki, FIOH, Ministry of Social Affairs and Health and Ministry of Labour, 2007</li> <li><i>Proceedings of the International Conference "Towards Better Work and Well-being"</i>. Helsinki, FIOH, 2010 (<a href="http://www.tti.fi/en/international/conferences/towards_better_work/Documents/Proceedings_of_the_International_Conference.pdf">http://www.tti.fi/en/international/conferences/towards_better_work/Documents/Proceedings_of_the_International_Conference.pdf</a>)</li> </ul>	<ul style="list-style-type: none"> <li>WAI portal, late 2010</li> <li>Revised WAI guidelines, early 2011</li> <li>Utilization of all materials available</li> </ul>
<p><b>Priority 2.2</b> → Healthy workplace programmes and guidance to inform country frameworks</p>	<ul style="list-style-type: none"> <li>Establishing a Zero Accident Forum to share all preventive ideas, measures and information among the members of the Forum with the aim of preventing accidents and near-accidents</li> <li>MASTO –National Programme for Prevention of Depression: Good work supports mental health</li> <li>Action Plan for Promoting Finnish Heart Health for the years 2005–2011</li> <li>National Programme to Prevent Musculoskeletal Disorders 2008–2015 (in Finnish)</li> <li>Strengthening healthy lifestyles using the workplace as an arena</li> </ul>	<ul style="list-style-type: none"> <li>Continuing the Zero Accident Forum</li> <li>Continuing the implementation of the national programmes</li> </ul>
<p><b>Outputs</b> → Review of effectiveness of existing programmes for healthy workplaces; tools for creating healthy workplaces, including a health-promoting culture and OHS principles</p>	<ul style="list-style-type: none"> <li>Safety (<a href="http://www.tti.fi/en/safety/occupational_accidents/zero_accident_forum/Pages/default.aspx">http://www.tti.fi/en/safety/occupational_accidents/zero_accident_forum/Pages/default.aspx</a>)</li> <li>Mental health (<a href="http://www.tartumasesennukseen.fi/en">http://www.tartumasesennukseen.fi/en</a>)</li> <li>Cardiovascular health (<a href="http://arkisto.sydantliitto.fi/ajankohitaista/en_GB/topi_english/">http://arkisto.sydantliitto.fi/ajankohitaista/en_GB/topi_english/</a>)</li> <li>Musculoskeletal health (<a href="http://www.suomentule.fi/KTO.pdf">http://www.suomentule.fi/KTO.pdf</a>)</li> <li>A-step. <i>Preventing alcohol-related problems at the workplace</i>. Helsinki, FIOH, 2009.</li> </ul>	<ul style="list-style-type: none"> <li>Continuing the implementation of the networks and national programmes</li> </ul>

**Priority 2.3** →

Develop toolkits for the assessment and management of global health threats including HIV, tuberculosis, malaria and influenza, emphasizing vulnerable groups, particularly migrant workers

- Publishing of the "Blue Book" to guide OHS in diagnosis and prevention of work-related diseases (in Finnish)
- Publishing of a book on bloodborne diseases by the Ministry of Social Affairs and Health and FIOH
- Instructions by the Ministry of Social Affairs and Health and the National Institute of Health and Welfare on prevention of influenza (avian flu, swine flu) ([http://www.stm.fi/c/document\\_library/get\\_file?folderId=28707&name=DLFE-3926.pdf](http://www.stm.fi/c/document_library/get_file?folderId=28707&name=DLFE-3926.pdf))

**Outputs** →

Tools, inventory, framework, mapping of use and types of tools, evaluation, and definition of toolkits

- *Health examinations in occupational health services*. Helsinki, FIOH and Ministry of Social Affairs and Health, 2006 (in Finnish)

**GPA Objective 3: to improve the performance of and access to OHS**

**Priority 3.1** →

Develop working methods and provide technical assistance to countries for the organization, delivery and evaluation of BOHS in the context of PHC, with particular focus on underserved populations and settings with constrained resources

- Special Act on Occupational Health Services since 1978, amended in 2001, obliging employers to organize OHS for all employees; four models for service provision, including legislation-based PHC model (<http://www.finlex.fi/fi/laki/kaannokset/2001/en20011383.pdf>)
- Ratification of ILO Convention No. 161 on Occupational Health Services, 1986
- National Programme on Occupational Health Services, 1990–2000, National Programme on Occupational Health 2015 ([http://www.stm.fi/c/document\\_library/get\\_file?folderId=28707&name=DLFE-3947.pdf&title=Government\\_Resolution\\_\\_Occupational\\_Health\\_2015\\_en.pdf](http://www.stm.fi/c/document_library/get_file?folderId=28707&name=DLFE-3947.pdf&title=Government_Resolution__Occupational_Health_2015_en.pdf))
- Development of farmers' OHS utilizing the PHC approach since 1980
- Contributing to the BOHS approach, provided by the PHC system
- SEITTI – A programme of the Ministry of Social Affairs and Health and FIOH to improve regional collaboration within Finland for improving the service provision system of OHS, 2008–2012

- Making an inventory of BOHS pilots and projects, International Forum, June 2011
- Introducing BOHS in the Republic of Karelia
- Supporting the BOHS pilot projects in East Africa
- Joint programmes on piloting of BOHS in Viet Nam, in collaboration with the National Institute of Occupational and Environmental Health, a WHO collaborating centre
- contributing to the south-eastern European projects related to BOHS implementation, in collaboration with WHO Regional Office for Europe and the participating countries
- Collaboration in the field of BOHS in South Africa, in collaboration with the National Institute of Occupational Health, a WHO collaborating centre
- A project on systematic evaluation of BOHS in the Finnish PHC 2010–2011
- Development of practical guides for various steps of the BOHS cycle
- Continuing the SEITTI development programme and scaling up good practices



**Outputs:** →

Good practices and demonstration projects for organization and delivery of OH services, evaluation of service delivery, international knowledge networks of service providers, web site clearinghouse of information materials for OH practice

- Good occupational health practice guidelines, published in 2004 ([http://www.ttl.fi/en/publications/Electronic\\_publications/Documents/Good\\_Occupational\\_Health\\_Practice.pdf](http://www.ttl.fi/en/publications/Electronic_publications/Documents/Good_Occupational_Health_Practice.pdf))
- Proceedings of an international Symposium on Occupational Health Services in January 2005 ([http://www.ttl.fi/en/publications/Electronic\\_publications/Challenges\\_to\\_occupational\\_health\\_services/Pages/default.aspx](http://www.ttl.fi/en/publications/Electronic_publications/Challenges_to_occupational_health_services/Pages/default.aspx))
- Proceedings of a Workshop on Global and Regional Development of Occupational Health Services, January 2005 ([http://www.ttl.fi/en/publications/Electronic\\_publications/Challenges\\_to\\_occupational\\_health\\_services/Pages/default.aspx](http://www.ttl.fi/en/publications/Electronic_publications/Challenges_to_occupational_health_services/Pages/default.aspx))
- Proceedings of an International OHS Symposium in the *Scandinavian Journal of Work, Environment and Health* Supplements 2005/1 ([http://www.sjweh.fi/show\\_issue.php?issue\\_id=93](http://www.sjweh.fi/show_issue.php?issue_id=93))
- Contributing to the development of BOHS with publishing the basic guideline, a response to the request of the ILO/WHO Joint Committee on Occupational Health for practical collaboration, 3rd revised version, 27 September 2007 ([www.ttl.fi/BOHS](http://www.ttl.fi/BOHS))
- Practical BOHS Guide on Surveillance of the Work Environment, No. 2 ([http://www.ttl.fi/en/publications/Electronic\\_publications/Documents/BOHS2\\_FINAL%20inidd.pdf](http://www.ttl.fi/en/publications/Electronic_publications/Documents/BOHS2_FINAL%20inidd.pdf))
- Practical BOHS Guide on Risk Assessment No. 5 ([http://www.ttl.fi/en/publications/Electronic\\_publications/Documents/BOHS\\_5\\_FIII%20inidd.pdf](http://www.ttl.fi/en/publications/Electronic_publications/Documents/BOHS_5_FIII%20inidd.pdf))
- SEITTI – occupational health service development programme (<http://www.ttl.fi/fi/tutkimus/hankkeet/seitti/Sivut/default.aspx>) (in Finnish)
- International Forum on Occupational Health and Safety: Policies, Profiles and Services, to be held on 20–22 June 2011, Espoo, Finland
- Proceedings of the International Forum 2011
- Disseminating information on results of various BOHS pilots
- Continuing the SEITTI development programme with the aim of establishing a national advisory and instruction service

<p><b>Priority 3.2</b> → Adapt and disseminate curricula, training materials and training for international capacity building in occupational health</p>	<ul style="list-style-type: none"> <li>• Development of a procedure for developing OHS infrastructure at the national level described in the East African collaboration</li> <li>• BOHS pilots in selected countries</li> </ul> <p><b>Outputs:</b> →</p> <ul style="list-style-type: none"> <li>• Stepwise development of the procedure for a BOHS approach, 2009</li> </ul> <p>Model materials and courses for BOHS, inventory, technical support for delivery of international courses and online training, national training programmes in low- and medium-income countries, introduction of occupational health into professional education</p>	<ul style="list-style-type: none"> <li>• Participation in and contribution to the GPA Platform on Occupational Health Services, ICOH-WHO initiative (in preparation)</li> <li>• Contributing to activities of the south-eastern European Workplace Academy by developing curricula for occupational health physicians and occupational health nurses and for BOHS</li> </ul>
<p><b>GPA Objective 4: to provide and communicate evidence for action and practice</b></p>		
<p><b>Priority 4.1</b> → Encourage practical research on emerging issues, including nanomaterials and climate change</p>	<ul style="list-style-type: none"> <li>• Nanodevices Project</li> <li>• Nanotechnologies Project</li> </ul> <p><b>Outputs:</b> →</p> <ul style="list-style-type: none"> <li>• International Conference on EURONanOSH, 2–5 December 2007, Proceedings</li> <li>• Meeting of WHO collaborating centres in occupational health, in connection with the EURONanOSH Conference, 2 December 2007, Summary Report</li> <li>• International Conference on NanOEH, 26–29 August 2009, Helsinki, Finland; Selected presentations were published in <i>Particle and Toxicology and Journal of Aerosol Science</i> in 2010</li> <li>• Meeting of the WHO collaborating centres in occupational health in connection with the NanOEH Conference, on 26 August 2009, Summary Report</li> </ul>	<ul style="list-style-type: none"> <li>• Including a session on climate change at the International Forum on Occupational Health and Safety: Policies, Profiles and Services, June 2011</li> <li>• Organizing an International Congress on Safety of Engineered Nanoparticles and Nanotechnologies (SENN2012), 28–31 October 2012</li> <li>• International Conference on Nanotechnologies, 2012 (<a href="http://www.tti.fi/senn2012">www.tti.fi/senn2012</a>)</li> </ul>

<p><b>Priority 4.2</b> → Further develop the global research agenda for workers' health</p>	<ul style="list-style-type: none"> <li>Participation in and contribution to developing the global research agenda on OSH</li> <li>Provision of systematic reviews on various topics within Cochrane collaboration</li> </ul>	<ul style="list-style-type: none"> <li>Identification of new priorities and challenges in collaboration with other partners (Risk Observatory)</li> <li>Provision of systematic reviews on various topics within Cochrane collaboration</li> <li>www.cohf.fi</li> </ul>
<p><b>Outputs:</b> → Research report matrix to identify relevant gaps in research</p>		
<p><b>GPA Objective 5: to incorporate workers' health into other policies</b></p>		
<p><b>Priority 5.1</b> → Collate and conduct cost-benefit studies to clarify the economic benefits of workers' health</p>	<ul style="list-style-type: none"> <li>Cochrane Occupational Health Field</li> <li>Collecting and evaluating cost-benefit studies by organization of three workshops, ECOSH</li> </ul>	<ul style="list-style-type: none"> <li>Further developing the Cochrane Occupational Health Field reviews,</li> <li>Continuing the cost-benefit analyses</li> </ul>
<p><b>Outputs</b> → Published articles and information posted to WHO web site</p>	<ul style="list-style-type: none"> <li>About 50 systematic reviews on occupational health (www.cohf.fi)</li> <li>Categorization and evaluation of cost-benefit studies (www.ttl.fi/ecosh)</li> </ul>	<ul style="list-style-type: none"> <li>www.cohf.fi</li> <li>www.ttl.fi/ecosh</li> </ul>
<p><b>Priority 5.2</b> → Develop specific and relevant recommendations to manage risks associated with the impacts of globalization on workers' health</p>	<ul style="list-style-type: none"> <li>Organization of a parallel session in International Conference on Health Research for Development, 10–13 October 2001 (COHRED 2001).</li> <li>Revitalizing the Health in All policies approach during the Presidency of Finland of the European Council, 2006</li> </ul>	<ul style="list-style-type: none"> <li>Integrate the Health in All policies approach to various regional collaborative programmes and networks</li> </ul>
<p><b>Outputs</b> → Guidance for development banks, non-health sector entities to improve workers' health</p>	<ul style="list-style-type: none"> <li><i>Health and Safety at Work: The Role of Research. People and Work. Proceedings of the Parallel Session. Recommendations in the Summary Report.</i> Helsinki, FIOH, 2001 (Research Reports 43)</li> <li><i>Health in the World of Work. Workplace Health Promotion as a Tool for Improving and Extending Work Life.</i> Helsinki, Ministry of Social Affairs and Health, 2006</li> </ul>	

<p>Priority 5.3 → Implement toolkits for the assessment and management of OSH hazards in high-risk industry sectors and for vulnerable worker groups</p>	<ul style="list-style-type: none"> <li>• Legislation on work of pregnant and breastfeeding women – reproductive health</li> <li>• Advisory service by FIOH for Finnish workplaces on prevention of reproductive hazards, including a net questionnaire form for workers who need advice on reproductive occupational health and counselling service for workers in cases of perceived hazards to fetus or pregnancy</li> <li>• Guidance on arranging the work environment of handicapped workers</li> <li>• FIOH Action Programme for Ageing Workers, 1991–1995</li> <li>• Age management programmes</li> <li>• Guidebooks for employer and employees when returning to work after a long sick leave</li> </ul>	<ul style="list-style-type: none"> <li>• Continuing the work related to special problems of vulnerable groups in working life</li> <li>• Including challenges related to working life of migrant workers in the agenda</li> </ul>
<p><b>Outputs</b> → Tools, inventory, framework document, mapping of use and types of tools, evaluation</p>	<ul style="list-style-type: none"> <li>• Special maternity allowance (<a href="http://www.kela.fi/in/internet/english.nsf/NET/180708132650HS">http://www.kela.fi/in/internet/english.nsf/NET/180708132650HS</a>)</li> <li>• Lists of hazards for reproductive health in the workplace to be used in the implementation of the special maternity legislation</li> <li>• Counselling service at FIOH for workers in cases of perceived hazards to fetus or pregnancy (<a href="http://www.tti.fi/fi/asiantuntijapalvelut/terveys_ja_tyokyky/Raskaus_ja_tyo_neuvontapalvelu/Sivut/default.aspx">http://www.tti.fi/fi/asiantuntijapalvelut/terveys_ja_tyokyky/Raskaus_ja_tyo_neuvontapalvelu/Sivut/default.aspx</a>) (in Finnish)</li> <li>• Guidelines on work environment of the handicapped (in Finnish)</li> <li>• <i>A guide to occupational health services and occupational safety personnel of the working conditions of the handicapped</i> (in Finnish). Helsinki, FIOH, 2001</li> <li>• <i>Prolonged sickness leave and return to work. A guide for the employer.</i> Helsinki, Ministry of Social Affairs and Health, 2005 (in Finnish with English summary) (<a href="http://www.stm.fi/c/document_library/get_file?folderId=28707&amp;name=DLFE-3763.pdf">http://www.stm.fi/c/document_library/get_file?folderId=28707&amp;name=DLFE-3763.pdf</a>)</li> <li>• <i>Prolonged sickness leave and return to work. A guide for the employer.</i> Helsinki, Ministry of Social Affairs and Health, 2005</li> </ul>	<ul style="list-style-type: none"> <li>• Continuation of the advisory services with a web site and counselling services</li> <li>• Compilation of statistics and analysis of cases of advisory services for further learning of the topic</li> </ul>



## The WHO Regional Office for Europe

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

### Member States

Albania  
Andorra  
Armenia  
Austria  
Azerbaijan  
Belarus  
Belgium  
Bosnia and Herzegovina  
Bulgaria  
Croatia  
Cyprus  
Czech Republic  
Denmark  
Estonia  
Finland  
France  
Georgia  
Germany  
Greece  
Hungary  
Iceland  
Ireland  
Israel  
Italy  
Kazakhstan  
Kyrgyzstan  
Latvia  
Lithuania  
Luxembourg  
Malta  
Monaco  
Montenegro  
Netherlands  
Norway  
Poland  
Portugal  
Republic of Moldova  
Romania  
Russian Federation  
San Marino  
Serbia  
Slovakia  
Slovenia  
Spain  
Sweden  
Switzerland  
Tajikistan  
The former Yugoslav  
Republic of Macedonia  
Turkey  
Turkmenistan  
Ukraine  
United Kingdom  
Uzbekistan

## World Health Organization Regional Office for Europe

Scherfigsvej 8, DK-2100 Copenhagen Ø, Denmark

Tel.: +45 39 17 17 17. Fax: +45 39 17 18 18. E-mail: [contact@euro.who.int](mailto:contact@euro.who.int)

Web site: [www.euro.who.int](http://www.euro.who.int)

