

PRIORITISING OCCUPATIONAL SAFETY - THE NATIONAL OCCUPATIONAL ACCIDENT PREVENTION PROGRAMME (2001 – 2005) IN FINLAND

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ABSTRACT

By a decision-in-principle the Finnish Government confirms a medium-term action programme "Prioritising occupational safety – occupational accident prevention programme 2001 – 2005".

The objective of the occupational accident prevention programme is to steadily reduce the number and seriousness of occupational accidents in Finland. This is how we can promote people's health and functional capacity as well as improve the results, productivity and quality of the operations of workplaces, and increase national well-being.

The primary method of the programme is to promote adoption of a high-standard safety culture and application of the "vision zero" approach at all workplaces. This requires that the management and personnel in private and public organisations acquire new knowledge, skills and attitudes and strongly commit themselves to applying and implementing the "vision zero" approach in their daily activities. A high-standard safety culture is also acknowledged as a factor of productivity in organisations. Safety is becoming an important element in productivity and the quality of products and services, thus also strengthening national and international competitiveness. Workplaces which have a high-standard safety culture have achieved significant results in the prevention of occupational accidents.

The national occupational accident prevention programme emphasises the importance of occupational safety as a key element in the quality of working life and the well-being of citizens. It also introduces the best workplace practices for promoting a high-standard safety culture and reducing occupational accidents. The programme presents priorities as well as goals and practices that can be adopted in safety operations, and proposes actual measures to be taken by the national actors in their joint efforts for a higher occupational safety.

Action within the programme is taken at three levels:

1. cooperation and synergy between national organisations and support of the programme for workplaces
2. measures taken by workplaces
3. measures taken by national organisations to give support for workplaces.

By means of the measures included in the programme, a high-standard safety culture is promoted and extended at Finnish workplaces also covering the SME sector, private entrepreneurs and self-employed persons. By means of the programme development, training and information projects to promote occupational safety are introduced, as well as examples of good practices used in occupational accident prevention being collected and refined to encourage workplaces to adopt and implement them.

The occupational accident prevention programme supports the objectives of the Government Programme to slow down early retirement and intensify the coordination and networking of working life research and development. One of the priorities of the social policy strategy to 2010 of the Ministry of Social Affairs and Health is maintaining the workers' health and functional capacity and increasing the attractions of working life. This is supported by the occupational safety and health strategy drawn up by the Ministry of Social Affairs and Health, where the prevention of occupational accidents and diseases is one of the objectives. The occupational accident prevention programme supports the implementation of these strategic objectives at the national level.

The programme is led by a management group with representatives from the central national participants and organisations in the field of occupational safety. Responsibility for the coordination of implementation and follow-up measures lies with the accident section of the Advisory Committee on Occupational Safety and Health. The measures included in the programme are financed mainly by targeting the existing resources of the different participants at actions in accordance with the programme. Resources for appointing a project manager and for necessary office services and information costs are allocated from the budget of the Ministry of Social Affairs and Health.

1. THE BACKGROUND TO THE POLICY OF THE OCCUPATIONAL ACCIDENT PREVENTION PROGRAMME

1.1 The development of working life and industry from the viewpoint of occupational safety

Occupational safety has in recent years become an ever more important part of the activities of both the private and public sector. Big international organisations in particular have adopted a high-standard safety culture and they have indeed achieved remarkable results in accident prevention through the "vision zero" approach and the top management's and personnel's commitment to it.

More and more enterprises are applying strategies dealing with social responsibility as an answer to different kinds of social, ecological and economic pressures. Occupational safety is a key component of social responsibility. The European Union wishes to open a lively debate on the social responsibility of enterprises. For this purpose the Commission published in July 2001 a Green Paper on the promotion of the European framework of social responsibility.

Following the example given by international organisations, more and more Finnish workplaces have incorporated occupational safety into their development and planning of activities. Responsibility for implementing occupational safety measures has been defined as a central task of the line management. Thus the enterprises have acknowledged the idea that input in the development of working conditions and work community also improve competitiveness and productivity.

A considerable part of work today is done outside the fixed workplace. The movement of people is growing and the companies' internal and external goods traffic and storage operations are also increasing. Travelling at work, installation and maintenance work and many outdoor operations entail working under changing circumstances and the risks associated with moving. To ensure safety in these circumstances requires especially careful cooperation between employers and also workers' responsibility, an active attitude and the readiness to act in questions of occupational safety.

Work orientation and guidance must cover all personnel. It is also important to take account of the qualifications required of persons in fixed-term and atypical employment, for example in the management of occupational safety.

Organisations are usually lean, and even one employee being absent can cause disturbances in the production. For the functions of the workplace, there is no difference if absenteeism is due to an accident at

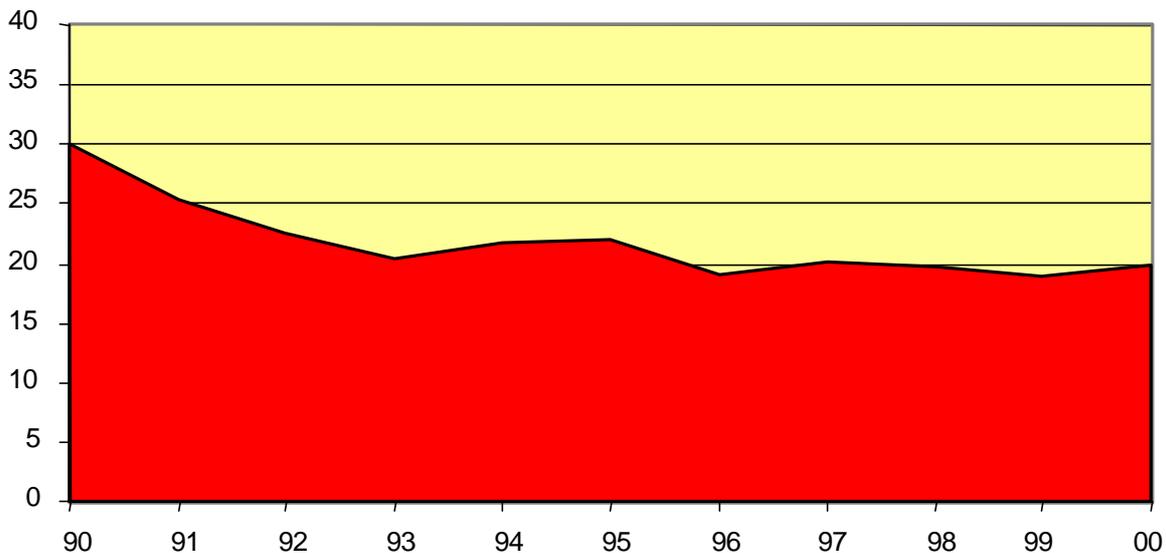
work or elsewhere, so accident prevention outside the workplace also has a positive impact on the functions of workplaces.

Good planning associated with cooperation at the workplace and between the parties involved is an important element of occupational safety. Quality systems and quality management are good instruments for improving occupational safety. Workplaces are expected to take the initiative in integrating quality and occupational safety in practical situations.

Though products must be safe when placed on the market, it must be especially ensured by means of supervision that they are correctly used and suitable for the purpose in workplaces. It is also important to ensure the compatibility and total safety of machines and equipment.

1.2 THE DEVELOPMENT AND STATUS REPORT OF THE ACCIDENT SITUATION

Accident frequency has changed in the past 10 years as presented by the figure.



Occupational accidents that resulted in more than three days' disability to work per one million hours worked 1990-2000.

In 2000 there were about 120 000 occupational accidents and diseases that resulted in compensation in Finland. The number of accidents at work was a little more than 100 000. Of these, about 60% resulted in more than three days' absence from work and nearly 10% in more than one month's absence from work.

There are great differences in accident frequency (number of accidents per million hours worked) between the industrial branches, since accident frequency in certain branches is nearly two and a half times the average for all branches. The proportionally most dangerous industries are construction, manufacture of timber and wood products, manufacture of metal products and manufacture of food and drink. However, it must be noted that the accident frequencies of workplaces with similar production in a certain branch may vary a lot.

Accident frequency in industrial enterprises with less than 200 employees is clearly higher than in enterprises with more than 500 employees in the same branch. The proportionally highest accident frequencies are found in enterprises with about 50 employees.

On the basis of the statistics of occupational accidents we can say that the most critical factors in accidents are unclean surfaces and obstructions as well as poor access and working platforms which are in bad condition or of have otherwise dangerous structures, and which jeopardise the safety of movement at the workplace.

Changes in the working environment increase the risk of accident. Two thirds of fatal occupational accidents have occurred in operations or tasks where the working conditions, working environment or other

factors change quickly. Such work conditions appear in construction, installation, maintenance, storing, mining, agriculture and forestry and in work on traffic routes.

Working has changed very much in recent years. Nowadays, most of the operations at a workplace are carried out by subcontractors. This development has produced a lot of workplaces where there are employees from several employers or self-employed persons working simultaneously. Installation, maintenance and repairs performed by subcontractors may often last for a short time and so workers at the workplace frequently change. This kind of situation is very challenging for the coordination and control of work operations and for the flow of information.

Fatal industrial accidents have been studied systematically for several years, specifically, investigating how the activities of the organisation are related to accidents. In the research results it has been established that some element in the organisational procedures has been the cause of accident or a contributory factor in almost 50% of fatal accidents at work. The most typical factors are associated with practices applied, work organisation, the management and control of work or the flow of information, and cooperation.

Accident frequency is high in male occupations, for example in manufacturing industry and construction. The figures for women are high in nursing, trade and cleaning. The causes of female accidents are often physical overload as well as uneven and slippery floors, access routes and work platforms.

When looking at the costs of occupational accidents and the losses they cause for workplaces, it is important to notice that the direct costs of accidents are only 20 – 50% of the total cost. Indirect costs are incurred by disturbances in production, for example such as:

- replacing absent staff with overtime or substitutes who often must be trained and orientated to the tasks
- other personnel costs such as rescue work and costs for clearance, repairs and cleaning
- stoppage of production, delayed deliveries or effects on product quality
- loss of property such as loss of raw materials or products and breakage of machines and equipment
- other indirect costs incurred by higher insurance premiums.

Accident insurance compensates for pay costs due to absenteeism, treatment and medicines, rehabilitation as well as for disability pensions, disability indemnities and family pensions. In 2000 insurance companies paid a total of EUR 500 million in compensation for occupational accidents and diseases.

2. THE OBJECTIVES AND GUIDELINES OF THE OCCUPATIONAL ACCIDENT PREVENTION PROGRAMME

2.1 The national objective of the programme

The objective of the occupational accident prevention programme is to steadily reduce the number and seriousness of occupational accidents. This is how we can promote people's health and functional capacity, improve the results, productivity and quality of workplaces, and increase national well-being.

The primary means for reaching this goal is to promote adoption of a high-standard safety culture and the "vision zero" approach in all sectors of the Finnish working life. The aim of action in accordance with a high-standard safety culture is that nobody gets injured at work. In practice, reaching this goal presupposes continuous improvements in occupational safety both by means of effective measures at workplace level and by intensive national action in support of workplaces.

2.2 The guidelines of the programme

The most important action for preventing occupational accidents is taken at workplaces. By means of the programme workplaces are encouraged and supported in launching development projects and applying permanent good practices and methods. The preventive viewpoint is essential in the measures to be taken. Targeted research and information projects are carried out to support the workplaces' actions. In addition, the focus of the programme is on providing information and training to support the application of the "vision

zero” approach and on collecting and disseminating of good workplace practices. The measures are carried out in cooperation between ministries, other national and regional actors and workplaces.

The central idea of the programme is to encourage the workplaces to take action on their own initiative. Occupational safety must be seen as an ever more important part of all activities of enterprises and other work communities. It should be ranked equally with performance, productivity, competitiveness, ethics and social responsibility as well as the quality of the activities, and sustainable development.

Synergies between accident prevention and the work for traffic safety as well as the prevention of home and leisure accidents shall become more apparent. A holistic view of safety has also been understood as part of the good company image in the foremost enterprises and public organisations. They are also able to take account of the economic impact of all accidents sustained by the personnel. In enterprises committed to the ”vision zero” approach and successfully applying it, accident prevention is not restricted merely to accidents at work.

Reaching the objectives of the programme calls for an active approach to the development of work and working conditions. In occupational safety activities, special attention must be paid to both the positive and negative effects of the changes in the working environment. A positive impact on occupational safety does not automatically result from technological development but requires active development.

Effective information on the objectives and guidelines of the programme as well as the grounds for occupational safety measures and good practices support the activities of the workplace. Dealing with occupational safety matters together with quality and environmental questions creates synergy. Safety also implies that the technology, machines, equipment, systems and chemical substances used at the workplace are safe.

3. ACTION INCLUDED IN THE OCCUPATIONAL ACCIDENT PREVENTION PROGRAMME

The three levels of action in the programme are:

1. Cooperation and synergy between national organisations and support from the programme for workplaces
2. Measures taken by workplaces
3. Measures taken by national organisations

The measures of the occupational accident prevention programme are targeted especially at areas which are crucial for the present situation of occupational safety and future changes. The development activities include both short-term and long-term measures. The responsible and cooperating parties mentioned in the programme document will be specified in cooperation between the concerned parties when the programme is started.

3.1 Cooperation and synergy between national organisations and support of the programme for workplaces

3.1.1 The cooperation concerns the whole of Finnish working life

At the national level the occupational accident prevention programme is especially focused on developing and spreading practical workplace solutions, with emphasis on the ”vision zero” approach.

By means of the programme, the workplaces are motivated and encouraged to strive for high-level safety on a voluntary basis. They are motivated to involve themselves in the action by strengthening their awareness of occupational safety as a means of competition as regards both their clients and personnel.

In the programme, the funds and resources of the ministries and other parties involved are directed to improving occupational safety in a broad sense, taking account of safety, safety culture, safety technology, sustainable development in safety, the results of the measures and the good public image of occupational safety. The programme promotes product development and commercial utilisation of safe technology and

targets resources to research and development activities in terms of subprogrammes, which are defined more precisely in the course of the programme.

The aim is to align activities by means of the programme and thus strengthen the impact of the actions of the ministries, other national decision-makers and executive bodies, cooperating organisations and workplaces. For the success of the programme, it is important to intensify cooperation with other safety and health activities such as traffic safety work and the prevention of home and leisure accidents. A holistic approach to safety is also part of a good company image in more advanced organisations.

3.1.2 Occupational safety is promoted by means of practical material produced for workplaces

By means of the material to be produced, the programme contributes to developing and introducing practical measures applicable to all workplaces. In line with a high-standard safety culture, safety should be part of daily activities where the line management and personnel have central roles. Cooperation is supported and promoted. Knowledge and proficiency is enhanced at all levels and the introduction of tools for improving safety is promoted. Knowledge and proficiency increase motivation for improving safety.

By means of measures included in the programme, the workplaces are encouraged to start their own development projects, the purpose of which is to achieve permanent improvements in the practices and methods used at workplaces.

Action models and material of good practices are produced and distribution of workplace examples is promoted. For this purpose, cooperation between the national organisations and workplaces is developed. Authorities, research institutes, labour market and entrepreneur organisations, accident insurance institutions, research financiers as well as training and information organisations strengthen and support the workplaces' accident prevention work.

Modern means of communication and data systems are utilised in producing, developing and distributing occupational safety material for use by workplaces. Information on occupational safety is collected in files and disseminated using the Internet, the new digital communication system and the traditional publication and information channels. The purpose is to produce practical solutions which are easy to find, understand and apply to the needs of workplaces.

Good practices are arranged in data systems which complement other Finnish and international systems. Modules of safety culture are developed to be used in the management data systems and other procedures and processes of a workplace.

As part of the programme, national campaigns, special subject days, seminars, conferences and training courses are arranged in cooperation with different interest groups in order to prevent occupational accidents. The programme supports targeted research and information projects and development projects carried out at workplaces.

In implementing the programme, good solutions and practices produced in research and development are analysed and they are refined into action guidelines to be easily adopted by different types of workplaces, including small and medium-sized enterprises.

Workplaces are supported in using and applying established good practices (e.g. risk management, risk assessment, self-audit procedures for SMEs). The material is adapted for workplaces of different sizes.

3.1.3 Examples of good practices are collected and distributed to workplaces

Safety culture can be developed by means of the examples of the occupational accident prevention programme or by further advanced good practices. Improvement of safety culture starts from the management and it is a deep-rooted custom in the organisation and visible in day-to-day activities. Safety culture is manifested in all established practices, as well as in new situations and it is an important part of the personnel's professional skills.

The programme produces material on safety measures for different situations in working life, such as telework, team work, temporary short employment, networking, etc. Safety procedures are developed especially for workplaces where subcontracting is done, such as construction, installation, repair and maintenance work, and where workers of several employers or self-employed workers are working

simultaneously. Procedures for agreeing on tasks and obligations, as well as for cooperation and dissemination of information, are developed for common workplaces with several employers.

In terms of the programme, branch-oriented groups are organised in which workplaces take part voluntarily but committing themselves to development work. Each workplace draws up its own development plan. The workplaces are informed of each other's successful solutions and thus encouraged to adopt good practices. Subprogrammes are launched in branches with high risks of accident in order to create branch-specific solutions and development projects.

Methods and material concerning safety culture, safety management, procurement procedures, coordination of work operations, cooperation between the parties, risk assessment and total safety management are developed for the needs of several employers' common workplaces and enterprises' cooperation networks.

The implementation of workplace-specific development projects is also supported within the programme. Methods for human resource accounting and reporting are developed for use by workplaces. These give support for the improvement of safety culture, monitoring of the working environment and large-scale development work.

To assess the workplace's health and safety level, procedures and indicators are developed. When necessary, documentation can be provided to demonstrate the organisation's level of safety. People have great confidence in the products and services of organisations using these aids, and thus safety and health at work also has a positive impact on business transactions.

Measure 1: Safety objectives in accordance with the occupational accident prevention programme are adopted at the political and national levels, as also the measures for reaching these objectives in cooperation in all sectors of the Finnish working life.

Measure 2: Information and training necessary for implementing the occupational accident prevention programme is started. The development of good practices at workplace level and cooperation between ministries, national executive bodies and cooperation partners and workplaces is also initiated.

Measure 3: The different implementing parties in cooperation direct funds and resources to improving safety on the basis of subject-specific plans worked out in greater detail in the programme. Among the subjects would be, for instance, safety as part of the company's total activities, safety and productivity, ethics and social responsibility, safety and information technology and safety as part of sustainable development.

3.2 Measures taken by workplaces

3.2.1 The application of the "vision zero" approach and the practices in accordance with it at workplaces

The safety objective of a workplace is a modern high-level and high-quality safety culture that is viable in practice and based on the "vision zero" approach and action in accordance with it.

To prevent accidents, information on hazardous incidents and accidents, preventive inspections and good practices is collected and analysed. Cooperation between the management and personnel is essential in line with a high-standard safety culture. The occupational safety and health personnel and occupational health care personnel, as well as other experts at the workplace and outside, have a central role in this work.

For workplaces it is important to be able to make use of the material produced by the programme, such as the examples of good practices which they obtain through the media and other marketing and distribution channels. The needs and facilities of small enterprises are taken into account in the implementation of the programme.

The measures taken at a workplace in establishing a good safety culture include:

- safety action policy and management
- the management's and superiors' own example and commitment

- integrating safety matters into all activities (e.g. management, planning, production, procurement, economy, marketing, personnel matters)
- dealing with safety matters in the management, departmental and group meetings
- including safety aspects in the planning of work, working methods and work stations
- including safety aspects in the organisation of work, management and control
- ensuring functional capacity and skills
- using and preferring safe work practices
- risk assessment and management
- utilising available technology, safe working methods and work equipment
- effective planning and implementation of action for maintaining working capacity
- maintaining and developing continuous safety training
- orientation and guidance of personnel
- efficient and adequate flow of information
- openness in dealing with accidents and hazardous incidents and learning from them
- giving feedback
- reacting to matters and readiness to act immediately.

Tools and practices on these subjects are produced for daily use by workplaces in cooperation between the different actors.

Competition for labour is increasing steadily. Good working conditions make certain jobs, occupations or branches attractive. This stimulates the employers to develop a good safety culture where emphasis is on the development of working conditions and work communities, maintenance of the workers' well-being and occupational skills and the management's visible commitment and responsibility for safety matters.

More than ever before, organisations act today as part of national and international cooperation networks. The depth and stability of cooperation varies. Clients and business partners expect the operations of industry and public organisations to be undisturbed, controllable and totally safe as well as collectively and socially responsible. In international markets, it is difficult to achieve sustainable competitiveness in the quality of operations in circumstances where occupational safety is badly managed. Thus questions of occupational health care and occupational safety have become an integral part of business transactions. Depending on the mode and content of the organisation's activities, occupational safety matters can be compared to and incorporated into the quality and environmental matters in order to create synergies.

Subcontractors and other cooperation partners are also expected to meet the requirements concerning occupational health care and occupational safety at the workplace and, when necessary, to show it by illustrative indicators or established practices. People have great confidence in the products and services of such enterprises, and thus occupational health care and occupational safety have an impact on the choice of cooperation partners.

At several employers' common workplaces the control of safety is based on safety culture, safety management, procurement procedures, coordination of work operations, cooperation between the different parties, risk assessment and total safety control. The programme produces practices and guidelines for good management and practical implementation of these matters.

Branch-specific accident surveys are of use for workplaces in targeting measures. At the same time, they are of help in finding and disseminating branch-specific solutions in cooperation.

By means of the practices provided by the programme, it is possible for the workplaces to develop an action policy based on their needs on their own initiative. This action policy can be pragmatic and able to be monitored and based on the vision zero approach. On the basis of the action policy, it is possible to implement an accident prevention programme best suited to the situation of the workplace step-by-step.

At the workplace it is necessary to ensure that the personnel's knowledge and skills are up-to-date. This, together with combined decision-making, supports the commitment of the whole personnel. It is

important to further develop the self-audit, risk assessment and monitoring systems produced in terms of the programme so that they meet the needs of the workplace.

Measure 4: Educational and supporting material is produced to assist the workplaces in developing a safety action policy, safety culture, safety management, good practices and monitoring in accordance with the "vision zero" approach.

Measure 5: Practices are developed for the workplaces to apply to their own situations when implementing the occupational accident prevention programme. The practices cover the following matters:

- safety culture both as part of safety management and as part of total management,
- risk assessment and risk management,
- connection of occupational safety with the control of disturbances,
- intensification of accident prevention in branches with high risks,
- use of safety procedures and tools.

Measure 6: By means of the programme workplaces are encouraged to form groups which commit themselves to telling about their successful practices and spreading information on them to encourage other workplaces to strive for a high level of safety.

Measure 7: In branches with high risks of accidents, branch-specific programmes are launched in terms of which the workplaces develop modes of action, methods and practices in cooperation. The programme supports initiating and distributing new branch-specific safety solutions and good practices.

Measure 8: Educational and information material is produced to assist the workplaces to develop the research and reporting of accidents, near-accidents and hazardous incidents.

Measure 9: Creating clusters of workplaces on a voluntary basis is promoted by the programme. Within clusters, enterprises and other organisations exchange their experiences and ideas for improving safety at work, for instance by arranging safety contests. Such a cluster of workplaces can, for example, learn through a common monitoring of the accident and incident situation. Information on successful results achieved by the groups is distributed in order to try to encourage other workplaces to strive for a high level of safety.

Measure 10: Development and research projects are carried out in order to create good practices for various situations in working life and industry, such as subcontracting, telework, team work, temporary short employment, networking and several employers' common workplaces.

Measure 11: Workplaces are encouraged to adopt the following central principles as part of a good safety culture: the top management directs occupational safety and health operations; safety is part of the activities and professional skills; the organisation has a viable risk assessment system; the flow of information is efficient; and interaction is open. Depending on the risks of the workplaces and the nature of their activities, certain workplace-specific factors can be the central objects of accident prevention: 1) the cleanliness and tidiness of workplaces, 2) transport and internal traffic, 3) safe practices and cooperation in giving instructions and advice, 4) to promote reporting of hazardous incidents, 5) functional principle of eliminating risks immediately, 6) application of the principles of ergonomics, 7) prevention of the threat of workplace violence, 8) development of the workplace surveys of occupational health care in cooperation between the occupational health care organisation, occupational safety and health organisation and line management.

3.3 Measures taken by national organisations

3.3.1 Intensifying the activities of the occupational safety and health authorities

The duty of the occupational safety and health authorities is to develop working conditions and ensure that occupational safety and health laws and regulations are observed. The prevention of accidents is one of the three priorities set by the occupational safety and health administration. The authorities develop the targeting and impact of their supervision and promotion activities. Special attention is paid to the needs of

small and medium-sized enterprises. An equal treatment of workplaces and citizens is one of the administration's guiding principles.

The principle of a high level of safety has been adopted in the occupational safety and health policy of the European Community. Thus new circumstances and changes in technology, products and economy also call for new occupational safety and health innovations. The greater part of the regulation of occupational safety and health belongs to the competence of the European Community. The aim of the EC directives on working environment is a high level of safety supported by the national implementation of regulations. The influence of the conventions and recommendations of the International Labour Organization ILO has been, and still is, significant.

Product control has been reformed in accordance with the EC product control principles in recent years. Its guiding principle is to reduce the supervision carried out by authorities and to increase the manufacturers' responsibilities. The procedures in accordance with the EC declaration of conformity have in recent years been established, and the safety level of new machines and equipment has clearly improved. The problems that have emerged have primarily concerned machines and equipment for which there are not yet harmonised standards. In case of personal protective equipment, problems have been caused by cheap imports from outside the EU.

Besides the occupational safety and health authorities, other authorities also have duties concerning the prevention of occupational accidents. For example the Safety Technology Authority (TUKES) is an agency in the administrative sector of the Ministry of Trade and Industry. It acts as the supervisor, developer and expert organisation within the technical safety and reliability. TUKES operates in the realm of chemical and process industry, electrical safety and pressure equipment safety, and rescue service equipment. The duty of the National Product Control Agency for Welfare and Health (STTV) is to prevent and control health hazards from chemicals as well as fire and explosion risks. The use of the accident report register compiled by the occupational safety and health authorities will be intensified.

The national research and development programmes have in recent years focused on matters other than accident prevention (e.g. the Finnish National Workplace Development Programme, the National Programme on Ageing Workers, Well-being at Work Programme, etc.). The aspect of accident prevention should also be taken into account in these programmes. For example, accident prevention has been very little considered from the viewpoint of ageing. Utilising the experience and professional skills of older workers imposes a positive challenge to occupational safety as well. The shift in generations current in the next few years also requires that the workplaces' orientation and guidance systems are considered from the aspect of accident prevention.

Measure 12: The synergy between the national programmes directed and coordinated by different ministries is utilised and practical cooperation improved between the programmes.

Measure 13: The occupational safety and health authorities develop new supervision methods and tools for contributing more effectively to better working conditions and promoting the workers' health and safety as well as reducing occupational accidents, diseases and other work-related illness.

Measure 14: The occupational safety and health authorities develop their assets and proficiency in order to be able to promote safety at workplaces, the SMEs in particular, also by giving guidance, advice and information within their supervision work. Workplace inspections are not only part of authority supervision but they also mean an important exchange of information and useful contacts between enterprises and the government. In supervision the authorities try to activate the company's own activities. Product control also requires cooperation between authorities across the administrative boundaries.

Measure 15: In cooperation between authorities, research institutes, labour market organisations and industry, a solid foundation for promoting occupational safety is built up and the latest research data and the views of the labour market parties as well as the European and international principles can be taken into consideration on a broad basis.

3.3.2 *Developing the quality and volume of occupational safety education*

The importance of occupational safety education is emphasised both in personnel training, instruction and guidance of the workplaces and in vocational and university education. In addition to educational

institutions and universities, other educators also have an important role in extending and improving proficiency in occupational safety.

Occupational safety is a major element in vocational basic and complementary education. There has not always been enough support and assistance for developing the resources of occupational safety training. The share of occupational safety has diminished in university education and is restricted to single courses in technical studies. The students' work practice and on-the-job learning, as well as school students' periods of working life orientation, are important opportunities to influence young people's view of safety. Developing the level of occupational safety education is a challenge for the whole educational system. It is important to ensure the basic knowledge of accident prevention both in vocational and university education.

How work trainees are treated and what kind of picture they get of working life may be decisive for our efforts to guarantee the supply of labour in the future. To ensure the safety of young workers and their commitment to the "vision zero" approach must be seen as an ethical obligation. According to the programme, the purpose is to influence instruction and guidance given in basic schools, preschool and day care so that positive safety attitudes for life would recur throughout their activities. In this way children and young people are educated as early as possible in schooling to adopt safety as a normal daily practice and observe it both at school and in leisure, and also later in working life.

The programme states that the advantages information technology brings to safety should be promoted in education. The opportunities provided by data networks are utilised both as to the content of work and occupational safety research, information and communication. The purpose is by different means to strengthen the positive impact of information technology on occupational safety. The use of data networks in promoting occupational safety activities is enhanced.

The programme involves allocating resources for producing educational material according to a detailed separate plan. When producing material in support of occupational safety, the procedures and cooperation of the programme's cooperation network are developed. There is no comprehensive Finnish study book on occupational safety, though we have plenty of material from enterprises and other material on safety. A handbook of safety would also be necessary, for instance, to support designers in their work. In creating this basic material on safety, both the literary and digital presentation and maintenance of the material is considered.

Measure 16: Material for education is produced and distributed to workplaces and educational organisations. By means of the programme, safety training provided by workplaces on their own initiative and a high-standard safety culture are promoted.

Measure 17: Occupational safety matters and safety management will be associated with education and professional exams more closely than today. This applies to vocational upper secondary level, vocational post-secondary level, higher vocational level, vocational adult education and university education. In cooperation between education authorities, educators and interest groups and by utilising the existing practices of cooperation, the present education is assessed. On the basis of this assessment, necessary measures are proposed and their impact followed. Within the programme, the possibilities for including a safety unit in the requirements of vocational diplomas will be encouraged. The basic ideas and approaches of accident prevention are also promoted in the instruction of basic schools and day care centres.

3.3.3 Targeting occupational safety research and promoting its applicability

Improving and strengthening safety at work needs basic and applied research in support of it. Research data does not reach workplaces very well, so attention must be paid to the acquisition of information and the viability of using information systems. Research and development projects are ever more directly targeted at the needs of the workplaces. Participation in international science communities gives a new impetus to the Finnish occupational safety work.

By means of the programme, the purpose is also to contribute to the resources of safety education and research at the university level and assess their adequacy and applicability in view of the needs to promote occupational safety and accident prevention at the national level.

The volume of research on accidents has not developed recently at the same rate as research activities concerning occupational health and work communities. Enterprises and other organisations must as far as

possible participate in the implementation and utilisation of research projects. Among other things information on management procedures in safety and health at work is needed. There is still a need for general and organisation-specific indicators of safety level for assessing the safety status of a workplace and its development. Practical knowledge is also needed to evaluate the impact of occupational safety and health on the productivity of work and the public image of an organisation.

The purpose of the Finnish Work Environment Fund is to finance such research and development work which improves working conditions and promotes the safety and productivity of the activities of workplaces. It is desirable that the Fund, in accordance with its decision-making process, would take part in the funding of research, development and information projects arising out of the programme.

The activities of the Work Environment Fund as the financer of occupational safety and health research and development is not known well enough at the workplaces. The development aid provided by the Fund is useful financial support for individual workplaces, and information on the opportunities for using it is today better available than before.

The Ministry of Finance is a similar actor as regards government workplaces and employees, so the above expectations apply to it also. The State Treasury acts as an educational and information organisation for government workplaces like the Centre for Occupational Safety.

Through management by objectives the Ministry of Social Affairs and Health influences through management by objectives the content of the activities of the agencies and institutes in its administrative field in order to achieve the objectives of this programme. The activities of many other authorities also have an impact on occupational safety, and they produce services useful for the occupational safety and health operations of workplaces.

The Finnish Work Environment Fund grants financial aid and awards for research and development from the funds that have accrued through insurance premiums. Besides the Fund, other financers are the Finnish Academy, the Social Insurance Institution, the Farmers' Social Security Institution and the National Technology Agency. The European sources of finance are the European Social Fund and the European Agency for Safety and Health at Work (Bilbao). At present, the National Technology Agency (TEKES) has no technology-based safety programme of its own (cf. environmental technology programme).

Information and communication technology, automatics and robotics are developing rapidly. This development produces innovations to improve safety but it also involves risks that require attention. Finland is one of the leading countries in information, production and safety technology, also including the export prospects.

The advantages information technology brings to safety are utilised. The organisation of information technology work and the quality of the activities of work communities are in many ways crucial for the mental load of work and working conditions, and for work results. The opportunities provided by information networks are utilised as regards both the content of work and occupational safety research, information and communication. Different actions aim at promoting the positive impact of information technology.

The ongoing national programmes for developing working life (the National Workplace Development Programme, the Well-Being at Work Programme, the National Programme on Ageing Workers, the National Productivity Programme, the programmes of the European Structural Funds) contribute to the development of working conditions and work communities and the content of work and thus also promote the prevention of occupational accidents. By means of the research-aided programmes, the projects of workplaces are supported, cooperation networks created, the creativity of workplaces is boosted and the utilisation of research strengthened.

The results of the working life programmes are monitored as part of the occupational accident prevention programme, and the emerging good practices and solutions are conveyed to workplaces. The purpose is also to influence the content of the other national development programmes above so as to link workplaces, enterprises and other organisations and networks as far as possible with the planning, implementation and utilisation of the projects. We need national indicators of safety level in order to be able to compare the safety levels of organisations. Research must produce more information on the applications

of the "vision zero" approach in enterprises, public organisations and their networks. Practical knowledge is also needed on the impact of safety on the productivity and results of work and the corporate image.

Integrated with the occupational accident prevention programme, the national, regional and workplace-specific projects concerning traffic safety, home and leisure accidents and sport accidents as well as their modes and methods of action are followed and the results of the projects exploited also in the prevention of occupational accidents. Similarly, experiences from the occupational accident prevention programme are communicated to the other accident prevention projects.

Measure 18: The Ministry of Social Affairs and Health seeks to guide occupational safety and health research and development and sets performance targets for the research and expert institutions in this administrative sector in accordance with its strategy, taking account of the objectives of this programme. The Ministry works for utilising the synergy of the programmes of the different ministries. The Ministry acts so as to make the research institutions in the sector improve the applicability of their research results at workplaces.

Measure 19: The different ministries and research financiers act on targeting research according to this programme, taking account of the objectives concerning occupational safety also in other research and development, and making use of synergy in research activities.

Measure 20: Basic and applied research on the prevention of occupational accidents is developed. The distribution and applicability of research results is improved. It is important that labour market organisations participate in the planning and implementation of research and development projects. The cooperation and communication networks of organisations is utilised when informing of actions within the programme.

Measure 21: Occupational safety research is targeted by the different ministries' and financiers' joint resources. Among the research subjects can be for example safety and information technology, safety culture, safety management, threat of violence at work, safety of movement, safety as part of total management, knowledge-intensive work, safety aspects as part of the company's total operations, occupational safety and well-being at work. How changes in the structure of production and working conditions affect the need for occupational safety and health research is taken into account in the programme.

Measure 22: Regarding the programmes of the National Technology Agency (TEKES), the possibilities and means of including assessment and consideration of safety aspects in the projects are surveyed. In addition, the possibilities of TEKES taking safety aspects as part of its technology programmes is investigated.

Measure 23: The possibilities and means of the Finnish Academy of increasing the funding of basic and applied occupational safety research, for example by means of a separate research programme, are examined.

3.3.4 *Developing and expanding the services of insurance institutions*

In the activities of insurance institutions occupational safety matters are today more and more incorporated into the risk management services they offer to their client organisations. On one hand, comprehensive risk management operations make it possible to have a direct link from the insurance company to the top management and others responsible for occupational safety in the client organisation. Thus it is possible to have a direct influence on the company's safety management and in course of time also its safety culture. On the other hand, the number of full-time safety experts in insurance companies has decreased in the past few decades. Nowadays the experts of insurance companies carry out comprehensive risk assessments in enterprises, including occupational safety risks.

Savings in the form of lower insurance premiums offered to small enterprises are important. It is necessary to collect data and present it in a centralised form to find out what insurance companies offer to enterprises and what means are effective in reducing accidents.

The Finnish accident insurance system has been designed to encourage enterprises and communities to improve their safety operations. As competition by premium rates was made free at the beginning of 1999, insurance companies are more able than before to develop client-specific rate systems which reward SMEs for their successful safety operations. According to this programme, insurance companies develop their

expertise and practices to especially support the safety operations of SMEs. It is particularly important to motivate owner entrepreneurs to improve occupational safety at their workplaces.

Adoption of the safety-economic view is promoted by illustrating accident costs by case calculations, because calculations on the macro-economic level often remain obscure to the workplaces. Data on occupational accidents with compensation figures and cost effects are forwarded to small and medium-sized enterprises to an ever larger extent so that they will be able to develop their safety operations.

Accident insurance companies give guidance and advice for their clients on accident prevention and risk management and other questions concerning the working environment. The Federation of Accident Insurance Institutions (TVL) produces annual statistics of industrial accidents and occupational diseases and together with labour market organisations coordinates the interpretation of all fatalities at work. The annual statistics of the Federation of Accident Insurance Institutions are improved nationally and sectorally.

Utilisation of the statistics of occupational accidents in prevention work is developed. The purpose is to target preventive action at industries with high accident risks. The use of the accident report register collected by the occupational safety and health authorities in accident prevention is intensified. It is being examined how the policyholder-based accident statistics could be utilised in targeting and prioritising the activities of the Occupational Safety and Health Inspectorates.

By means of the programme, the utilisation of the accident investigation results in information, training and the occupational safety operations of workplaces is intensified. The utilisation of the investigation reports on occupational accidents (TOT investigation) is developed by the TOT management of the Federation of Accident Insurance Institutions in cooperation with the Centre for Occupational Safety and the State Treasury.

Measure 24: The insurance companies integrate occupational safety matters into their risk management services and thus into the safety culture of their client organisations.

Measure 25: The insurance institutions seek to develop their occupational accident insurance systems to encourage employers by rewarding practical safety operations. Adoption of the safety-economic view is promoted by illustrating accident costs by case calculations in the SME sector in particular.

Measure 26: The insurance institutions develop and produce material on occupational safety and risk management. New occupational safety services are worked out for small and medium-sized enterprises. The utilisation of occupational accident statistics in prevention work is developed. More information on occupational accidents with compensation data and cost effects is forwarded to SMEs so that they can develop their safety and health operations.

Measure 27: It is investigated if it is possible to complement the annual statistics of the Federation of Accident Insurance Institutions by national statistical data on the economic impact of accidents. The use of the brief statistics of occupational accidents is promoted.

Measure 28: The utilisation of the accident investigation results in information and training and the occupational safety operations of workplaces is improved. The material on the investigation of occupational accidents (TOT investigation) is distributed to workplaces through the Centre for Occupational Safety and the State Treasury.

Measure 29: The Federation of Accident Insurance Institutions takes care of developing the compilation of occupational accident statistics so that they fulfil the requirements of the EU cooperation for improving the content and comparability of statistics.

3.3.5 Utilising the activities of the labour market and entrepreneur organisations

It is important for the labour market organisations to participate in the planning and implementation of research and development projects. The cooperation of the labour market organisations in accident prevention is today mainly concentrated in the Centre for Industrial Safety, which targets its information towards persons acting in combined decision-making on occupational safety and health matters at workplaces and line organisations. The member and information networks of the labour market organisations and entrepreneur organisations can be utilised even more in spreading information on accident prevention. In

this case the target group is the whole labour force. Information on the situation, problems and opportunities of accident prevention collected by the labour market organisations should be extensively employed.

4. THE IMPLEMENTATION OF THE OCCUPATIONAL ACCIDENT PREVENTION PROGRAMME

4.1 Organising and monitoring the implementation of the programme

The programme is implemented in close cooperation between the Ministry of Social Affairs and Health, the labour market organisations, the entrepreneur organisations, the research and financial institutions in the sector, and the parties promoting the occupational safety operations of workplaces. Each party is responsible for the content and progress of its share in the programme and for the evaluation of the measures it takes.

A management group with representatives from the central executive parties is set up to coordinate, monitor and evaluate the programme.

The occupational accidents section of the Advisory Board for Occupational Safety and Health acts as the practical cooperation body for the programme. Its duties include the direction and monitoring of the programme measures and the preparation of matters presented to the management group.

Subject-oriented expert groups or project groups are set up within the programme to support its practical implementation and for their part to ensure the practicability of its implementation.

A programme manager is appointed for the programme within the limits of the budget. The manager is in charge of the progress of the programme, information, administrative routines and other support for the implementation. The programme manager works at the Centre for Occupational Safety.

The implementation is annually recorded in a report which is dealt with by the management group and submitted to the Ministry of Social Affairs and Health.

4.2 The resources of the programme

The occupational accident prevention programme is mainly implemented by directing the normal activities of the different parties according to the programme objectives.

To implement the programme, special appropriation is allocated to targeted research and information projects and development projects to be carried out at workplaces. Resources are also reserved for the duties of the project manager, secretarial services and the functions of the different groups. About 350 000 euros is annually appropriated for funding the programme from the budget of the Ministry of Social Affairs and Health. The Ministry provides resources needed in communication for use within the programme.

In their annual plans the Work Environment Fund and other parties funding occupational safety and health research prepare for actions in accordance with the occupational accident prevention programme.

The Finnish Academy provides, as far as possible, for funding the basic and applied research on occupational accident prevention arranged by universities. For this purpose, the Academy seeks to launch a separate research programme for promoting working life development, one part of which is improving safety, including prevention of occupational accidents.

If the resources for safety education and research at universities and the safety instruction in vocational education need to be increased, it will be discussed separately with the Ministry of Education. Finance from the annual budget of TEKES will, as far as possible, be reserved for the research and development of technical and productional solutions. The other bodies funding the research and development projects of the programme are, for example, insurance companies.

The targeting of separate grants for the implementation of the programme, which are admitted by the Ministry of Social Affairs and Health, is dealt with in the occupational accidents section of the Advisory Board for Occupational Safety and Health. When necessary, the section can also give statements on research and development projects funded by the other financiers above.

The amount of resources allocated to the programme will be annually agreed in discussions with the different financers. The opportunities to get finance from the European Union and the procedure to be followed in this is examined in cooperation with the research institutions.