The FinEst bridge –

Finnish-Estonian collaboration

in occupational health

Partners in
the Estonian-Finnish Twinning Project on Occupational Health:
Finnish Institute of Occupational Health
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Preface

The Estonian-Finnish Twinning Project on Occupational Health supports the Estonian accession into European Union by providing support for achieving the requirements of various European Union (EU) directives. The most important EU regulations affecting occupational health, and the project in particular, are the Directive (89/391) on improvements in the safety and health of workers, and the Directives (75/117 and 76/207) on the equality of men and women in work life. The project also supports strengthening of the administrative capacity of the Estonian Ministry of Social Affairs, and the operation of the Occupational Health Center.

The Estonian Ministry of Social Affairs chose the Finnish Institute of Occupational Health to be its partner in the Twinning Project on Occupational Health. The decision was a continuation of the well-established (30 years) collaboration between Finnish and Estonian experts. The project began on 15 August 2000 and it will end on 31 May 2002. The duration of the project is 21 months.

The Twinning Project has offered to professionals, both in Finland and Estonia, many new opportunities and ways to learn from each other. During the project it has become obvious that the Twinning method is a more useful and relevant tool for a development project than the classical expert consulting projects. The Twinning method also initiates new ideas for exchanging practical experiences in the field, and between the research institutes, as well as between the administrative bodies. An example of the work on the administrative level is consultation on improving the new Estonian Occupational Health and Safety Act (adopted on 26 June 1999). The new Act covers most of the pre-accession criteria. However, some improvements are necessary on the parts relating to occupational health services (OHS), the Occupational Health Center, the training of experts in occupational health, and on information dissemination strategies.

An essential part of a Twinning project is to guarantee the sustainability of the development achieved. It is therefore important to disseminate information to all stakeholders and interest groups in the field of occupational health and safety. This book is one of the ways to disseminate information and to guarantee sustainability. The book aims at:

1. Increasing the efficiency of Twinning projects in general
2. Describing the challenges of occupational health services, and on the other hand, suggesting ideas to support the development of occupational health service, in a country undergoing rapid transition
3. Describing and analysing the key elements and critical paths in the process of developing and strengthening OHS in general
4. Supporting the collective learning process among authorities and experts in the field of occupational health, by providing examples of good occupational health practice
5. Describing the possibilities and advantages of a Twinning project as an approach towards supporting the growth in the coverage and effectiveness of occupational health services
6. Sharing experiences on good Twinning practices.

The book consists of two parts. The first part covers the goals and challenges of occupational health in general. The second part concentrates on the Twinning Project and its

achievements. The contents of the second part are arranged according to the structure of the Twinning Project.

For us, the partners in the project, Twinning is working together as equal partners. Thus, during the project, Finnish and Estonian experts together solved problems, made plans, and implemented the planned actions. We hope that our experience of a 'joint learning process' can be of help to readers, when developing occupational health and safety in general, and also when collaborating with different countries.

We extend our heartfelt thanks to all of the experts in the project, the Delegation of the European Commission in Tallinn, the Central Finance and Contracting Unit at the Estonian Ministry of Finance, and the Office of Twinning coordination and bilateral cooperation at the Finnish Ministry of Finance, for their support before and during the project.

Tallinn, 1 May 2002

Dr Matti Ylikoski, Professor
The Pre-accession Adviser of the Estonian-Finnish
Twinning Project on Occupational Health
and the authors of this book and the partners in the project

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List of abbreviations

CC	candidate country
EC	European Commission
EKMI	Institute of Experimental and Clinical Medicine
EU	European Union
FIOH	Finnish Institute of Occupational Health
GOHP	good occupational health practice
ILO	International Labour Organisation
MoSA	Ministry of Social Affairs (Estonia)
MS	member state
NGO	non-governmental organization
OH&S	occupational health and safety
OHC	Occupational Health Center (Estonia)
OHN	occupational health nurse
OHP	occupational health physician
OHS	occupational health services
OHSA	Occupational Health and Safety Act (Estonia)
OHSAS	Occupational Health and Safety Assessment Series
PAA	Pre-accession Adviser (Twinning Project)
Phare	European Union's Phare Programme provides cofinancing for institution building through 'Twinning', technical assistance, and investment support for applicant countries (to EU) to strengthen public administrations and institutions, to promote convergence with the EC's extensive legislation and reduce the need for transition periods, and to promote economic and social cohesion. Phare has provided support to the countries of Central Europe since 1989. http://europa.eu.int/comm/enlargement/pas/phare/intro.htm)
SE	self-employed
SME	small and medium-sized enterprises
SSE	small-scale enterprises
Twinning	A programme launched in May 1998 to help candidate countries to develop modern and efficient administrations, with the structure, human resources and management skills needed to implement the 'acquis communautaire' to the same standards as the EU member states. (http://europa.eu.int/comm/enlargement/pas/twinning/index.htm)
WHO	World Health Organization
OMAS	Phare Operations Monitoring and Evaluations Service

The changing world and challenges to occupational health and safety

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Changes in world economies, globalization and new technologies have implicit effects on occupational health and safety, presenting numerous new challenges. New development trends are seen in enterprise structures, job contents, work practices, as well as in the hazards at work. On the other hand, there are new opportunities and tools available for the protection of workers and the promotion of their health and safety at work.

Several parallel developments are linked with the new dynamic developments, such as:

- Internationalization of world economies
- Declined importance of primary production, such as agriculture, mining, forestry and fishing, and the growing role of new industries, the information industry, and the service sector
- Increasing economic competition
- Introduction of new information technologies
- Re-engineering of enterprise structures
- New types of employment and new work contracts
- An increase in high-tech and service occupations and a decline in traditional manual jobs
- Growing turbulence of economies.

The social effects of globalization have been diverse. Although the percentage of absolutely poor people has decreased in the developing countries during the 1990s, the poorest have simultaneously become poorer in spite of the moderate growth of economies and cumulation of wealth in the world as a whole. Poverty, illiteracy, poor labour market status and unemployment are associated with malnutrition, poor health and poor work ability, affecting the life of people particularly in developing countries. But also the marginalized groups in the countries in transition, and even in industrialized countries (the so-called new impoverished) are facing poverty. In some areas, trans-national economic activities have generated new jobs and produced income for the low-income groups, but also a large impact of unemployment with numerous adverse social consequences has been reported. To control such adverse effects of globalization the United Nations has launched a new global strategy on better global governance and elimination of poverty. Europe is a unique region in the world, as it combines the economic and social dimension in the development of economic collaboration and trade in the generation of new economies.

Unemployment is one of the adverse effects of globalization. A rough estimate gives a 25% unemployment rate among the global workforce. But the distribution again is unequal. While the unemployment rate in the USA is about 3%, in the EU around 10%, as many as 50–70% of the workers in some developing countries are chronically unemployed. In about half of the EU applicant countries, the unemployment rates substantially exceed the EU average.

Unemployment leads to severe social and health consequences. The health of the unemployed is poorer than that of the full-time employed. The vocational skill and work ability of people declines in long-term unemployment, and this also results in lower employability. In the countries in transition, the cause of unemployment is seldom the lack of training of the workers. Often the reason originates from the lack of active employment policies and of outdated technology, economic structures, and low competitiveness.

Short-term employment is particularly typical among young workers, as 50–60% of the age groups <24 years in some countries may have short-term employment contracts. In the EU, two thirds of the unemployed people shuttle frequently between unemployment and short-term employment. According to the EU Dublin Foundation study, temporary workers have poorer working conditions, training and education, and social protection than permanent workers. Short-term work contracts are particularly prevalent in sectors of rapid growth, in service occupations and in small and medium-sized enterprises. It will be very difficult for occupational health services (OHS) to ensure the continuity of the services for such shifting target groups. Therefore, the basic community-based infrastructure of OHS may become a very important service provision option in the future.

Structural changes in the world of work

Large enterprises. Globalization affects the structures of enterprises. The 50 000 or so large multinational enterprises of the world will merge further to form gargantuan companies capable of global operations. Their transactions may exceed the economic volume of an individual medium-sized country. Due to the distribution of the ownership of the multinationals to several countries, their national identity starts to fade away, and their global operations cannot be covered by the legislation of any one country. Many multinationals provide new jobs and introduce good occupational safety and health practices in the countries where they operate. Some others show less encouraging examples by compromising safety, health and social dimensions in the name of global competition. The need for global actions in occupational safety and health has been recognized. The ILO, international expert communities, and the international associations of global businesses have emphasized the importance of the social responsibility of the multinationals. Responsibility and good human resource management are among the key criteria for a globally successful enterprise. Large multinationals play a growing role in the world economies, and they may substantially contribute to the positive development of occupational safety and health world-wide. There is an urgent need to initiate discussion at the global level on what the health and safety requirements and implications of globalizing economies are. The United Nations institutions, ILO and WHO, play a crucial role in such discussion. The EU Social Charter, the Amsterdam Treaty and the accession criteria of the EU for applicant countries, particularly chapter 13 on social policy and employment, of the negotiation agenda work towards the same objective.

Small and medium-sized enterprises and the self-employed. Globalization demands flexibility from enterprises at the national level. In their search for flexibility many companies have been fragmented into smaller units. Outsourcing and subcontracting have led to the establishment of high numbers of microenterprises, small and medium-

sized enterprises, and workplaces of the self-employed. The small and medium-sized enterprises (SME) in the industrialized countries are striving to attain more strength, opportunities for specialization and sustainability through networking, either horizontally with each other, or vertically with big and often multinational main contractors.

The vast majority of the about 100 million enterprises of the world are small ones. More than one billion of the total 3 billion workers in the world are self-employed in agriculture. In the 15 EU countries, about 14.7 million (over 98%) out of 15 million enterprises are SMEs employing some 88 million people (i.e. 60% of the total workforce). If the 26 million self-employed are included, about 85% of the European workforce are working in small facilities. Some 97% of the Finnish enterprises employ fewer than 50 persons. At the national level, the average size of the enterprises is decreasing rapidly, and the number and economic importance, as well as the share of employment of small-scale enterprises has grown rapidly, particularly in the 1990s. In Finland, these (<10 workers) employ 35% of the workforce, and their total business turnover is 31% of the total of all Finnish enterprises. As large enterprises (except in electronic equipment production) are downsizing their workforce, the perspectives for better employment depend on the development of jobs in small and medium-sized enterprises.

The small-scale enterprises cover a wide range of activities ranging, for example, from restaurant, cleaning services and hair-dressing services, to construction, metal work, foundry, electronics or computer software, and multimedia production. Although small-scale enterprises were traditionally established in industrial activities, their future growth will be in the area of personal services and in the information sector. EU has continuously focused attention on conditions of work in small and medium-sized enterprises and continues to do so within the framework of the new EU strategies.

Most of the workplaces and enterprises in the developing countries are small, and in many countries the majority of the workforce (50–80%) are self-employed in the informal sector, particularly in agriculture. The countries in transition constitute a double process for small and medium-sized enterprises. As the former big socially owned companies are privatized and fragmented, also the growth in the new small enterprises in both industry and the service sector is active. Another major change is the opening of the economy to free market competition.

The demands set by globalization to the occupational health of the workers in small enterprises are paramount. The need for occupational health and safety activities in small and medium-sized enterprises and among the self-employed is more striking than in big enterprises, and they are more dependent on the individual worker's work ability than in the large companies. The small enterprises need new service provision models based on external service provision units. Some countries like Finland have organized such services in primary health care units. On the other hand, the growing internationalization of work life puts pressure toward the harmonization of occupational health practices in companies which function in different parts of the world and under different circumstances.

Ageing working populations

The average age of the global workforce is increasing in parallel to the relative ageing of the total world population. Ageing is most prominent in North America, western and northern Europe, Australia and Japan. For example, in Japan the age dependency ratio will be doubled in the next 25 years. But ageing is not the challenge of the industrialized countries only, it is a global phenomenon. In the European Union, the present proportion of workers aged 50 years or older is 25% and by 2025 it will be 35% of all workers. The total number of workers over 60 years in the world is about 165 million, i.e. 5.5% of the world workforce. The age structure of the workforce in the countries in transition is much the same as in the EU and, in addition, the health status and life expectancy in these countries are lower than in the western countries.

Ageing affects a person's work ability in several ways. First, the natural ageing process decreases, for example, physical capacity as measured in VO_{2max} by about 1% a year, i.e. about 10% in a decade. Psychomotoric performance is also affected by age, although a physically active life-style slows such a decline. Psychomotoric performance is affected by several different mechanisms, causing a decline in the short-term 'working memory', lowered performance of visual and auditive sensory systems, and growing sensitivity to disturbing environmental factors. On the other hand, long-term memory and the 'crystallized intelligence' based on long-term memory, experience, judgement and 'wisdom' improves during ageing and strengthens the senior worker's work ability in jobs where such capacities are crucial.

Chronic diseases, however, may affect the work ability of an individual, and ageing is reflected in the statistics on ill health. Long-term sickness absenteeism and difficulties to work due to chronic or permanent health problems were substantially higher among workers aged 40 years and over, compared to younger age groups. Poor health status and lowered work ability affect substantially the employment opportunities and productivity of particularly ageing workers in countries where the social dimension is less developed. This in turn leads to further deterioration of health and work ability.

There is a need to adjust the work to the capacities of the individual worker, and to consider the needs and strengths of the ageing individual, as proposed already 10 years ago by the WHO expert group. There are promising results showing an improvement in the work ability and employability of ageing workers with the help of special occupational health promotion programmes.

New job contents and competence demands

Changes in the structure of economies, the implementation of new technologies, and changes in occupational structures inevitably imply major changes in job contents along with the shift from manual jobs to mental work tasks and information-intensive jobs. It has been estimated that about 70–75% of the workforce in industrialized countries will very soon work in information-intensive work (such an employment structure already

prevails in many countries, e.g. in Finland). The remaining 25–30% are expected to continue in more or less physical and manual jobs. The occupational structure, for example, in Finland already corresponds to such a new distribution.

New job contents set new competence requirements for working people. While 30 years ago the ratio of white-collar to blue-collar workers was 30/70%, the ratio today is the opposite. In many countries the training programmes have not been able to renew the competence of ageing workers. This has resulted in a higher risk of exclusion from the labour market, stress caused by insufficient skills, particularly in the use of information and communication technologies and sometimes by an unreasonably heavy work load. Although the maintenance and development of the competence of working people is not directly the responsibility of occupational health services, the lack of competence may result in health problems which occupational health professionals face in their everyday work. The health consequences of such mismatch are often stress disorders, and in some cases psychological burnout, increased sickness absenteeism, or premature retirement. Thus, as education is seen as an important prerequisite for the general health of an individual, training in professional competence and skills has been found to be an important factor behind work ability and occupational health. In the countries in transition, the occupational structure of the workforce during the next 10–15 years will still be greatly influenced by the former economic structure, i.e. large-scale manufacturing industry and a less extensive service sector. This requires substantial changes in the occupational structure and the retraining of high numbers of workers.

Challenges to the development of working conditions

Traditional occupational safety and health hazards, accidents, occupational diseases and various kinds of overload still play an important role in the global work life. As reported by Dr Jukka Takala of ILO, every year 250 million occupational accidents and 335,000 fatalities are estimated to occur world-wide, a vast majority of them in the developing countries. In spite of the positive trends in safety in the past, even in the highly industrialized European Union, every year some 5 million accidents are estimated at work, with 6,000 fatalities, and dozens of thousands of occupational diseases, and hundreds of thousands of work-related disorders. Altogether 600 million work-days, i.e. 2% of the total working time per year, are lost due to work-related health problems.

The limited data from central and eastern Europe are even more striking. The rough estimates point to about a 3-fold average risk of occupational accidents when compared with the West, although the comparability of the data is poor due to differences in the definitions of outcomes and in the coverage of registration. And the risks in the developing countries are 10–30 times higher than in the safest industrialized countries. The high risk is caused by the fact that a large proportion of the workers are employed in high-risk branches, such as agriculture, forestry, mining and quarrying, construction, as well as traditional manufacturing which applies old, often unprotected machines, which may have been imported from industrialized countries. Road transportation, fishing, and various types of home industries also imply high risk. The prevention and control of such traditional hazards requires the use of traditional safety strategies, such as specific risk assessment, technical preventive measures, inspection by authorities, training in safety practices, and the use of proper personal protective equipment, etc.

Unfortunately, the trends for de-regulation as a consequence of globalization and the economic difficulties may lead to a weakening of the role of occupational safety and health inspection, which may in turn lead to lowered safety and health standards. The introduction of large industrial facilities with suboptimal safety precautions also increases the risk of major industrial hazards in many rapidly industrializing areas.

Although most industrialized countries have been successful in the control of traditional occupational diseases, such as toxic metal and pesticide poisonings, solvent-derived injuries of the nervous system, pneumoconiosis and strain injuries, these diseases are still important determinants of health and work ability in the transitory and developing countries. The WHO and ILO data rank occupational diseases as one of the most prevalent health problems in Europe, and among the world population as well. According to the ILO, occupational diseases constitute a health problem comparable in magnitude to the occurrence of widespread communicable diseases, such as malaria. In both industrialized and developing countries, asbestos-related cancers will continue to constitute a severe health problem long into the future, and they can be controlled only by primary prevention. The question should be posed whether the epidemic of asbestos-related diseases in industrialized countries, which is a consequence of the use of asbestos in the 1960s and 1970s, could be prevented in the developing world by the worldwide ban of asbestos. Similarly, there is a need to introduce the proper and safe use of pesticides in the developing world.

New challenges and health problems

Information and communication technologies will change the job contents, organization of work, working methods and competence demands substantially in all sectors of the economy and in all countries. A number of new occupational health and safety hazards are foreseen, including problems in the ergonomics of visual display units, information overload, psychological stress, and the pressure to learn new skills.

The challenge confronted by occupational health and other related research is to provide health-based criteria for new technologies and new types of work organization, and to contribute to the establishment of healthy and safe work and work environments, preferably already in the planning stage, instead of post-hoc corrections. This calls for research efforts to determine health-based criteria for the human-technology interface in a modern occupational setting.

Numerous guidelines and EU directives are available for optimizing the conditions of work with a visual display unit. New perspectives are opening up for the introduction of the next generations of information and communication technologies. The trends and technology forecasts speak for the increasing mobility of multimodal technologies permitting work anywhere without limitations by time or space. Instead of fixed work sites, many workers will do a substantial part of their work at temporary sites or while moving or travelling. Such development sets new demands on occupational safety and health programmes for information-intensive work done outside a fixed work site. Non-ionizing radio-frequencies and electromagnetic waves are widely used at work, and their risks need to be assessed. Large international research projects have been launched to

assess exposures, to evaluate the potential health risks, and to provide safety standards and suggest preventive measures.

Occupational stress

In the search for efficiency, productivity and flexibility, work time schedules and working hours are becoming more irregular and unconventional, and the total hours of work are increasing. Psychological stress and psychological overload are growing due to the haste and time pressure at work, the information overload, the growing demands for competence and high productivity, the uncertainty of employment, pressure from the clients in service occupations, the threat of violence, and the declining work ability of ageing workers. There is growing research evidence of the impact of psychological stress on both the mental and physical health of working people. Lengthened working hours have been found to affect the quality and length of sleep, and also the risk of sleepiness during the work day is true for about one third of the workers. This may lead to increased risk of accidents, major hazards, and lowered quality of work.

Occupational and work-related stress is further aggravated in the countries in transition by the major social and economic changes, unemployment and lowered socio-economic status of the workers and their families. Special social development programmes in connection with the accession process are of utmost important for the sustainable and balanced development of the applicant countries.

Occupational allergies

There are signs of increasing rates of allergic occupational diseases among the workforce. Similarly, an increase in asthma and other respiratory allergies is seen in both the general populations and among working people. These trends indicate growing numbers of allergic diseases among working people in the future, possibly aggravated by the introduction of new allergens, organic dusts, animal epithelia, and sensitizing chemicals. The individual agent-specific asthma may be possible to control and prevent by careful control of the exposing agents, dusts or chemicals. Workers who have an allergic constitution need to be selectively screened for the identification of hypersensitive individuals, and they are to be guided to exposure-free environments. Dust exposure in the work environment is highly prevalent, and many of the dusts which earlier were considered inactive have been found to be allergenic or irritating. Thus, dust control programmes are of current interest in all countries, and a new critical view should be taken on the concept of 'inert dusts' and the levels of exposures to them.

Musculoskeletal disorders

Musculoskeletal disorders constitute a major problem for occupational health. Although heavy physical work and the lifting of heavy loads are moderated by mechanical work aids in the industrialized countries, they will remain for a long time a cause of overload for manual workers in industrialized countries, and particularly to high numbers of workers in the transitory and developing countries. Evidence of the association between

heavy physical work, overexertion and traumas, and low-back pain, degeneration of the large joints and intervertebral discs is cumulating, and will provide a basis for preventive actions through the moderation of work load, improvement of ergonomics, and the prevention of exertion and accidents.

It is very likely that work-related musculoskeletal disorders will remain high on the agenda in the years to come due to the ageing of the workforce, the emphasis on physical work in the transitory and developing countries, and the vast amount of office and visual display unit work in the industrialized countries. Research on the control measures and on the prevention of muscular overload and unergonomic loads still needs to be augmented.

Need for occupational health and safety services in future

Occupational health services constitute an important infrastructure which provides expert advice to the employer and the workers, institutes preventive and control actions targeted at safety and health hazards at work, provides health education and counselling, and in most instances provides also curative care for the workers. The fragmentation of enterprises and the growing numbers of precarious and temporary workers, as well as the increase in their turnover and mobility, makes it more difficult to organize services in future. This constitutes also a major challenge for the follow-up of life-time exposures, health status, and work histories of individual workers. New strategies for the surveillance of the work environment and workers' health need to be studied and generated. A conservative estimate of the total coverage of OHS of the world's working population is as low as 10 to 15%, and due to economic constraints and structural changes some adverse developments have taken place in the 1990s in the enterprises (e.g. outsourcing of OHS). In the countries in transition, the reorganization of the whole economic system also swept out a large portion of occupational health service systems, and the existing ones need substantial re-orientation. This has happened in spite of the growing need for OHS in today's work life with its higher performance demands, ageing workers, psychological stress and new technologies, and also in spite of the vital need to maintain and promote the work ability of the workers. The vast majority of the workers in developing and transitory countries have no access to OHS despite their urgent needs. An occupational safety structure is needed to control and prevent accidents and hazardous exposures.

There is a need to initiate new efforts for the development of occupational health services for all working people, as proposed by the World Health Assembly, when it adopted the Global Strategy on Occupational Health for All in 1996, and as guided by ILO Convention No. 161 on Occupational Health Services. In order to achieve such a goal by the year 2010, enormous efforts are required from the international and national occupational health expert communities, national authorities, social partners and international organizations, WHO, ILO, and the EU. The role of the EU in the development of OHS is of crucial importance particularly for the European transitory countries. Success in such a task would have a Europe-wide impact, not only on occupational health, but also on the economy and well-being of the whole working population and their families. A number of studies show the positive impact of OHS on the enterprise

economy through the reduction of sickness absenteeism, improved work ability, and improved productivity, thus supporting the sustainability of the enterprise and providing a positive contribution to the national economy.

Summary

The rapid changes in work life are challenge to the occupational health and safety programmes in several ways, i.e. through changes in enterprise structures, introduction of new technologies, growing mobility of people, and growing economic competition. Occupational health and safety services need to be adapted to the new economic structures to ensure the health and safety of working people in new types of employment contracts. They must respond to the new health and safety problems, such as stress-related diseases, musculoskeletal disorders, the challenges of new technology, and the growing risk of allergies. The OHS system is also expected to promote the sustainable health and work ability of working people, life-long working careers, and high quality of work life. If properly developed, the widely covering and comprehensive OHSs have also been shown to have a positive impact on both the enterprises and the national economy.

The EU enlargement policy, by including the economic, social and employment dimensions in the accession agenda, constitutes a unique strategy in the globalizing world which otherwise is overwhelmingly and one-sidedly dominated by the economic dimension only. We have considerable evidence to support the view that such a strategy will ultimately be a competitive and sustainable one in the globalizing world.

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Organizations in change and challenges for occupational health services

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Changing work life

Work life is currently in a state of rapid change, particularly in countries with the fastest socioeconomic and technical development. While change in stable societies was predictable, the present world is characterized by unpredictable directions of changes with high turbulence and often chaotic features. Such a situation has made the management of change and the development of organization important. Expectations are also increasing with respect to occupational health services, because of the ongoing changes in the nature of work-related diseases and occupational accidents.

In the post-modern society of today, changes can be multifactorial and involve multiprocesses and multi-outcome phenomena (1). Change can also be discussed in relation to the health of workers in developing and changing enterprises (2).

Challenges to work organizations

Recent changes in the organization of work can be summarized by the following conditions of the modern work life (3): Market orientation and capital costs, technical development, employee's social demands, and health and well-being.

Market orientation and capital costs

Even in the public sector, production and services are highly dependent on markets, sales demands, and customer preferences. Organizations increase their internal productivity and cost-effectiveness, shorten delivery times, and control the total quality of processes. The central role of capital costs in the value of work means small stocks and rapid production and also, investments in automation and environmental and internal information systems.

Technical development

The necessary tools, computers and other technological advancements are available, and prices are decreasing. Production develops in flexible organizations with horizontal integration. In other words work is processed in groups or cells and, on the other hand, with networks and vertical integration, in which design, planning, process management and actual work are linked. Job structures are changing due to the increasing 'information intensity' of tasks. Fragmentation of job careers, variation in professions during the

life span of the individual, and self-employment will be typical characteristics of the world in the future.

Employees' social demands

Employees now have more social demands at work. Despite high unemployment levels, it is obvious that work life has to be a part of human life. Values, various expectations, and emotional needs are important elements of human life. Today people expect that work, the work environment, and organizational conditions will not underestimate their humanity and their needs. Therefore, requirements will increase to develop an organization as a socioeconomic system in which there are new ideas of groups and leadership, interaction and equality between individuals, and quality of work life and processes prevail (4).

Health and well-being

Today, the costs of training new people for increasingly complicated jobs, the high competence levels needed in modern work processes and networks, the importance of cumulative experience, and the high level of performance mean increasing demands on the health and work ability of employees. Changes in occupational exposure lead to increased physical load and repetitive movements. Chemical and biological hazards due to new agents are also increasing. Furthermore, in most countries, the early retirement, stress, and problems with work ability, violence at work, work injuries, and sickness benefits have an important role as a potential risk factor and economic burden for work organizations. Employee's health and well-being have become important as factors in the success and productivity of all kinds of organizations. It means that organizations must emphasize occupational health services and the prevention of accidents and work-related diseases. They must also establish health promotion programmes and programmes to ensure the work ability of employees in the long term.

Development of successful organizations

The process of changing working conditions brings organizations to a threshold of something new, and the process of adjustment may be difficult. Many of the old, traditional aspects of individual life and organizational adaptation abilities are being threatened. People feel unsure, and the security that was once based on a predictable future and the stability of their professions has diminished. However, these threats also contain a challenge. They provide an opportunity to change the conditions of work so that the knowledge and experience of all employees can be put to good use (3).

Traditionally, organizations have developed their structure and production and service processes with a flattening, leaning or networking organizational structure. Flow charts of production and service chains have been focused on, and production cells, matrix organizations, and flexible 'just on time' models are used. In Scandinavia, a more holistic approach has developed that takes into consideration the psychosocial experience of employees in the success of the organization (4). An individual is seen as

a part of the organizational system (5) and his or her responses are the most important variables in the development.

There are two mainstream strategies to develop organizations. In many organizations both strategies are used simultaneously. First, development can be based on changes in organizational structure, technology, or work processes and planned and performed as a part of the management process. In these models employee participation (if at all) is primarily arranged with contributions from employee's representatives or through questionnaires. Second, development can be based on the actual participation of every employee and can be a continuous and organic process. The following characteristics are typical in these individually centred development processes:

- Appreciation of experience of every employee as a prerequisite for development
- Respectful accent on individual differences and individual entrepreneurial skills as a crucial power of the organization
- Arrangement of equal conversation on the goals and process of development
- A solution-oriented development method used instead of problems being stacked
- Confidence in the readiness of individuals and groups to carry out their tasks.

This approach is based on the acceptance and understanding of the basic role of psychological interpretations of the minds of individuals as a steering power for their attitudes, commitment, and action as group members and members of the organization. This understanding creates a possibility to listen and to deal, and also change, these interpretations in respectful interaction (2). Furthermore, self-esteem seems to strengthen, which is a crucial factor of long-term health and well-being (6).

Challenges for occupational health services in changing organizations

Occupational health and safety systems in changing work life have an ultimate goal, which is to support healthy work and the healthy worker. From this point of view, the following characteristics are important for future activities in the field of occupational health and safety in enterprises:

- Sensitivity and specificity of services and their further development as a response to changing needs of employees and enterprises
- Closer collaboration between occupational health services and occupational safety within the enterprise and the development of multidisciplinary preventive services
- Responsiveness to modern work life conditions – meaning greater strategic and functional integration of occupational health services into human resource management and operational-strategic management within enterprises
- Improvements in the information base for policy development
- Integration of occupational health services and environmental management systems in connection with quality management procedures within the company
- Avoiding the too profit-oriented approach of private occupational health services which may do only the legal minimum, particularly if the client employers see occupational health and safety services as an economic burden (7)
- Pro-activity instead of reactivity of responsible people and experts in the planning and implementation of organizational changes and changes in work environments –

health aspects and consequences should be taken into account in a very early stage of every change process

- Through participation to partnership – participation as a concept, although very democratic, is built on an attitude of asymmetry
- Presentation and implementation of health as a resource – many organizational change consultants and managers are very interested in factors producing a 'healthy change' and promote the health and work ability of employees
- Competence to recognize a psychosocial crisis and misinterpretations in and between various groups and individuals in the organization – this characteristic requires competence in the field of group dynamics and psychology.

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Occupational health strategies in Europe – Development and models

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Introduction

Already the Rome Treaty (1957) of the European Union confirmed provisions for occupational safety and health, and the social dimension at work in general. These provisions were further strengthened by the adoption of the EU Social Charter in 1989 (Community Charter of the Fundamental Social Rights of Workers). The Charter emphasized the importance of social dimension as an essential element of EU integration policy. The Maastricht Treaty in 1993, and the Amsterdam Treaty in 1997, in particular, strengthened the European policy for social dimension and social dialogue in the future development of integration. The Amsterdam Treaty also stipulated that a high level of protection should be ensured for people at work.

Since 1962 EU has adopted some 20 different Directives concerning occupational safety and health or other conditions of work. One of the most important instruments is the Framework Directive 391/89 EEC on Safety and Health at Work. A several years' adaptation time has been allowed for the transposition of the provisions of the Directives as regards both legislative measures and implementation. Article 18 of the Framework Directive stipulates that the member states report on transposition and compliance of the Directives into their national legislation, and every five years report on the implementation. Similarly, the Commission is obligated to follow-up and report to the European Parliament on the implementation. The follow up of the transposition by the EU Commission has shown that it has proceeded relatively well. On the other hand, problems have been detected in the implementation into everyday practice. Several types of problems can be recognized in the implementation. For example, there have been difficulties to adapt the required provision into national traditions and practices. Major difficulties to cover the whole workforce, particularly the employees of small and medium-sized enterprises and the self-employed have also been reported.

There has been some uncertainty concerning the interpretation of the Framework Directive Article 7 on preventive and protective services. Therefore, the Commission and the Advisory Committee on Safety, Hygiene and Health Protection at Work have initiated the preparation of guidelines on multidisciplinary services.

Key policy principles of occupational health and safety

Occupational health and safety (OH&S) activity touches the everyday working conditions of people. Thus, by developing OH&S, the EU improves the quality of the everyday life of people. The tripartite social dialogue on aspects of OH&S is an important element in the democratization process of EU. By eliminating hazards in the most unfavourable jobs, it also contributes to equality. In addition, the good management of

health and safety at work is an important part of good governance in general in the society. It is evident that the emphasis of the social dimension in work life and the promotion of occupational health and safety brings EU closer to its citizens.

In addition to the close links with occupational health and safety, occupational health services (OHS) are closely connected to public health. Key activities in the promotion of the citizens' health are information, advice, training and education, activities of non-governmental organizations, and the development of community services and infrastructures. OHS contribute to public health programmes through their access to the working population consisting of groups and individuals (e.g. middle-aged men) who otherwise would be difficult to reach through public health services. Thus, for example, the health promotion activities targeted at the adult population are greatly facilitated and supported by the occupational health approach. Traditionally the OHS have in most countries been under the jurisdiction of the Ministry of Labour, whereas health services belong to the Ministry of Health. As OHS substantially belong to both of these jurisdictions, also effective and close inter-sectoral collaboration is needed.

In the modern society, the development of work ability, productivity of work, and also the quality of products and services are critically dependent on the psychological and physical health and well-being of workers. By improving health, work ability, the work environment and the work atmosphere, OHS contribute positively to the quality, productivity and innovations at work, which are becoming more important in all the member states. The OHS contribute positively also to the employability of people and support and encourage the employees' participation in work life. There is scientific evidence of the interaction between health, work ability and employability of people.

There is a need to formulate a concise policy for the further development of the OHS system in each member state. Some countries have, often in connection with legislative reforms, launched a national policy and programme for the development of OHS. Such a programme may include elements such as

- Development of a normative basis and guidelines for implementation
- Tripartite collaboration and participation (social dialogue)
- Development of the infrastructure
- Developing the quality of the services to meet the needs of the workers, employers and enterprises
- Development of human resources in regard to quality, quantity, training and education, and setting special competence requirements
- Training and education of workers and employers
- Information for workers, employers, the general public, and experts on OHS
- Research
- Collaboration with various other actors, e.g. health services, safety organizations, emergency services, rehabilitation systems, employment services, etc.

The National Programme, for example, in Finland guided the development of OHS in the 1990s. Definite progress in the development of services was seen in spite of the deep economic recession in the country. It was concluded that such a long-term programme, while complying with the legislative objectives, also supported the continuity of developing the services. The programme stretched over the critical years of recession and thus carried forward the OHS vision. Such a long-term vision is gaining in impor-

tance in the new economies where shorter-cycle turbulent economic changes are taking place, and it is important to see the more far-reaching effects of the social dimension.

Basis of the current European Union legislation and its enforcement

Since 1989 the EU countries have been guided by the Framework Directive 89/391/EEC on Safety and Health at Work in their development of occupational health and safety activities. The Framework Directive has been a prominent factor behind the development of OH&S in the 1990s in all the member states. Particularly Articles 5, 6, 7 and 14 of the Directive have implications on the tasks, methods and structures of occupational health and safety in all the 15 member states.

The principles emphasized by the EU Directives on OH&S are:

- A high level of protection, derived from Article 137 of the Amsterdam Treaty
- The primary responsibility for occupational safety and health rests with the employer
- Collaboration and participation
- The priority position of primary prevention
- Avoidance of risks
- The need for actions based on risk assessment
- Controlling hazards at their source
- Use of the best available technology
- The employer is responsible for organizing preventive and protective measures
- The employer is obligated by law to organize preventive and protective occupational health services
- The requirement of using competent experts and efficient external services
- Training and education of workers
- The right for a worker to have a health examination if he or she so wishes.

These principles provide a clear and ambitious political and legislative strategy for the development of European occupational health and safety and other conditions of work.

In general, the occupational health and safety activities, including safety inspections, the setting up of safety committees, and instituting company-level safety policies and programmes have been implemented more extensively than programmes for occupational health services in almost all member states.

The Framework Directive is in general well transposed to the legislation by virtually all the member states, although they have had problems with the interpretation of the Directives and in the practical implementation. It is a common observation in all member states that the transposition and implementation of the Framework Directive has been a stimulus for the development of occupational safety and health, and also of safety activities in general, preventive services, and occupational health services as well. This is the experience of both the countries with a high level of development in OH&S and of those which have thus far not been able to develop their activities up to the level of the European average.

Models for occupational health services

European occupational health services are largely based on legislation. Fourteen out of the 17 EU/EEA member states (80%) have definite legal provisions on OHS, obligating employers to organize health services for their employees. In most of the member states, the enforcement is entrusted to occupational safety and health authorities located in the jurisdiction of the Ministry of Labour, except in Finland, Italy, and Luxembourg, where the control is delegated to the Ministry of Health, and to the Ministry of Social Affairs and Employment in the Netherlands. Only two countries, the UK and Sweden, have a voluntary basis for OHS, the others have stipulated the services by legislation. In spite of the harmonization efforts through the Framework Directive, there is wide variation between the national OHS laws and practices. A number of member states, such as the Netherlands, Denmark, UK, France, Germany, Austria and Finland, have launched special nation-wide actions to further develop their systems and to expand the coverage of the services.

The following main principles are found in the OHS of European countries:

- Protecting workers' health against hazards at work (the protection and prevention principle)
- Adapting work and the work environment to the capabilities of workers (adaptation principle)
- Enhancing the physical, mental and social well-being of workers (the health promotion principle)
- Minimizing the consequences of occupational hazards, accidents and injuries, and occupational and work-related diseases (the curative and rehabilitative principle)
- Providing general health care services for workers and their families, both curative and preventive, at the workplace or from nearby facilities (the general primary health care principle).

The principles have been developed on the basis of the international guidelines of ILO and WHO, and also they are based on national traditions and practices.

The countries in Europe have organized OHS either to implement all of the above principles or only a part of them. In about half of the European countries, OHS are exclusively preventive, aiming mainly at realization of the principle of protection and prevention, while the rest of the countries have included several or all of the above principles. Comprehensive OHS covering all of the above principles are, however, relatively uncommon in Europe.

Because of the special occupational health needs of the small-scale enterprises, it is often justified to try to organize services that are as comprehensive as possible, including each of the five principles. Particularly in the developing countries and in the newly industrialized countries where the coverage of the general health services may also be insufficient, the comprehensive model would permit combining of the OHS approach with the primary health care approach. It would permit the provision of services from primary health care units, and the primary health care services could be provided by the occupational health units of big companies for their workers and family members. Such a combination has been successfully implemented in Finland and Sweden. In addition, it

has been found that the high coverage figures in Finland are for a large part achieved by the municipal health centres which also provide OHS to the small-scale enterprises and the self-employed.

In order to meet the occupational health needs of several types of small enterprises, with different types of activities and with different structures, it is necessary to use several alternative service provision models. According to practical experiences in different countries, and following international guidelines, several different models for service provision should be available under the national legislation – e.g. a big industry in-plant model, a big industry satellite model, a group service model, a primary health care unit model, a branch-oriented model, a hospital outpatient polyclinic model, a private medical centre model, a private physician model, and the OHS provided by social security institutions. As to the needs of the small-scale enterprises, only the external OHS units can be considered appropriate. The most recent model for service provision is the network of one or several types of OHS units, and strengthening the resources and enabling the multidisciplinary approach in OHS. The typical characteristics of various models and their feasibility for small-scale enterprises are discussed below.

Big industry model with satellites

Large enterprises or institutions, industrial and non-industrial, in both the private and public sectors may organize OHS within the organization by establishing a special OHS unit manned most often by physicians and nurses, and possibly a physiotherapist and occupational hygienist. The services usually include both preventive and curative general health care that is provided to the workers and their family members in connection with the OHS. Such a unit is able to carry out comprehensive OHS with the help of a multidisciplinary team. The feasibility of this model for small industries is poor but, in some instances, such an OHS unit may also provide services for neighbouring small enterprises in the same branch of industry or any small-scale enterprises located in the same area. In the latter case, the small-scale enterprises enjoy the same services as the large company (satellite model). This is an optimal solution, but its application is very limited because the number of small-scale enterprises served by the big industry OHS unit may be restricted.

Group services

The organization of OHS jointly by several small or medium-sized industrial undertakings is the traditional way to solve the problems of OHS provision to the small-scale enterprises. Such a model is widely used in industrialized countries such as Sweden, Norway, Finland, Denmark, the Netherlands, France and Belgium. The benefit of the group service model is that it enables the establishment of a sufficiently large OHS unit in spite of the small size of the client companies. At best, such units can hire a sizeable multidisciplinary team equipped with appropriate laboratory and other specialized services. In the past 10 years some countries, such as Sweden, Finland and particularly the Netherlands and Denmark, have made efforts to increase the size of the group service units in order to take advantage of the stronger and larger service provision unit and to avoid splitting of the OHS into too small monodisciplinary units.

Branch-oriented service model

A variant of the group service is the joint organization of OHS by several companies of a particular branch of industry. Construction, food, agriculture, banking and insurance are sectors which have made such arrangements in Europe. Examples of such a model are found in Sweden, the Netherlands and France. The benefit of this model is to gather OHS resources into larger units and thus elevate the competence and improve the operational and analytical capacity for OHS. A special strength of this model is to give the OHS team an opportunity to concentrate on the special problems of one industry and thus gain strong competence in that special area. Formerly such a model for the construction industry was organized in Sweden and it provided a high-quality multidisciplinary service covering the construction sites in the whole country, and was able to carry out not only routine services in occupational health services but also research programmes on occupational health problems relating to the construction industry.

Hospital outpatient clinics

The hospital outpatient clinic model has been used in some countries, particularly in North America and in the countries of Central and Eastern Europe. This is the model primarily directed at the diagnosing of occupational diseases by combining the competence of professionals in occupational medicine and occupational hygiene with the diagnostic and therapeutic capacities of the hospital (private or public). Some of these clinics have been able to organize multidisciplinary teams that may correspond to those in the big group service units. The difference is, however, that the client companies own the group service units and have the decision-making power over service provision, while the hospital units as private or public polyclinics are in a producer-customer relationship with their client companies. This has an impact, for example, on the extent to which participation and collaboration between employers and workers can be applied to OHS units. Another problem particularly in the former socialistic countries was the exclusively curative content of the services, while prevention and work environment-orientation remained weak.

Private health care centres

The private health care centre model is a unit that is usually organized by a group of physicians who have joined to provide several types of outpatient (and sometimes also hospital-based) health services (mainly general health services). In large centres it is possible to organize a multidisciplinary team for OHS supported by, for example, occupational hygiene and physiotherapy services. Smaller units may provide only medical services. The relationship with the client companies is that of a producer with a customer, and this may make the implementation of participatory principles difficult. In some countries (e.g. Finland) it has been criticized that such units are too oriented to curative services provided by physicians. This criticism may be justified in the case of a small centre that cannot afford to hire a specialized OHS team, but instead provides services by general practitioners. Working on a commercial basis, such units may also focus on selling of their 'products' instead of taking full responsibility for the health of

workers, the healthiness of the work environment, and the quality of the work community.

Primary health care unit model

Primary health care units are usually organized by municipal or other local authorities or by the national health service. They carry out both preventive and curative primary-level health services. This is the model strongly recommended by WHO as the means for OHS provision for small-scale enterprises and particularly for agricultural undertakings, the informal sector, and for the self-employed. Due to the special requirements of OHS which are not within the competence of the normal primary health care physician or nurse, the success of the model is critically dependent on whether special training in OHS can be organized for staff members of such units. The merit of the primary health care unit as a provider of OHS is its coverage of the country and its location at community level where the clients are. This is of particular value when OHS are organized for agricultural workers and the self-employed. The weaknesses of these primary health care units as providers of services is their tendency to provide curative services only, because the ability to survey the work environment and to institute preventive measures at the workplace may be limited. The burden of other tasks and the inadequate training of primary health care staff in matters of occupational health may also be limiting factors. Experiences from Finland with the provision of OHS by specialized OHS teams of larger primary health care units are highly positive. Interesting new models for organizing OHS from primary health care units have also been recently tried in China.

Social security model

The social security institution model provides OHS from special units maintained and operated by the social security organization. Such models are available in Germany, Israel, Mexico and Spain. The model corresponds operationally and structurally to that of the group services. The social security model, however, is a unique in that the OHS activities are carried out by the same organization which is also responsible for the cost of compensation for occupational diseases and accidents. This has led to a situation where preventive services are effectively prioritized, while curative and particularly rehabilitative services are also permitted for OHS units. This model also makes it easier to get the small-scale enterprises economic support to cover the costs of OHS. A new application of such a model is the so-called 'Employer model' in Germany and Austria.

The strengths and weaknesses of various models are analysed in Table 1.

Table 1. Assessment of different occupational health service models

Model	Typical field of application	Typical size of the client enterprise	Multidisciplinarity	Spec. competence in OH	Impact capacity	Integration with safety services	Integration with general health services	Cost-effectiveness
1. In-plant service	One company	Large	+++	High	+++	+++	±	+++
2. Group service	Numerous enterprises with highly varied activities	SMEs	++	High	++	+	±	++
3. Trade service	Numerous enterprises with one or a few types of activities	All sizes	+++	High	+++	+++	±	+++
4. PHC-unit	Numerous enterprises with high variation of activities	SMEs	±	Not always high	+	±	+++	+
5. Private OHS centre	Several enterprises	Large or small	–	Variable	+	±	–	+

SME = small and medium-sized enterprises, PHC = public health care

New strategies for occupational health and safety in Europe

Changes in work life

In the new Millennium, globalization, the implementation of new technologies, and the fragmentation of work life bring along new needs which are not necessarily covered by the EU Framework Directive. Changes in economic structures, production methods and organization of work, work practices and occupational profiles are changing the requirements for safety and health at work. Particularly problems of a psychological and psychosocial nature, the fragmentation of work life, growing numbers of self-employed and short-term and precarious workers, as well as the needs of special labour-intensive sectors, such as agriculture, forestry, fishing, mining, construction and other hazardous branches, and special groups of workers, such as elderly people, may require new approaches in the provision of services.

There are several obvious needs for the further development of occupational health and safety:

1. First, a legislative basis is needed at the national level for ensuring equal access, a minimum level of quality, appropriate content, continuity, and scope for safety and health services. This is a logical consequence of the Framework Directive.
2. There is a need to clarify the interpretation of Articles 5, 6, 7 and 14 of the Framework Directive in view of the organization and content of preventive and protective services, and particularly of OHS.
3. Nearly all countries still need to work intensively for the achievement of full coverage of the workforce in occupational safety and health services, and particularly the services for small and medium-sized enterprises.
4. The 'new work life' is bringing entirely new conditions and new challenges, which are not necessarily covered by Directive 89/391, such as psychological aspects of work, information-intensive work and, for example, work abroad (outside EU).
5. There are several sectors and special groups of workers which are not yet covered even by the minimum level of services stipulated in the Framework Directive, such as self-employed persons, agricultural workers, microenterprises, students, etc.

There is also a need to continuously constrict the differences between the present member states and the applicant countries, not only in the accession process but also in the future in the enlarged European Union.

New policy objectives and strategies of the European Union for occupational health and safety

Two important strategy documents have been recently launched by EU for the further development of health and safety and of work life in general:

a) The Commission communication 'Investing in Quality' that is a direct response of the Commission to the objectives set by the Lisbon European Council in March 2000

b) The Commission communication on a new 'Strategy on Health and Safety at Work', 2002–2006.

The Commission response to the Lisbon summit objectives focuses broadly on the quality of work. The communication includes the objectives for improving the quality of work life for Europeans through the implementation of the social dimension and the strengthening of cohesion, through improvement of competitiveness, and through improving the quality of work and the employment situation hand in hand. The approach of the member states to achieve such strategy objectives will be monitored with the help of indicators comprising job security, the competence of working people, the fitting together of work and family life, and occupational health and safety. The preparation of such a monitoring system is underway, and some pilot experiments are being carried out.

The new occupational health and safety strategy recognizes the dynamic changes in the world of work, changes in the society, and demographic changes of the workforce, including ageing and the growing mobilization of women to the work life. New forms of employment, particularly the growing precariousness, the increasing numbers of self-employed and of small and medium-sized enterprises are also considered. The new types of risks and health and safety problems arising from the so-called 'new economy' are also challenges for health and safety.

The new European policy will be built on a comprehensive, global approach to well-being at work. It will involve continuing efforts to reduce occupational accidents and diseases. It will take into consideration the gender dimension, the prevention of social risks, the prevention of occupational diseases, and demographic changes in relation to risk. It will respond to new forms of employment and work organization, and focus on analysing new risks. The new strategy will strengthen preventive culture through education, and awareness raising, and by anticipating new emerging risks. More efficient law enforcement is also a method for improving prevention.

New instruments and the combined use of various instruments can be used as tools to implement the new strategy. Also, new partnership relations and voluntary activities are encouraged.

The preparation for enlargement is one of the important elements in the new European Union Strategy. This will require technical assistance, partnerships and Twinning Projects, the exchange of knowledge and experiences, the strengthening of the social dialogue, and the improvement of statistics and the collection of data on occupational health and safety and on work life in general.

New instruments for developing working conditions

A unique feature of the EU general integration policy is the emphasis given to the social dimension, and this dimension is primarily applied to work life. Europe has a number of instruments for implementing the social dimension at work, such as:

- Amsterdam Treaty from the year 1997, which is the principal agreement of the European Union; it stipulates high-level protection as the basic principle in the development of working conditions.

- The European Union Directives, which are binding to the member states, and the so-called Framework Directive 89/391/EEC with its about 20 Daughter Directives, constitute the practical instrument for the implementing principles of the Amsterdam Treaty and the new strategy.
- Numerous specific guidelines, which are mostly interpretations of the specific provisions of Directives, provide practical instruments for implementation. The most recent guideline concerns multidisciplinary services and guides the development of occupational health services in accordance to the Framework Directive.

The Directives function relatively well in practice, if implemented properly. The Commission emphasizes the importance of the proper implementation of the existing Directives instead of preparing numerous new instruments. For the thirteen countries that have applied for membership into the European Union, a comprehensive accession process has been designed. The EU Strategy for enlargement clearly stipulates that the condition for membership is the adoption and implementation of the existing EU legislation in the applicant country. Chapter 13 of the enlargement Agenda contains the social policy legislation, including health and safety at work. By March 2002, 10 out of 12 applicant countries had completed the negotiations with the Commission on Chapter 13. The accession criteria (29 chapters) cover a wide scope of prerequisites that the applicants have to meet in order to be accepted to the Union. Transposing the EU Directives into the national legislation and implementing them in practice are among the central criteria. The ultimate objective is to harmonize the minimum conditions of work in the member states and in the applicant countries and thus to prevent social dumping.

It has been recognized, however, that the Directives are not the only means to steer the development of working conditions. A number of new instruments have been generated to support more flexible implementation, particularly in aspects of work life which are difficult to regulate. The following instruments warrant mentioning:

- European-wide surveys of working conditions, carried out particularly by the EU Dublin Foundation
- Indicator systems showing the situation in countries, and the benchmarking of the best performers
- Occupational health and safety management systems as a part of the quality management of enterprises
- Production of good practice guidelines, manuals and check-lists for the implementation of best practices
- Commitment of enterprises to social responsibility, and production of social reports by the enterprises
- Harmonization of statistics on occupational accidents and diseases
- Development of European-wide Internet-based data systems and information services on occupational health and safety
- Launching of EU-wide information campaigns and competitions
- Initiation of concerted research projects and research networks.

The new European Employment and Social Policy strategy has a special entry for health and safety at work. It aims at the development of high-quality jobs from the health and safety point of view. The following priorities are of interest as regards both research and practice:

- Psychological stress
- Musculoskeletal disorders
- Violence at work
- Allergies at work
- Occupational accidents
- Hazardous substances
- Ageing and work
- Women and work
- Combining work and family life
- New information technologies
- Occupational health and safety
- Employability.

It is likely that most of the European occupational health and safety efforts in the near future will substantially be directed at these problem areas.

The question arises whether such ambitious new policy objectives are feasible and realistic in practice. Finland serves as an example of a country where the practical implementation of the new European principles has been carried out well. In Finland the occupational health service and occupational health and safety systems have been developed stepwise from a strictly curative, health-oriented system to a comprehensive, multidisciplinary promotion and development service, aiming at the maintenance and promotion of the work ability of workers, and at the development of the work community and enterprises as a whole. The development of this new policy was carried through on a nation-wide scale during a 10-year period. Today 80% of the Finns work in enterprises where such a comprehensive strategy is being implemented. It has proven to be highly beneficial for both the work ability of workers and the productivity of the companies.

Summary

The long European history in occupational health and safety has been successful and able to develop in the pace of the changing work life and the society at large. The strong emphasis given to the social dimension at work in addition to the economic dimension, and new objectives for quality of work open new avenues for the development of health and safety as well. The new European strategy implies expansion of the scope of OH&S to the direction of comprehensive, multidisciplinary development and promotion-oriented strategy that includes the traditional health and safety aspects, but also aims at promoting work ability and well-being at work. The strategy thus contributes to better jobs, employment, innovativeness and competitiveness of European work life.

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Development of occupational health services in Finland

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Occupational health and safety (OH&S) legislation has been developed in most European countries in pace with the changes in work life and production systems. In Finland, a stepwise development of the occupational health strategy has taken place as follows:

1. The activity was started as conventional curative health care at the time of the industrial revolution.
2. Later on, after World War II, the scope of occupational health service (OHS) was expanded to include prevention and control of risk factors at work and in the work environment.
3. In the 1990s a new direction was taken to include health promotion into the content of the services.
4. The maintenance and promotion of work ability was adopted as a key strategy in health promotion.
5. And finally, at the beginning of the new millennium, the enhancement of the well-being of working people was added to the previous strategies.

In this way the Finnish occupational health services have expanded from relatively narrow curative activity to a comprehensive occupational health programme.

Sporadic occupational health services and curative care

Before World War II the main emphasis in Finnish health care was on curative care and the elimination of infectious diseases, such as tuberculosis. Only a few of the biggest enterprises had employed an occupational health physician, who usually had the general practitioner approach, although some attention was directed also to the preventive approach and the rehabilitation of workers with disabilities due to work injuries.

During the post-war years, interest was focused mainly on veterans and their rehabilitation, and questions related to nutrition and the health of children. The number of occupational health physicians grew and the first occupational health nurses as well as physiotherapists were employed by the larger companies. Occupational health was still mainly reactive and comprised of the treatment of diseases, as in general practice.

At the same time, however, the scientific and developmental basis for occupational medicine was grounded, as the Finnish Institute of Occupational Health was established in 1945 as a result of the enthusiastic efforts of Professor Leo Noro and his colleagues at the Department of Internal Medicine of the Helsinki General Hospital.

From voluntary enthusiasm to legislation-based activity

Growing research efforts brought to daylight numerous factors in the work environment which were found to be hazardous to the workers' health. Simultaneously, the prevention of chronic diseases, such as musculoskeletal and cardiovascular diseases, had been given a high priority in the public health agenda.

In the 1970s legislation on OH&S was amended towards the prevention of occupational injuries and diseases, towards controlling the work environment, and later, to ensuring OHS for all working people. Employers' and employees' organizations and their collaboration at all levels were essential elements in such development. In 1971 the largest labour market organizations (employers and trade unions) made an agreement on the development of occupational health services in enterprises. The Act on Occupational Health Services was passed in 1978, and came into force stepwise by 1983. The Finnish Ministry of Social Affairs and Health has been in the lead of drawing the policy aspects of the legislation and the Finnish Institute of Occupational Health carried out the practical drafting of the Act. So at the beginning of the 1980s Finland was one of the few countries where the provision of occupational health services was regulated by very effective specific legislation.

The main principles of the Finnish Occupational Health Service Act

Occupational health services are preventive, and the responsibility of the employer

The objective is healthy and safe work in a healthy and safe work environment, and a well-functioning work organization and work community. The prevention of work-related diseases, as well as the maintenance of the employees' work ability and functional capacity, and promotion of their health, are equally important objectives.

In Finland employers are obligated to provide and finance OHS for their employees. Parallel to the EU Directive 89/391/EEC, the employer must also have a prevention policy for promoting safety and health at the workplace in general. Programmes for promoting occupational health and maintaining the employees' work ability are closely linked to the content and implementation of that policy. Self-employed entrepreneurs and farmers are entitled to get the services from municipal health care centres.

The aim is to get the enterprises to voluntarily take an active approach and to commit to the control of their health risks. The content of the activities as well as the volume and nature of the services must be planned, organized, assessed and changed according to the conditions, the personnel structure and the work-related health problems of the workplace, i.e. based on the analysis of the company's needs. The occupational health practice of OHS teams is guided by the 'Good Occupational Health Practice' guideline that very much emphasizes the multidisciplinary approach in the provision of services, including the activities of occupational health physicians, occupational health nurses, physiotherapists, psychologists and occupational hygienists.

Several alternatives for providing services

When providing occupational health services, employers must resort to health care professionals who have the proper education and competence in occupational health and an adequate knowledge of working conditions. Employers can arrange OHS in one of the following ways:

- OHS from a municipal health care centre, which is obliged to provide services if the client requests.
- The employers may organize services in the company's own OHS unit.
- An OHS unit may be established and owned jointly by several companies.
- The services may be provided by a private medical clinic or a physician who is entitled by health authorities to provide OHS.

Collaboration is an important asset of occupational health service

Good cooperation between the employer and the employees creates opportunities to plan, develop and evaluate the company's occupational health service system in a client-oriented way. Experiences of OH&S prove that changes in the work environment can not be carried out successfully merely through the action of an expert organization. Instead, they also call for large-scale participation on the part of the collaborating partners, and their acceptance of the actions of the OHS personnel. The statutory forms of collaboration are defined in the Occupational Health Service Act. In addition, collaboration is included in the collective agreements.

Provision of essential information, but ensuring confidentiality

The employer, the OH&S committee of the workplace and the safety representative of the workers have the right to get information from the occupational health personnel, when this information is important from the viewpoint of the workers' health and the improvement of the working conditions. However, it must be noted that the occupational health personnel are bound to secrecy concerning an individual worker's health.

The occupational health service consists of several activities

Depending on the work, the working conditions, and the recognized needs of the company, OHS cover the following activities:

- Survey of the work environment, with risk assessment constituting a basis for other OHS activities
- Informing and guiding of employers, managers and workers regarding the observed health hazards at work
- Pre-employment and pre-placement and periodic health examinations particularly for workers in jobs involving a specific risk of illness, and when there is reason to suspect that the work involves health hazards
- Participation in actions for promoting and maintaining the work ability of workers

- Monitoring how disabled workers are coping with their work
- Referral to treatment or rehabilitation when necessary
- The employer can voluntarily provide curative care and other health care services for employees if he wills.

The employer is entitled to reimbursement of the costs of the OHS he provides to the workers. There are different levels of reimbursement for the costs of obligatory preventive OHS, and for voluntary curative and other services.

The Ministry of Social Affairs and Health and the provincial governments are obligated to supervise the work of OHS professionals and the medical content of the occupational health services. It is the duty of the authorities to make sure that employers have arranged occupational health services in accordance with the Act. The responsibility of employers to provide OHS for workers is, however, controlled by the OH&S authority.

Public health and occupational health service

The high coverage of OHS in Finland is to a great extent the result of the activity of the public health sector, and especially the efforts of local municipalities and their primary health care units to direct their resources to OHS. Thus, even small and medium-sized enterprises have realistic possibilities to provide OHS for their workers.

Finnish Institute of Occupational Health and occupational health services

The Finnish Institute of Occupational Health has played a major role in the development of OHS and the improvement of work environments in Finland. Researchers at the Institute have gathered scientific data and transformed these data to practical models and to quality criteria for OHS. The development of work life in general is also facilitated by the Institute's OHS expertise. An important prerequisite for the development of OHS and work environment in Finland has also been the dissemination of information and the training of professionals by the Institute. Thus the OHS sector has a good reputation and an increasing number of students choose this discipline and profession.

During 1970–1985 the legal, organizational and knowledge basis was established for an effective preventive approach in occupational health services. An important step in this approach is the risk assessment, and planning and implementation of effective actions for controlling risk factors in the work environment. Such a comprehensive approach requires collaboration between various professionals and with the representatives of the enterprise. New models are needed for joint work and interaction between different actors, experts, authorities and training institutions.

Healthy worker in a healthy enterprise

During the 1990s, OHS in Finland were seen more and more often as a resource, and not only as a burden to the economy of the enterprise. Occupational health professionals are increasingly working in collaboration with safety engineers, designers and planners. Many OHS teams include psychologists and physiotherapists, who have become essential members of multidisciplinary teams. Furthermore, the collaboration between OHS professionals and personnel managers of the companies, the decision-makers in the enterprise, and the representatives of employees, is quite common and is seen as a prerequisite for effective and beneficial changes in the work environment.

Future challenges for occupational health services in Finland

Although over 90% of employees are covered by OHS in Finland, many challenges still remain for improving OHS, e.g.:

1. Increasing the coverage of services, particularly for small and medium-sized industries, self-employed, temporarily employed persons, and for workers in agriculture, construction and transportation
2. Enlarging the content of OHS to include even more substantially the maintenance of work ability and health promotion
3. Integration of OHS into primary health care, public health and municipal health and environmental health services, and collaboration between these
4. Closer collaboration between OHS and OH&S within the enterprise. The multidisciplinary service concept is needed in today's multidimensional work life. Psychosocial, physiological and physicochemical and engineering skills should come together in a multidisciplinary way in OHS
5. Responsiveness to the challenges of modern work life (information society, ageing, lowered work capacity, human resource development and organization development processes) in the enterprises
6. Collaboration at company level between OHS personnel and these dealing with environmental health considerations
7. Improved training and education for professionals, employees, managers and workers
8. Bringing forth the economic incentives for improved health and safety, and emphasis on the evaluation of OHS based on e.g. cost-benefit analysis.

At the beginning of year 2002 a number of amendments were made to the Finnish Occupational Health Service Act to assure its correspondence to the changes in the work life. The collaboration between employer, employees and occupational health service providers is strengthened according to the new law. The planning of OHS must be carried out jointly with the stakeholders, workers and employers. The objectives of OHS have expanded, now including in addition to the promotion of the workers' health, also the healthfulness of the work and the work environment, and the functioning of the work communities and organizations. Another expansion concerns the promotion of the work ability of employees during different phases of their work career. Furthermore, the multidisciplinary teamwork of specialists in health, psychology and technical matters is emphasized in the renewed law. The professional independence of OHS staff is also re-

quired. Furthermore, it was seen necessary to emphasize the need of OHS activities and their client orientation. The needs at the workplace are to be considered in defining the content and the scope of the services. The amended act requires that a written contract is made between the employer and the service provider regarding the organization, provision and content of the services.

The role and the rights of employees have been strengthened in numerous ways. Employees have the right to make proposals for OHS activities, and the employer is obliged to present an explanation if the proposed actions have not been carried out. The employer is obliged to draw up an actual action plan for OHS, and it must be based on a workplace analysis, which has to be available and on display for all workers. OHS activities should follow 'good occupational health practice' and the employer is obligated to evaluate the performance and impact of the services as defined by the new amended act.

In the revised law, the comprehensiveness of OHS activities and collaboration between interest groups at work are further emphasized. Follow-up of the activities guarantees the sensitivity and specificity of the OHS in the present rapidly changing work life and also in the future.

Development of national systems of occupational health services

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Background

In general, traditional occupational health services (OHS) focus on protection and prevention, mainly with respect to safety, personal protection, and work environment issues within the workplace. Prevention covers also diseases and injuries. The concepts of preventive actions and the methods with which they are carried out vary according to country, professional training, tradition, and the legislative and practical requirements. Employers often expect immediate benefits from prevention in terms of increased productivity, whereas professionals increasingly see their work as long-term activity to improve the quality of life among workers and to promote health.

OHS have been defined in international recommendations and conventions. The first definition was presented already in 1955 by the World Health Organization (WHO) and International Labour Organisation (ILO). In ILO Convention No. 161 and Recommendation No. 171 on OHS (1985), the basic principles are presented more precisely. The WHO/ILO Joint Committee on Occupational Health (1995) stated that occupational health should focus on the maintenance and promotion of workers' health and work capacity. Improving work environments and developing work organizations and cultures help support health and safety at work and promote a positive social climate.

Within the European Union (EU), the principles for implementing preventive and protective services are presented in Framework Directive 391/89/EEC, which emphasizes traditional physical and chemical occupational health hazards. However, simultaneously, new challenges need to be met, such as new technologies, new forms of radiation, new chemicals, new biological factors, allergens, new musculoskeletal disorders, psychological and psychosocial problems, violence at work, and problems related to the work ability of ageing workers. Such problems cannot be approached with traditional preventive methods, and thus new strategies have been adopted in many countries.

The content of services has been monodisciplinary, either medical in some countries or technical in others. The practices and requirements for health examinations vary widely, and health examinations are often seen as the principal form of occupational health activity. At the same time, advice and consultations on complex problems of psychological stress, psychosocial problems, and work ability are increasingly requested from occupational health personnel, and new methods and approaches are needed to deal with these problems.

In addition, some countries are increasingly interested in health promotion approaches to dealing with large entities of workers' health, the work environment and the work community simultaneously (i.e. the comprehensive occupational health approach). Inevitably a multidisciplinary approach is required, as defined in recent acts concerning occupational health and safety in countries like Belgium, Finland, and the Netherlands.

Development of occupational health services

The basic requirements for successfully developing a well-functioning and sustainable national OHS system can be presented in terms of the following principles:

1. Wide commitment among responsible state administrators, employees' and employers' organizations and health professionals' associations to adopt national objectives for OHS (e.g. principles for the prevention of occupational health and safety risks, the promotion of work ability and health, full coverage of services, professional competence and the independence of occupational health personnel, the planning and monitoring of services in conjunction with employers and employees and the assurance of high-quality services)
2. Defined roles for public institutions and authorities, social partners, and professional OHS associations in the development of policies and strategies as well as in the development and implementation of a service infrastructure
3. Assurance of human resources for OHS through involvement in training administration and training institutions
4. Evaluation and monitoring of the quantity, quality, and availability of OHS with continuous feedback to all levels of the national and local OHS systems
5. Assurance of financial resources and evaluation of cost-effectiveness of the OHS system according to respective national requirements.

The main principle in the actual process of developing OHS at the national and local levels is a responsiveness to the assessed needs for such services. Thus the development process should be based on a careful mapping of the needs of clients and target groups, including risk assessment and work life phenomena in relation to occupational health. Results of the analysis of needs and risks are compared with the opportunities of the present health service system and other resources available to support the activities necessary for a well-functioning national or enterprise OHS system. In many countries, special national and local development programmes have been launched to assure the relevant level of OHS.

The State as a steering structure and heightened general awareness are important factors in the achievement of services with high coverage. Strategies for increased OHS coverage are illustrated in Figure 1.

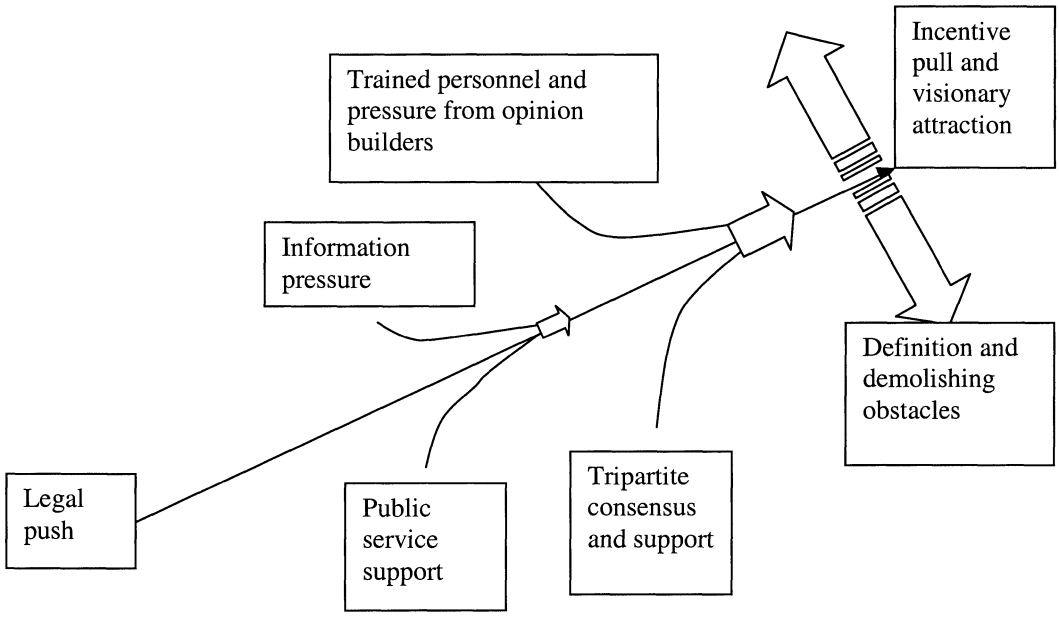

Figure 1. Seven strategies for increasing the coverage of occupational health services

The development of OHS in Estonia depends greatly on the activities and resources of the national agency for occupational health (the Occupational Health Center). Although the Ministry of Social Affairs is important also because of its opportunity to steer development through with legal channels, centre of excellence, like the Occupational Health Center is needed to support the implementation of legislation at workplaces and to assure the high competence and quality of services. Information dissemination and training are also basic tools through which to increase awareness and sustain OHS activities.

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Economic aspects of occupational health services

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Occupational health services (OHS) are a part of human resource management, which in turn is a part of the value creating activity of the firm and other organizations. Although the primary objective of OHS is not to increase the profit of the firm, it does have effects on the economic result of the firm. The economic effects of OHS are twofold (Figure 1). On the one hand, OHS can be seen as a way of personnel cost containment. By efficiently treating the illnesses of the personnel at an early stage, the costs in the form of treatment costs and loss of work hours can be reduced. On the other hand, and even more importantly from an economic point of view, OHS can be viewed as preventive action, which prevents work-related diseases and accidents from occurring at all, and enhances the employees' work ability in general. By engaging in all forms of promoting work ability – health- and safety-related information and education, development of the work environment and ergonomics, and of the work community – the OHS can affect the productivity of the firm, and consequently the profitability.

Research results indicate that physical fitness of the personnel reduces the amount of absenteeism (1) and improves the social climate of the workplace (2). As a rule of thumb, American scholars say that one dollar invested in the so-called work site health promotion leads to a three dollar gain for the company (3). More comprehensive interventions can have even bigger effects. So for instance the so-called Dalbo project at the Fundia Company in southern Finland gave a tenfold return compared to the investments (4). A FIM 0.3 million investment per year in 1990–1994 resulted in a FIM 3 million annual benefit. Each year an almost FIM 1.5 million benefit was due to reduced early retirement costs and increased productivity. Only FIM 0.2 million was due to reduced sickness absenteeism. This case gives a general picture of the dimensions of the benefits of well organized OHS. The Dalbo case indicates that the reduction in sickness absenteeism is not so important from an economic point of view as the effects on early retirement costs and on productivity. In some cases improved OHS activity can even temporarily lead to higher sickness absenteeism level, and still it can be economically feasible, because of the other positive effects.

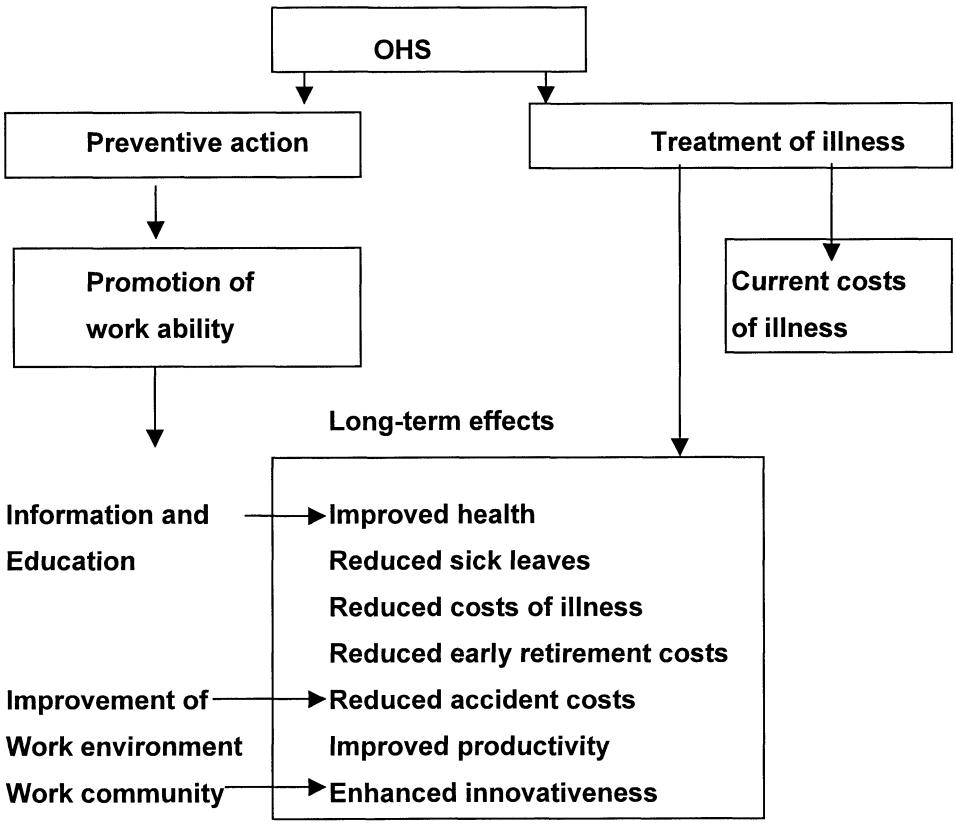

Figure 1. The economic effects of occupational health services

Perhaps the most advanced way of looking at the economic role of OHS is to approach it from the viewpoint of 'intellectual capital point'. According to e.g. Karl-Erik Sveiby (5) intellectual capital consists of three mutually related elements: (a) Competence, which is the knowledge and skills of the personnel, (b) Internal Structure, which includes the company culture, and (c) External Structure, including the relations to customers and suppliers. There are numerous ways in which the OHS can affect the intellectual capital of any organization. For instance, by improving the health and endurance of the personnel, OHS increase the number of the available working hours of the firm and enhance the ability of the personnel to utilize their potential knowledge. Knowledge is not merely cognitive activity; to be usable it must be combined with physical and mental health.

OHS can also play an important role in enhancing the internal relations of the company. By carrying out company climate surveys the OHS can provide information to both the employees and the employer about the weaknesses and strengths of the organization. The role of OHS can in these contexts be irreplaceable, because valid company climate surveys can be done only by organizations that are trusted by the personnel. Quite often OHS are the only actor that is fully trusted by the personnel, and which have the competence to conduct and interpret the results of company climate surveys.

In addition to affecting the actual competence and the internal structures of the firm the OHS can affect the third area of intellectual capital, namely customer satisfaction. According to data from the ParasKäytäntö-BestPractice Ltd., there is a positive correlation between employee satisfaction and customer satisfaction. Consequently, the OHS have a role also in improving the external relations of the firm.

When the effects on the intellectual capital of the firm are considered, the economic effects of OHS can have a fundamental impact on the whole business activity of the firm. Especially when the innovativeness of the firm is increased by the help of OHS, the economic effects can be significantly greater than previous research results have shown. Research results from the Small and Medium-sized Enterprises Programme, by the Finnish Institute of Occupational Health, indicate that OHS activity can have effects which go beyond the traditional productivity increase (6).

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Ensuring equality in work life

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General situation of gender equality in Estonia

Gender equality means that power and influence are equally distributed and that women and men have the same rights, obligations and opportunities in all areas of life. Achieving gender equality and fairness in society requires a comprehensive gender equality policy that applies to both men and women. Gender equality is connected to essential values and factors such as respect, equal worth, understanding, quality of life and identity (1).

Estonia has expressed its political will to adopt the strategic goals of the Western world by signing the United Nations conventions on human rights, including the Convention on the Elimination of All Forms of Discrimination Against Women and the agreements of the Council of Europe. However, the very concept of gender equality is not yet widely understood in Estonia by policymakers, legislators, employers, and employees. One problem is the lack of sufficient knowledge about gender equality issues and the lack of people with the knowledge needed to develop gender equality. In its extreme, gender equality is being regarded as a pseudo problem, an outside product imported into Estonia from other countries.

It is important to understand that the so-called natural development of welfare societies is, in reality, based on progressive, systematic, and planned long-term activities, in which Estonia could not, because of historical reasons, participate actively for 50 years. The development of welfare societies was based on social science research, the expertise of specialists and the data necessary to monitor social processes. Research and gender sensitive analysis of the social process are preconditions that offer possibilities and means for developing human-centred society and policies (2).

In Estonian society, numerous gender inequalities exist, for example, occupational gender segregation, unequal pay, gender dissymmetry in health and poverty, under-representation of women in the political decision-making process, and an imbalance in the division of family responsibilities. Women's average wages have been approximately one-quarter less than those of their male counterparts during the whole period of independence, and the gender gap has even grown in recent years. Women enter the labour market better educated than men do, but their better qualifications do not adequately determine their position in the labour force.

Women are widely represented in occupations and sectors of work that are not very prestigious and which do not offer career development. A good half (54%) of the men work in the primary or secondary sectors, while the majority of women (70%) work in the service sector. Only a few women can be found in high-ranking positions, either in

business organizations or politics. This situation can be considered as evidence of the existence of a glass ceiling. According to the population survey 'Estonia 98', as reported in the Estonian Human Development Report (4), considerably fewer women than men feel that their jobs offer possibilities for career advancement and are autonomous, prestigious and well-paying.

The causes of inequality lie in the social expectations of women's and men's roles, which are still more traditional than in the Nordic countries, as an example. The reasons behind lower wages and labour market segregation are not sufficiently recognized in Estonia. Traditionally, the activities pursued by women are culturally less valued. However, attitudes are changing among younger people. New views on gender roles are emerging, particularly among younger women, about 25% of whom find that domestic work should be more equally shared between women and men. However, only 7% of men share this view. For a real change in attitudes, special focus needs to be placed on training young men in equality issues. When traditional gender roles disappear, alternative new identities are needed.

Women and men in Estonian work life

Women's main employment fields are education, health and social work, as well as wholesale and retail trades. Men's employment fields differ, being fishing, agriculture and forestry, as well as construction and transport industries. There is a trend towards increased gender segregation because of the increased employment of women in the service sector.

Because of strong segregation, women's jobs are more open to contacts with other people both within and outside the workplace – patients, pupils, customers – than men's jobs. Female jobs are characterized by elements of caring, nurturing and supportive roles, while men monopolize the 'heavy' manual, technical and managerial tasks. This is also the case in the European Union, even though important national differences in these broad patterns can be found.

Existing research and documentation show that women's occupational settings have multiple stressors (stress factors), and when considered together, they can contribute to high levels of stress and illness. The new 'emerging' problems, such as stress, anxiety, violence at work, psychological harassment and intimidation, are more frequently found in education and in health and social services (e.g. in occupations in which women predominate).

Rapid structural changes

The Estonian labour market underwent rapid structural changes during the 1990s. The proportion of industry and, especially, agriculture in employment has been decreasing, while that of services and high technology have been increasing. The changes, with heated competition and 'atypical' work forms, are leading to a harder work life, and

therefore put new demands on people's adaptability and coping skills. These changes affect both women and men, but women are particularly vulnerable.

According to a report from the World Bank, almost half of the workers in Estonia changed jobs during 1992–1994 alone. In Tallinn the changes have been even more comprehensive than in other regions of the country, and many new jobs have been created for both men and women. Population surveys in 1993 and 1998 showed that the share of men in senior or managerial positions has increased, while the share of women has decreased. Simultaneously women's share among industrial manual workers has increased, a new feature showing that women have increasingly found employment in newly established enterprises (4).

The Working Life Barometer of 1999 showed people's estimations of the directions of changes in work life to be positive (5). The meaningfulness of work, the opportunities for influence, and the availability of information are questions that have taken a positive development in Estonia. There is, however, one exception, which points to the opposite direction: gender equality.

The negative trend in gender equality may be related to the increased competition and uncertainty in the labour market, and to the persistent salary difference between women and men. The transition to a market economy has broadened the gap in wages, and this gap appears to be the most notable in newly established enterprises.

Even if there have been major changes in work life, a survey on health behaviour among the Estonian adult population in 2000 (6) showed a steady decrease in stress and depression during the 1990s. Women seem to feel somewhat more depressed than do men; however, the overall trend is the same, decreasing for both genders (Table 1).

Table 1. Percentage of persons depressed more than usual, 1992–2000

Year	Men	Women
1992	43%	58%
1994	40%	48%
1996	43%	50%
1998	36%	44%
2000	35%	45%

Everyday problems and hassles (e.g., balancing work and personal life) were seen as the most important reasons for the high rate of stress and depression among both men and women.

Global approach to well-being at work

Due to the high degree of gender segregation and major changes in their work conditions, men and women are exposed to different work environments, occupational settings and different types of demands and strains. Gender-segregated work life must be taken as a starting point for identifying psychosocial and other risks in the work environments of women and men.

These problems are linked less to exposure to a specific risk factor (such as noise) than to a whole set of factors that increasingly are of a psychosocial nature (e.g. paced rhythm of work, multiple responsibilities, need for social skills, flexibility) and these factors need to be addressed within a global approach to 'well-being at work', as presented in the new strategy of the European Union with respect to health and safety at work in 2000–2006 (3). The strategy also emphasizes the importance of mainstreaming the gender dimension into risk evaluation, preventive measures, and compensation arrangements so as to account for the specific characteristics of women in terms of health and safety at work.

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Networking

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Fragmentation of occupational health and safety – A need for new strategies

Occupational health and safety (OH&S) is a mosaic that cannot be mastered by one professional or one agency. Broad or specific responsibilities, capacities and interests exist in ministries and government agencies, employers' and workers' organizations, the health care system, faculties and departments of universities, training institutes, and non-governmental civic institutions. Subject-wise, elements of OH&S are related to clinical medicine, public health, social security, labour relations, productivity, employment, economics, equity, and environmental health.

Much of the daily work is, of course, routine and dealt with by individual professionals or agencies without the need to resort to support from others. However, latent possibilities for various complex problems are numerous. In difficult situations, it is necessary to seek assistance from multidisciplinary sources of scientific and professional expertise.

Occupational health and safety (OH&S) professionals consult experts who have special skills. Reaching out for advice is possible through established relationships or knowledge on where to seek for counsel. Such relationships provide a support system for professionals. If a consulted contact is unable to assist, he or she may know another source that can be approached for help. Such an extended web of relationships is a network, even if informal and haphazard. Like individual professionals, OH&S organizations also have needs to resort to external expertise when internal capacities are insufficient for handling a particular situation.

A modern strategy for managing the complexity of OH&S is to build networks that cross conventional administrative borders of organizations. A network links fragmented capacities of manpower, professional skill, research abilities, laboratory facilities, information, and services to a system in order to make a greater impact with available resources.

Definition of a network

A network is a system of interconnected things, points, or people – like a system of rivers, railways, or telephone lines. 'To network' means to link together to allow the sharing of information and efficient use of resources.

Purpose of a network

The purpose of building a network is to form a transparent system by opening all channels between relevant organizational entities, and to make these channels explicit and easy to use. A network promotes communication and cooperation between organizations, i.e. to increase efficiency of the system as a whole. Novel telematic tools provide means for efficient inter-organizational co-operation in a way that formerly has not been possible.

Network architecture

Network structures can differ in accordance with their purpose and need. Some networks are closed systems while others are open.

A network can be built around a central hub (director) which governs and controls the information flow and activities of members, and may act as a clearing house. Ministries often have internal networks, which typically are hierarchical in structure. Information may flow vertically back and forth as stipulated by the rules of hierarchy.

A centralized (hierarchical) network topology is not optimal for linking OH&S infrastructures. Few organizations are willing to give up the power of decision to another hierarchy that might administer and control the network. Experience has shown that independent organizations may be lured to join a centralized network, but the motivation often remains low for providing contributions to the network.

Another architectural option is a decentralized network which does not have a director in the sense of authority that could command the member organizations. This kind of network topology means voluntary participation of organizations on a peer-to-peer basis. Each organization retains full autonomy on its participation in network activities. Thus, participation in the network does not require any change of existing internal practices, it does not mean any new legal or other considerations, and it does not need to surrender any organizational power.

In a decentralized network the members are voluntarily linked together because such linkage provides benefits to the members without requiring commitments that may be difficult to fulfil.

A decentralized OH&S network typically promotes

- horizontal communication across organizations and administrative borders
- economic use of national capacities
- inter-organizational task forces
- flexibility
- equality
- transparency of governance
- OH&S awareness in the society
- empowerment of local institutions for dealing with OH&S.

Levels of networks

OH&S networks can be built at different levels and for different purposes. The Baltic Sea Network on OH&S, for instance, is a regional arrangement between the national focal points of ten countries.

A national network typically has broad goals and policies for promoting co-operation between organizations or units that have OH&S responsibilities or capacities in a country. A local network, such as a provincial network, ties together expertise that can be used for solving local problems. Subject-oriented networks are formed by organizations that have similar technical interest areas – such as OH&S training and education, elimination of silicosis, chemical safety, etc.

Secretariat

A decentralized network that does not have a director needs a mechanism for the administrative care to remain well-functioning. A secretariat can be selected by the member organizations. The role of the secretariat is to provide technical assistance for organizing network meetings, and for other issues of a technical nature. A competent secretariat is most important for the success and sustainability of a decentralized network.

Decision power

The members of a decentralized network may jointly devise a network policy statement that defines the goals, objectives and operational principles of the network. Strategies and principles can be amended in the (annual) meetings of the network.

Network members may choose to appoint a steering committee that has 'political influence' and can thus facilitate network activities. Yet, it is important to understand that a steering committee can advise and assist in furthering issues which the network members agree upon and accept.

Use of Internet

Internet technology provides tools that OH&S networks can utilize with a completely novel and powerful information strategy. The information capacities of member organizations can be linked to a common virtual repository of OH&S information and training materials.

A network homepage can have access entries to the member organizations' information repositories for which member organizations assume contextual and operational responsibility. The network's information repository is thus mainly a virtual aggregation of information that resides at and is maintained by the member organizations. The member organizations decide what information they are willing to provide for public use. They are also responsible for the correctness and up-to-dateness of their information. The network secretariat maintains the network homepage and the access entries to the mem-

ber organizations, but is not responsible for the content provided by the individual organizations.

Besides offering an entry point to OH&S information regarding the member organizations, the network may develop a portal to topical and problem-oriented OH&S information for which the contextual and technical responsibilities need to be separately agreed upon. Such a portal could also offer advanced telematic instruments for e.g. OH&S inquiries.

A network as an instrument for occupational health and safety promotion

- Links isolated OH&S activities and fragments into a national OH&S entity
- Efficient instrument for general and focused information dissemination (contact lists)
- Repository for continuously accessible information support on Internet (regulations, good practice, check-lists, lecture notes, etc.)
- Immediate identification of national and local OH&S resources and capacities
- Collective OH&S identity for member organizations: joint ownership of achievements
- Inclusion of stakeholders in the national development
- Social marketing tool for promoting OH&S awareness in the media, among politicians and the general public
- Instrument for promoting specific campaigns
- Marketing tool for providers of OH&S services and training courses.

Information dissemination

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What is information dissemination about?

In order to achieve the desired objectives, every person needs to make decisions concerning his or her work practices, work contents, work environment, the organization of work, the enterprise and life in general. The decisions need an information basis in order to be rational and in order to lead to the desired end results. The information basis consists of relevant information disseminated and received through various channels, as well as the experience and tacit knowledge cumulated by each person in the course of years.

The concept of information dissemination includes both the provision of relevant information to the 'decision-maker', and promotion of the proper use of that information.

Changes in work life bring about changes in information dissemination

The economic integration in Europe has changed the work life and dissemination of information a great deal. The approach is shifting from normative steering to the direction of information steering. The globalizing markets force enterprises to pay growing attention to effectiveness and competition. On the other hand, the globalizing consumers put a lot of pressure on the companies for ethically sound products produced in healthy and safe working conditions. The modern information technologies do not allow any mistakes or oversight, as the information is immediately available in all corners of the world.

There are various national documents to guide, motivate and stimulate the dissemination of information in the field of occupational health and safety. The task of work environment policy, for instance, is not only to eliminate or reduce hazards and detrimental factors in working conditions, but also to contribute to the positive development of those factors in working conditions which enhance the physical, mental and social well-being of the employee. Therefore, up-to-date information is needed about the exposures and trends in the work life.

An analysis of the information needs should be based on a situation analysis and assessment of the status of the work life, occurrence and trends of health and safety problems, ongoing activities and operations, available resources, the scientific and professional information available for experts, academia, social partners, and enterprises (1).

Various uses of information

Information as a tool for decision-making

The first and the very basic question is to ask why information is needed. No decisions can be made on occupational health and safety without information. Also, the employer is obliged to provide information about the working conditions and hazards at work (2). The information that is needed can be statistics, research data, advisory services on occupational health, or survey data on various problem areas and topical issues.

Information as a tool for priority setting

The society faces many important problems simultaneously, and there is a need to prioritize the activities, as the resources in all societies are scarce. Information helps to provide a basis for prioritizing the most urgent goals from among a great number of more or less necessary ones. Often, a lot of information is gathered through various surveys, aiming at providing a quick basis for priority setting, which is a key process in the strategic planning.

Workers' right to know

The workers' right to know is one of the very basic rights in the work life in general. It is based on the understanding that in order to avoid risks, workers need to know the hazardous factors in their work environment, the best work practices, and how they should protect themselves against the risks. This principle has been widely accepted both in the ILO instruments and within the EU.

Motivation to promote work ability and productivity

There is a great amount of evidence indicating that good and ergonomic working conditions, support from the supervisors, and feedback on the work done, improve the workers' work ability and well-being, and simultaneously, productivity. The benefit-cost ratios according to some studies show 3–20-fold increases in economic productivity (3).

Information to the workplaces

The EU Framework Directive stipulates that enough information material on various risks and hazards of the work environment must be available for the workplaces and workers as well. There should be close collaboration among all those actors who have regular contacts to the workplaces.

Information process

The various steps of information dissemination need to be analysed thoroughly in order to be able to identify the proper forms of information for each target group.

Effect	Increasing awareness	Influencing attitudes	Improving understanding	Supporting activities at workplaces	Changing behaviour
Channel	Mass media Campaigns Brochures Fact sheets Newsletter	Text books Schools Campaigns Fact sheets Newsletters	Text books Manuals Guidelines Fact sheets Checklists Training Newsletters	Manuals Guidelines Fact sheets Checklists Posters Training Newsletters	Training Interventions Collaboration

Figure 1. Various effects and channels of information dissemination

The first step to any change and improvement at the workplace is to develop awareness of the potential risks and needs, and to make preventive and control measures available. Thus general information on occupational health and safety, and on the developments in work life in general, should reach the whole working-aged population, including the authorities, politicians, decision-makers, and all who need to be aware of the special problems of work and health. This can be achieved by disseminating information through mass media as effectively as possible. The basis for understanding this information is built already in schools, where information related to work and health should be given in an easy-to-understand form to all pupils and students. This involves a long-term commitment to information dissemination. Eventually, the work can be expected to pay back in the form of improved health, better work practices, and more satisfactory quality of life.

Estonia has placed much emphasis on developing the society in the direction of an information society. According to this principle, the State constitutionally guarantees the openness and free movement of information, implying that public organizations must, without delay, disseminate information about their operations. The following aspects need to be followed (4):

- Every citizen must be guaranteed an equal opportunity to access information
- Information must be provided actively and systematically and, on the whole, be easy to understand
- Responsibility for the correctness of public information must be specified in order to increase its trustworthiness.

This means that the recipients of information need to have certain prerequisites met before they can fully utilize the information they receive. Estonians have been encouraged to use the electronic information media, and there is research evidence that a good basis has already been established for electronic information dissemination in the field of occupational health and safety. The facilities for sending and receiving messages and information electronically are not sufficient, however. We need to ensure, through training and education and other support activities, that the recipient of the information has enough time and capacity to analyse the information and to draw the right conclusions on the basis of that information.

Information management – backbone of information dissemination

The starting point for all information dissemination in occupational health and safety is to know what the exposure in the work life is like, how the trends in the work life develop, and what are the numbers of workers in various sub-groups. Defining the forms and contents of information management in occupational health and safety creates the basis for cumulating data and information at the national level. This helps to know what information is available but at the same time it also defines what gaps need to be filled with the information collection.

Data bases and registers on various aspects of occupational health and safety will then cumulate the information so that it will be easy for anybody needing that information to retrieve it from the data bases.

The organization of the storing and maintaining of occupational health and safety information is a huge challenge for all those working in the field of occupational health and safety. It also encourages further collaboration among all experts in the country. The registers on occupational health and safety are best developed in the hands of those whose mandate is to promote and enhance workers' health.

Summary

With the increasing level of education and information in society today, there are also increasing possibilities and new avenues for information dissemination. The process of information dissemination can be improved, as regards the channels, media, messages, formats, and information technologies. However, the most important elements in information dissemination are interpreting, understanding and making use of the information. There is a need to reserve more time than now for this part of the process. If we expect wise decisions, we need to provide everybody with better prerequisites for selecting, processing and understanding the information. Simultaneously, this will ensure the development of an informed civil society.

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Twinning Project with respect to the complicated developments of Estonian occupational health service system

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Expectations that the restoration of Estonian independence would guarantee a smooth and swift creation of a society that is economically efficient, socially balanced, and secure have been realized only in part. It would not be fair to say that the development of occupational health services has been as successful as expected. We were too optimistic at the beginning of the 1990s and could not foresee all the complications (i.e. growing difference in wealth among people, negligence of social care issues, conflicts and ethical problems in the course of privatization, unemployment, etc.). In conjunction with the privatization of companies, the State began to maintain a distance between itself and issues and responsibilities concerning occupational health. The initial idea of regional occupational health centres was relinquished. Occupational health services had to take on an independent life to prove its use to employers, whose prime worry was survival in a tough competitive economic environment – cheap labour and lower expenses with respect to working conditions. The vision of experienced occupational health specialists, including the specialists of the Institute of Experimental and Clinical Medicine, with respect to an excellent occupational health system was fostered by cooperation with the Finnish Institute of Occupational Health. We believed that Estonia could also have a similar institute, of course, adequately tailored for our local needs and, housing organizational and methodological activity, an information centre, scientific research, training and complementary education, diagnostics and expertise on occupational diseases. Such a development would have established a rational and effective occupational health base that would have had an impact on public opinion.

Here, it is suitable to present an extract from a speech made by me at a symposium in 1993:

> "We ask: if we have had a long-term pleasant co-operation with one of the outstanding occupational health institutes – the Finnish Occupational Health Institute – why hasn't it influenced occupational health care in Estonia? Why are we so much behind?
>
> It may seem that there is something hidden here. But actually everything is simple. Indeed, our specialists are well informed of occupational health standards. We are aware of what should be done. With the assistance of our Finnish colleagues, we have managed to increase the level of our scientific research in many ways. But that's it. More than cosmetics are needed for greater achievements. An extensive surgical approach would be good. The entire occupational health care system needs to be reorganized, adequate financing channels found, the financial and technical bases of institutions involved in occupational health need to be significantly improved, and a training and education system should be created".

More:

> "The success of all such undertakings depends on the extent to which our society and leaders acknowledge the role of occupational health in the health of our people's presence and future. Personally, I am convinced that occupational health care is of crucial importance. Occupational health is one of the pillars of health promotion. Furthermore, well-organized occupational health is one of the prerequisites for working with enthusiasm, feeling satisfaction with one's work, and retaining efficiency also when older".

Unfortunately we have to admit that the impact of occupational health services on one's health and work capacity has not been sufficiently recognized till today. Nevertheless, the last 10 years have demonstrated indisputable achievements in the development of occupational health. Already in 1993, the Institute of Experimental and Clinical Medicine (EKMI) started training occupational health physicians and nurses. In 1995, under the decree of the Minister of Social Affairs, an occupational health centre was formed on the basis of the Institute's Department of Occupational Medicine. This act indicated independent Estonia needed a large-scale institution engaged not only in scientific research but also in the legislative process, the development of organizational structures providing occupational health services and improvements in training. Unfortunately the funding of these functions were not covered, and the activity was performed on the so-called voluntary basis.

In 1996, University of Tartu started providing education for occupational health physicians (postgraduate residencies). Year by year the number of companies providing occupational health services has grown, and it has already reached 25. In 1999 the Riigikogu (Estonian Parliament) adopted a law on occupational health care and occupational safety, and the same year the country witnessed the first celebration of the nationwide Occupational Health Day. Steps taken by the Tartu University, the Agricultural University and the Tallinn Technical University in the field of occupational health must also be positively noted. The Department of Occupational Health in the Ministry of Social Affairs has prepared several legal acts during these years. In 2000 the Ministry of Social Affairs founded the Occupational Health Center, under its jurisdiction, in order to implement occupational health programmes, the training of occupational health specialists, and the provision of information on occupational health care. All these activities are well covered in the journal *Estonian Occupational Health*, which has been published since 1993, and has been regularly supported by the Finnish Institute of Occupational Health.

However, when evaluating the actual situation, we cannot ignore the setbacks that have complicated the development. The moving of the Occupational Diseases Clinic (Kutsehaiguste kliinik) twice to smaller premises has affected the diagnostic services.

The termination of funding to scientific research in occupational health affects the training of researchers and specialists for occupational health and leaves the equipment which was purchased within the Twinning Project unused for unknown periods. There are several priority research projects which would be critically important for Estonian occupational health and which cannot be implemented, such as the diagnosis of the outcomes from high workload and overwork, development of rehabilitation services and, for example, the survey of asbestos-related diseases in Estonia (so far only one case diagnosed). The role of occupational health physicians also needs clarification to permit

them to do both the diagnosis of occupational diseases and the subscription of the sick leave if needed. The national programme for occupational health services should be accepted by the government and the education of occupational health in the University of Tartu including doctorate training should be organized and strengthened.

The preceding discussion provides a short summary of the background on which the joint Estonian-Finnish occupational health project, The Twinning Project, has been based. We have to admit that it would be difficult to overestimate the importance of this to the development of occupational health care in Estonia, and, to be frank, all Estonian officials agreed that the leadership of this project should be entrusted into the hands of our Finnish kinsmen, to the Finnish Occupational Health Institute, headed by Professor Jorma Rantanen.

The preparation of the Twinning Project started in 1998–1999, when it was clear that we needed help in training our specialists, improving the organization of our occupational health system, and providing related information, as well as in strengthening our financial-technical bases. Now, when the Twinning Project has reached its final phase, we can be assured that all the goals set for it have been excellently accomplished. Special notice should be taken of the organization of multiple courses attended by numerous occupational health physicians, nurses, occupational hygienists, and the like. An important result has been that occupational health of Estonia is joining the occupational health and safety information system of the Baltic Sea countries, and the development of the Estonian Occupational Health Care Information Network under the framework of the Twinning Project.

Thanks to the head of the Project, Professor Matti Ylikoski, we can consider the Twinning Project a success. In addition, thanks to our Finnish colleagues, Estonian organizations and specialists have received support in different aspects of occupational health services, including improvement in legislation and training programmes, and provisions of study aids. I especially consider important the fact that the project brought respect and support to Estonian occupational health institutions and enabled them to carry on their work more intensively.

In addition to the many merits of a Twinning Project, this project provided us with experience and a lesson that, the recipient of assistance also has an obligation to ensure that the assistance is used in the most efficient way. Unfortunately, as regards the expensive equipment for scientific research sent within the framework of the Twinning Project, already before it arrived, financing of scientific research in the Institute of Experimental and Clinical Medicine was stopped, and the desired equipment is now on hold. It will be extremely difficult and time consuming to start the respective research activity again. Therefore, a recommendation for better coordination of allocation of resources for various activities is well justified.

In conclusion I would like to express my sincere gratitude to our Finnish friends and hope for continuing cooperation.

Estonian work life and work environment in transition

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Background

In Estonia the importance of occupational health and safety (OH&S) was recognized immediately after independence was gained in 1918 and the Labour Inspection (central organization) was founded in the same year. By 1927 several legal documents had been adopted already regarding e.g. the labour relations, the protection of children, women and young workers. Estonian was modernizing its work life after the period of tsarist Russia.

During the last 11 years of independence, it has been necessary to revise labour and work life legislation after the end of domination by the Soviet Union. History is repeating itself. Older acts and directives have been replaced by new ones that correspond to current conditions and ambitions in Estonia. In addition to Estonian culture and its concepts of human values, an important guideline in this respect has been the requirements needed to join the European Union.

After June of 1999, when the Estonian Parliament adopted the Act on Occupational Health and Safety, several laws and regulations have been adopted, most of which are meant to further the implementation of the Act on Occupational Health and Safety, and directives of the European Commission in the field of OH&S. Another important act, from the viewpoint of OH&S is the Act on Compulsory Insurance of Occupational Accidents and Diseases, which was recently presented to Parliament.

Policies and future strategies

Development of OH&S in Estonia is based currently on a strategic planning process. After the recent reorganization of the Ministry of Social Affairs the responsible body in the Ministry is the Department of Labour. Inside this department is the Working Environment Bureau with OH&S specialists. The strategic planning includes policy making and the planning of special programmes for development. Development programmes will be implemented through action plans. Action plans are concrete plans for resources, schedules, activities, and responsibilities set up for OH&S actors.

Planning policies, strategies, and development programmes for OH&S in Estonia involves processes in which social partners have a central role. Thus the plans are discussed in the Working Environment Council, which is an advisory body for the Ministry of Social Affairs and has representatives from trade unions and employers' associations, in addition to the representatives of the Ministry.

The aims of policies on the development of OH&S in Estonia are as follows:
1. To decrease the number of occupational accidents and occupational diseases
2. To increase the work ability and the employability of workers
3. To reduce human and economic losses due to health and safety hazards in the work environment
4. To promote physical and psychosocial health and welfare at work.

Development programmes are the strategic tools being used to achieve these aims. With the support of the Twinning Project the following three development programmes have been drafted in the OH&S domain:
1. National Programme for the Development of Occupational Health, 2005 and 2010
2. National Working Environment Programme, 2005
3. National Programme for Promoting Employability and Work Ability, 2004–2005.

The implementation of these programmes will be based on separate action plans that concretize the objectives and necessary functions described in the development plans.

National Programme for the Development of Occupational Health, 2005 and 2010

The definition of occupational health services (OHS) in the national programmes is based on the internationally accepted definitions of the International Labour Organisation (ILO) and the World Health Organization (WHO). These definitions are formulated in ILO conventions and recommendations. The definition emphasizes the right of preventive, comprehensive, and multidisciplinary OHS for all workers. OHS are not only meant as a preventive activity against health and safety risks at work, but also as a means to maintain and promote the health, work ability, and welfare of employees.

The preceding definition is also the basic guideline in the Estonian Act on Occupational Safety and Health. In the programme, the objectives for 2005 and 2010 have been described separately with respect to the following factors:
1. The State and thus the ministry level
2. The respective national agency in the field of OHS, the Occupational Health Center
3. The field activities for OHS
4. Training, research, information dissemination, management and technology to support OH&S.

The State and thus the Ministry of Social Affairs has set some of the main objectives quantitatively. In 2005, 25–30% of Estonian employees should be covered by qualitative OHS. By 2010 the respective percentage of coverage should be 35–40 %. In addition, the occurrence of work-related diseases should decrease from the respective number of incident cases in 2001 by 6% in 2005 and by 15% in 2010.

On the State level the main objectives concern the assurance of the resources needed to implement the development programme and strengthen the legislative base of OHS according to directives of the European Union. In addition, the aim is to ratify the ILO Conventions No. 155 and 161 concerning OHS and OH&S. State strategy also aims at strengthening and increasing collaboration with organizations and respective activities

in the fields of public health, labour inspection, environmental protection and social insurance.

One of the state objectives is to assure the sustainability and high quality of diagnostics created by the Clinic of Occupational Diseases. This objective needs collaboration with the hospital system, which is currently under reorganization in Estonia.

In addition, it is important that good occupational health practices be widely accepted and applied among OHS structures and professionals. Thus information and learning material and guidelines will be published and disseminated. The State will also assure that plans for activities formulated and recommended by the present Twinning Project will be implemented in the future and that collaboration with the Finnish Institute of Occupational Health will continue.

The programme also offers some objectives for the Occupational Health Center. It will be the central body in implementing the programme and will have a central role in the development of the OHS infrastructure, the training of OHS professionals, the quality assurance of OHS training, OHS professionals and good occupational health practices. The International Code of Ethics for Occupational Health Professionals will be the guideline for the activities of the Occupational Health Center.

Occupational Health Center is a development and coordinating agency and it will promote the establishment of new OHS units by developing models for such services. The aim is to ensure that all employees have access to OHS in the future. In addition, the Center will collaborate with the Labour Inspection in setting up an information database compiled of data on work-related health hazards on the national level. The database will help support planning for human resources in OH&S at the regional level.

The OHS objectives concern mainly increasing the quality and quantity of services. In the programme four different models for offering OHS are presented. The training objectives of the programme emphasize an increase in the number of OHS professionals with special training and licenses. It is expected that 120 occupational health physicians will have received specialist training by 2005. To strengthen the quality and sustainability of training of all occupational health professionals, seven training posts are planned for universities.

The research objectives in the field of OHS focus on increases in resources of Occupational Health Center in scientific and applied research, with a special research department located in the Center. The main objective of the research department will be to support the development of the OHS system and the quality of services with research results.

The information strategy of the programme emphasizes information dissemination, information management, the development of databases and a library. Its aim is to develop registers and indicators for evaluating OHS. The evaluation is needed to ensure better use of resources, to help recognize bottle necks, and to increase collaboration between respective actors in the field of OHS and OH&S

National Working Environment Programme, 2005

The National Working Environment Programme of 2005 aims to increase safety at work. The following three main strategies have been devised to achieve greater safety in Estonia:

1. To make employers and employees more aware of risks and the possibilities for the early recognition and prevention of accidents
2. To increase effectiveness of labour inspectors' inspection and information dissemination
3. To strengthen collaboration and goal-oriented planning within enterprises with regard to action programmes for the work environment.

It is essential to link the Occupational Health Programme with the Work Environment Programme.

National Programme for the Promotion of Employability and Work Ability, 2004–2005

There is a great amount of evidence indicating that good ergonomic working conditions, the support of supervisors, and feedback improve workers' work ability and well-being and, simultaneously, productivity. According to some studies, benefit-cost ratio show 3–20-fold increases in economic productivity. In Estonia the workforce is ageing as in all other European countries, very quickly. Thus a special programme on work ability and employability is necessary.

The programme attempts to support the opportunities of ageing workers and workers with some health changes to continue at work. It will focus on the following objectives and activities:

1. General objectives:
    - To support continuously the availability of sufficient workforce, both quantitatively and qualitatively
    - To emphasize good work atmospheres and the motivation of personnel
    - To make good use of the experience, skills and tacit knowledge of all age groups
    - To accept and make good use of diversity as a resource and opportunity
    - To provide positive messages to younger age groups
2. Respect regarding ageing personnel
    - To meet people as unique individuals and to respect people and their experience, skills and knowledge
    - To understand and respect diversity
3. Support and promotion of the work ability of individuals
    - To offer flexibility in work arrangements and working conditions
    - To offer an attractive alternative to early retirement
    - To develop the skills of OHS in promoting work ability
    - To further the employability of ageing workers and the employment of the ageing workforce
    - To ensure equality among personnel and candidates for workforce recruitment.

Conclusions

The current transition period in Estonian work life and its work environments has many big challenges ahead, and it demands much effort from the entire administration and workforce in OHS, OH&S and, work life. However, it is obvious that, in Estonia, the value of a healthy and safe work life has high value.

Achieving and sustaining the European level in Estonian work environments and in the health of its workers needs systematic development and competent administration and professionals. The progress supported by development and action programmes seems at present to be very suitable for future achievements in Estonian culture.

Background for the need to develop occupational health services in Estonia

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The reform of occupational health and safety (OH&S) started in Estonia in 1994, and the work has intensified since 1997 when the Working Environment Department was established within the Ministry of Social Affairs. In 1998, the government approved the National Working Environment Policy and Occupational Health Programme to 2000. The development activities were necessary because of the increased occupational hazards in Estonia. The Twinning Project was expected to support the achievement of better health at workplaces further according to European criteria.

Occupational health and safety in Estonia in the late 1990s

In 1998, when the planning process of this Twinning Project was begun, it was obvious that the number of serious occupational accidents and occupational diseases in Estonia was increasing. Table 1 presents the number of occupational accidents in 1995–2000, while Table 2 shows the number of occupational diseases in 1990–2000.

Table 1. Reported occupational accidents in Estonia, 1995–2000

Type of accident	1995	1996	1997	1998	1999	2000
Fatal accidents	61	46	50	56	47	26
Fatal accidents/ 100 000 workers	11.6	8.9	7.7	8.6	7.7	4.2
All accidents	2460	2251	2368	2664	3285	2463

The rate of occupational accidents per 1000 workers has been increasing since 1993, but the level (4.5/1000 in 1995) was at least 10 times lower than in Western and Nordic countries (20–100/1000). According to Estonian National Labor Inspection these estimates represent very serious underreporting of accidents. In 1995 a violation of safety rules was the cause of 46% of occupational accidents. The reporting of occupational diseases had been increasing thanks to better diagnostic work at the Clinic of Occupational Diseases and workers' increasing economic interest. Earlier there had been too few occupational health physicians in outpatient clinics, and most of the workers had applied to the Clinic only when affected by severe health impairment (1).

The rate of occupational diseases was 0.3 per 1000 workers in 1996; this level is about 20 times lower than that of the Nordic countries. Musculoskeletal disorders are the most

common, followed by vibration disease, hearing damage and erysipelas in meat processing. Evidence of increasing psychological violence on the part of managers and stress among workers has also been reported. Hazardous substances, like asbestos, are still in use, but only single cases of asbestosis have been diagnosed. The socioeconomic situation has led to the spread of infectious diseases, like tuberculosis, which has also been registered among medical personnel (1).

Table 2. Reported occupational diseases in Estonia, 1990–2000

	Year						
Main diagnosis	**1990**	**1992**	**1994**	**1996**	**1998**	**1999**	**2000**
Physical factors							
Hearing damage	16	21	12	17	109	154	137
Vibration disease	16	15	42	49	37	59	60
Other (eye diseases, radiation disease)	1	-	-	1	-	-	-
Musculoskeletal diseases	1	16	28	53	76	115	128
Bronchopulmonary	20	10	6	17	3	10	5
Pneumoconioses	1	1	2	*	2	2	1
Allergies	14	6	2	*	*	*	*
Diseases caused by dust	5	3	2	*	*	*	*
Skin diseases	11	8	5	6	2	2	3
Poisoning	12	16	22	3	21	8	5
Biological factors							
Erysipelas	48	17	11	26	15	0	8
Leptospirosis, Tuberculosis	-	-	-	2	4	6	2
Total	135	105	126	174	269	359	355

*Data not available

The National Labor Inspection has inspected adherence to legislation dealing with the work environment since 1995. Working conditions have improved as a result of inspection, counselling, and concerted activities among employers and employees. An evaluation of the work environment in 3250 enterprises showed that the organization of OH&S activities and the conditions of work environments as a whole were on the required level in 1643 of the enterprises. However, the legislative requirements and regulations on work relations were not followed in 986 (30%), whereas in 10% the work environment was unsatisfactory. Requirements for workers' training and supervision were violated in 1867 (57%) of the enterprises. Health examinations were not organized as required in 45% of the enterprises. There were serious shortcomings in the provision of first aid, and the investigation of occupational accidents and occupational diseases. Environmental conditions were considerably improved in enterprises in which work environment structures were functioning (work environment council, work environment representatives, work environment specialists) and the employer and employees had obtained the necessary OH&S training. (1)

In some enterprises, especially in agriculture, the agricultural, transport and lifting machinery of the former Soviet Union was still in use, and safety, noise and vibration levels exceeded the limit values. As a result, many occupational accidents had occurred (Table 3).

Table 3. Distribution of severe and fatal occupational accidents according to occupation in 1998 and the first half of 1999 (1)

Occupation	Death at work		Severe occupational accidents	
	1998	1999	1998	1999
Manufacturing	4	4	45	58
Transport, storage and communication	6	4	40	21
Agriculture, forestry and fishing	6	8	29	15
Construction	8	0	25	12
Societies, social and personal servicing	2	0	26	7
Energy, gas and water supplies	1	2	10	7
Mining	4	1	5	4
Trade, finance, business and other activities	1	3	5	29
Total	32	22	185	153

Work-related sickness compensation statistics

Estonian statistical data for 1997 showed that workers received compensation for a total of 7 573 872 sick days; temporary incapacity payments amounted to approximately EUR 36.8 million. Workers' illnesses led to daily losses amounting to approximately EUR 0.933 million. The burden of all costs of health losses increased in 1996–1997 from 12.3% to 14.3 % of the gross national product. It was approximated that, if the implementation of an active occupational health policy and the targeted programme could help reduce the number of occupational diseases by only 1% public expenditure would be cut by about EUR 3.666 million a year (2).

Policies and National Programmes as development tools

The aim of the National Working Environment Policy (1998) was to create a general framework for improving the work environment. The primary targets were the elimination of accidents and the prevention of illnesses caused by work.

The Occupational Health Programme to 2000 was designed to implement the new occupational safety and health act (1999) and to meet the OH&S requirements of the Framework Directive 89/391/EEC. The main objective of the Programme was to reduce or minimize health hazards resulting from the work environment. The main features of the Programme were as follows:

1. Establishment of the Occupational Health Center
2. Reorganization of the Occupational Diseases Clinic
3. Training of occupational health specialists
4. Setting up of occupational health services (OHS)
5. Development of applied research work in the field of occupational health
6. Organization of occupational health information production and dissemination.

The Occupational Safety and Health Act as a cornerstone of the development of legislation for occupational health

In 1999 the Occupational Safety and Health Act focuses on the development of national system of OHS for workers. According to the act a national agency, the Occupational Health Center was necessary. The Center will coordinate and provide methodological guidance for the OHS activities. Legislation also ensured adequate involvement of the social partners and the public in improving the work environment. The new act represents the foundation of a modern work environment system, in which social partners have substantial influence over the development of work environment issues.

The Occupational Safety and Health Act created a legal basis for an internal control system as a systematic approach to record and ensure that the OH&S activities are performed in accordance with specified regulations. According to the new act, a systematic review and examination of all types of work, work processes and methods, technical equipment, substances, materials, and the like, must be made to obtain a complete picture of potential exposure and hazards in enterprises (workplace risk assessment).

In order to ensure that all aspects of OH&S are included in the workplace assessment, it was considered crucial that the internal safety body and the employees of an enterprise participate in the planning and implementation of workplace assessment. The Ministry of Social Affairs also considered the cooperation of OHS to be essential in the workplace. OHS can advise and assist the employer, and the internal OH&S body to create a general survey of the work environment and to promote OH&S among employees, both physically and mentally. The Ministry of Social Affairs stressed as well the importance of cooperation among occupational health professionals, including OHS physicians and

nurses, labour inspectors, occupational hygienists, work psychologists, and specialists involved in ergonomics, accident prevention and the improvement of work environments as well as researchers in the field. The trend was to mobilize the competence of occupational health professionals into a multidisciplinary team as a new approach to the development of an OHS system.

Furthermore a new chemicals act was adopted in 1998, and it created a legal basis for preventing or reducing damage of human health, property or the environment by chemical substances.

The implementation of the Act on Occupational Health and Safety was supported by two projects of the Phare Programme, concerning the approximation of corresponding legislation and the institutional development of the Estonian National Labor Inspection in a pre-accession context. However, further support was considered necessary especially in strengthening the human resources of occupational health professionals, supporting the establishment of the Occupational Health Center and developing the centre into a national agency in the field of OHS.

In addition there was a need to develop equal opportunities at work. One of the main goals regarding equality has been to establish and strengthen the national mechanisms for ensuring equality at all levels of government. In 1997 the Bureau of Equality started running courses on gender planning (mainstreaming and gender-policy appraisal for civil service officials) to create a network of focal points on gender equality within public administration structures. The Estonian Women's Studies and Resource Center was set up with support from member states of the European Union and the Phare Programme in 1997. In 1998, a Nordic-Baltic working group was established on gender equality.

An analysis of compliance to Estonian legislation with respect to equal rights led to recommendations in 1998 concerning a possible new act (Equal Rights Acts) within the framework of a project called the Promotion of Gender Equality Mainstreaming, under the support of the United Nations Development Project. To improve women's positions in the workforce and in decision-making bodies, an international programme of the International Labour Organisation, called More and Better Workplaces for Women and aimed at creating new jobs for women in rural areas of Estonia was launched in 1997. Still, needs to strengthen equal opportunities in work life existed and an equality act was prepared.

Needs to increase administrative capacity

New legislation followed an additional need to strengthen the administrative structures to ensure effective implementation of legislation. In 1997 the National Working Environment Board was reorganized into the National Labor Inspection and the Working Environment Department within the jurisdiction of the Ministry of Social Affairs. The Department is responsible for the overall coordination and management of activities in the field of OH&S, and drawing up legislative acts regulating this field in accordance with legislation of the European Union.

The Working Environment Council was established in 1997; it acts as a tripartite and advisory body. The Ministry of Social Affairs improved its internal organization, on the basis of recommendations made by a commission (OMAS Rep. No.: R/ES/SOC/98028). The additional post of vice-chancellor was introduced into the Ministry in 2000 to cover labour problems. This step allowed better hands-on management of each sector and also emphasized the role of the Ministry in the area of OH&S. The Ministry emphasized the need to strengthen the Working Environment Department as a steering unit for the development of OH&S and OHS, and it looked forward the support of the Twinning Project.

The European Union and occupational health

The objective of the European communities and the EU policy on occupational safety and health as part of the 'social dimension' has a high level of protection. Its basic principles follow:

1. Assessment of the safety and health hazards of workplaces
2. Competent OH&S personnel and OHS staff
3. Employers' and employees' balanced participation in the decision making concerning aspects of OH&S
4. Employees' right to know about matters concerning health and safety and serious or dormant hazards, as well as guidance and advice given in order to prevent such hazards.
5. The EU directives on OH&S and the national legislation based on these directives impose obligations on employers, and in some cases, also on OHS.

The Ministry of Social Affairs considered a process within the framework of the Twinning Project to be necessary to strengthen institutional building, administrative capacity, the competence of OHS professionals, key activities of the OH&S system, and equality within the country.

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Twinning as an approach to support occupational health services in Estonia

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Phare Programme supports the accession process

Candidate countries accessing to the European Union (EU) may need strengthening of some of their institutional and administrative capacities to be capable of applying the 'acquis communautaire' according to the standards in the member states. The European Commission (EC) helps candidate countries to reach the required level with the aid of the Phare Programme.

Support on institution building in the candidate country aims to cover the requirements and to achieve the benefits of EU membership. This is performed by developing the structures and systems, human resources and quality of management, and the administrative practices and services concerned. Investments mean equipment and other material prerequisites that raise the administrative and practical capacity.

Twinning makes available the expertise of member state

In the European Union and member states a lot of experience and expertise in the implementation of the 'acquis' at the central, regional and local levels has cumulated into agencies, professional bodies, as well as the private sector. Twinning is a process to make this expertise available to the candidate countries. Under the umbrella of the Twinning, a long-term member state expert, called pre-accession adviser (PAA), is available to the corresponding ministry of the candidate country. A senior member state project leader and many short-term experts in the home administration of the pre-accession adviser are available, too.

Twinning builds bridges

In addition to expertise and administrative assistance to the candidate country, Twinning aims to build long-term relationships between existing and future member states and contacts with the European Union practices in general. However, Twinning does not only enhance better contacts, it especially brings about specific results in the implementation of the priority areas of the 'acquis', as agreed between member states and candidate country, and fortified by the Commission in the Regular Reports on the progress achieved.

Twinning means 'working together as equal collaborators'. Thus, the project means not only traditional technical assistance, but rather activities where member state and candidate country experts and professionals together solve problems, and make plans, and

implement them in real situations. Twinning includes workshops, seminars and consultative discussions more than lectures and teaching.

Thus, Twinning has generally specific targets and the means to achieve them. Commitment of the member state and candidate country to jointly achieve the result agreed upon takes place with a covenant of the Twinning Project. The candidate country is responsible for ensuring the pre-conditions for success, e.g. the needed legislation and the appropriate staff and agencies.

Twinning to support Estonian occupational health services

The new Occupational Health and Safety Act (OH&SA 1999) in Estonia covers the most important issues of the pre-accession criteria in the area of occupational health and safety (OH&S). However, some strengthening and further development of Occupational Health Services (OHS), the Occupational Health Centre, the training and education of the experts concerned, dissemination of information and networks among the institutions and organizations concerned was seen necessary by the Estonian Ministry of Social Affairs. In addition, the development of the Ministry and especially its Working Environment Department was included in the Twinning Project.

The strengthening of the infrastructures and development of human resources in OHS are important elements of developing OHS according to the norms stipulated by the Occupational Health and Safety Act. Thus, the Twinning operation implies support to OHS. In focus are various activities and infrastructures of a modern OHS system. Furthermore, the Twinning includes elements to support prerequisites for equality in the Estonian work life.

One of the main purposes of the Twinning operations in general is the sustainability of the developments achieved. Therefore, it was seen important to disseminate information to all workplaces in order to support the employers' and employees' representatives (e.g. foremen and safety delegates) and experts (e.g. safety experts, designers, etc.) in addition to OHS and OH&S professionals at the workplaces. The aim was to strengthen such functions and elements which are feasible from the viewpoint of the Estonian culture and way of life.

Objective

The objective of the Twinning operation was to develop further the Occupational Health Center for Estonia, to strengthen the infrastructures of the OHS and the corresponding human resources. Training related to labour inspection in OHS and equality issues was also to be a part of the operation.

The most important EU regulations in the background of the operation are the Directive (89/391/EEC) concerning improvements in the safety and health of workers at work, and the Directives (75/117 and 76/207) concerning the equality of men and women in work life.

Long-term collaboration as a basis

The Estonian Institute of Experimental and Clinical Medicine and the Finnish Institute of Occupational Health have collaborated since the beginning of the 1970s. The collaboration has consisted of exchange of information, exchange of research programmes, and the organization of joint scientific symposia every three years. These have been a good forum for the information exchange and more sustainable long-term collaboration during the past 30 years.

When Estonia gained its independence in 1991, the contacts between the Institutes were intensified, and the Estonian and Finnish experts analysed the most urgent needs of the Estonian society in developing its work life in general, and its occupational safety and health matters in particular. The Finnish Ministry of Social Affairs and Health allocated some seed money to get the projects started. A few Estonian experts were trained in ergonomics, some experts visited the Biomonitoring Laboratory of the Finnish Institute of Occupational Health to acquaint themselves with various analytical methods, and so on. After the initiation phase, the Estonians were able to carry out the activities on their own within the framework of the joint international collaboration.

New developments in the 1990s

During the past ten years, a number of various joint projects have been carried out in the form of training of OH&S experts, conducting risk surveys, disseminating information, and implementing research projects. The working conditions of bus drivers in Tallinn have been investigated, exposure to asbestos and carcinogens at Kohtla-Järve has been studied, allergic dermatoses in a ski factory have been examined, a survey on indoor air has been conducted and reported, just to mention a few.

In order to inform people about the relationships between work and health, the Estonian Newsletter on Occupational Health and Safety was established in 1993. Each year two to three issues of the Newsletter have been published. In addition, four supplements have been published during the past ten years. They can also be used as training material.

The Estonian Ministry of Social Affairs started to take part in the collaboration in 1995. Estonia joined the Baltic Sea Network on Occupational Health and Safety from its very beginning in 1995, and the Estonian pages on the telematic network were opened in 1997. When experts of the Finnish Institute of Occupational Health first discussed the idea of a network on Internet with Baltic experts in spring 1996, Internet was not yet a very familiar word in Estonia. Now Estonia has a tremendous package of knowledge on her web-pages. This is encouraging for all of us working in this field, as it means that with systematic and determined efforts it is possible to achieve results also in a short period of time. All these developments during the years eventually led to the planning of a Phare-funded Twinning Project in 1999.

Twinning – a concept for close and equal collaboration

A wish had been expressed by various organizations, that EU should fund more long-term projects in order to guarantee the sustainability of the activities. The opportunity for this kind of funding from Phare opened in the spring of 1999. The Finnish Institute of Occupational Health made a tender in March 1999. The discussions among the Phare, the candidate country and the member states tendering were carried out in mid-July 1999 in Tallinn. The final decision concerning the Twinning partners was made late September of the same year. The decision was that the Twinning partner with the Estonian Ministry of Social Affairs would be the Finnish Institute of Occupational Health.

This decision was the basis for further work that started with the aim to prepare the final programme, consisting of the elements agreed upon with the Ministry of Social Affairs, with the aim to develop and support OH&S in Estonia. The main elements comprised the development of the occupational health service infrastructure in Estonia, the establishment of an Occupational Health Center which is also mentioned in the Act on Occupational Health and Safety, the organization of training and education in occupational health and safety, the provision of information support, and the development of equality issues.

Several meetings were held between the representatives from the Ministry of Social Affairs in Estonia, Ms Milvi Jänes, Ms Katri Targama and Mr Tanel Tomson. From the Finnish side, a small planning group was involved: Professor Jorma Rantanen as the project leader of the member state, Dr Matti Ylikoski, Dr Kari Kurppa, Ms Suvi Lehtinen, Ms Anneli Vartio and Ms Taina Pääkkönen. Three full days were spent together discussing the contents and practical forms of the collaboration.

In addition to the discussions and meetings between the Estonian and Finnish experts, also the Finnish expert group met regularly. The idea has been to make sure that the basic thinking and principles of the whole team are similar. It is of utmost importance that all experts involved are fully informed about the objectives of the whole project, and also about the other elements in the programme in addition to their own expertise area. One aim has been to provide – not individual experts, but rather a network of expertise – for the support and stimulus of the Estonian colleagues.

A lot of work has been done on the Estonian side to establish a well-functioning Occupational Health Centre in the country, and to ensure the prerequisites for its activities. In addition, great efforts have been made to improve the whole infrastructure of occupational health services at the country level. Training and education of the experts in occupational health and safety has been organized. The editorial office of the Estonian Newsletter on Occupational Health and Safety (Eesti Töötervishoid) has been transferred to Tallinn within the framework of the Twinning Project. All of these functions aim at sustainable development of the Estonian Occupational Health and Safety Community.

A lot has already been done; there has been an earlier project to improve the labour inspection in Estonia with funding from Phare. The results obtained and the experiences and lessons learnt from it were utilized in the realization of this Twinning project. This implies the proper use of resources.

Twinning – a challenge for joint development

The Estonian-Finnish Twinning Project in Occupational Health was started in mid-August 2000. Since then, Dr Matti Ylikoski, the pre-accession adviser has stayed in Tallinn. From the very beginning Mr Tiit Kaadu in the Ministry of Social Affairs has given his full support to the Twinning Project. The time allotted for the project was 21 months, a relatively short time for this ambitious task, i.e. the development of OH&S in Estonia. It was agreed at the very beginning that the Twinning Project can only initiate and stimulate the development within the present time limit, not finalize all its elements. From the experience gathered in Finland, the development of work life and OH&S is a life-long endeavour which needs to take into account the local conditions in the country, but also the changes ahead in the work lives of the Twinning partners and elsewhere on globe to be anticipated.

High-level Policy Forum

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Background

The High-level Policy Forum aimed at bringing information about the Twinning Project to all key policy-making bodies, interest groups, decision makers, and social partners and also attempted to create interest and support for the project. It is essential to enhance the awareness of the importance of developing the work life and occupational health and safety (OH&S) even at the highest policy-making and decision-making level. Such awareness can lead to a distinct priority position for OH&S on the national agenda. The conclusions of the Forum guided further development of the Twinning Project.

Actions

The High-level Policy Forum consisted of two parts, the two-day workshops on 13–14 September 2000 dealing with work-related stress and multidisciplinary work in occupational health and a one-day high-level policy forum in connection with the Second Estonian Occupational Health Day. The scientific programme of the workshops and forum were planned and chaired by Professor Helena Taskinen with the assistance of the Pre-accession Adviser. It was held in the Ministry of Social Affairs and was attended by 72 participants.

The workshop and forum had the following three key themes:
1. Stress and stress management at the workplace
2. Multidisciplinary teamwork in occupational health and in risk assessment at the workplace
3. Collaboration in the planning and implementation of the Twinning Project.

Conclusions

On the basis of the presentations and discussions held in different sessions of the workshops and forum, conclusions were presented by the Pre-accession Adviser to be taken into account in further planning of the implementation of the Twinning Project.

Conclusions of the stress management workshop

Stress management at workplaces is a challenge for all levels of organizations and for different professionals. Two strategies of stress management were emphasized. Firstly, stress as a possible risk factor should be taken into account as early as possible, already

when the work itself, work environments and work organizations are being planned and designed. Thus making planners and organizational developers aware of stress at work is a prerequisite for effective stress management activities.

Secondly, training occupational health professionals in stress management and the prevention of stress-related risk factors increases the effectiveness of health promotion programmes on better psychosocial work environments.

Information for raising awareness needs planning and implementation for the following:
- Motivation and change in attitudes at the policy-making level
- Administrative and legislative preparation
- Employers' and employees' associations and representatives
- OH&S professionals to help them recognize their supporting roles

The following models are needed for successful stress management:
- Comprehensive stress management programmes are needed in organizations as a part of their own OH&S programmes, human resources or personnel administration programmes, or even their strategic planning process.
- Systematic process set ups are needed by professionals in occupational health services to support the implementation of presented models in enterprises, even in small and medium-sized ones.

Training is needed for occupational health professionals and team members concerning, especially, the following aspects:
- Risk assessment of stress factors or their consequences (recognition, interpretation)
- Stress management and preventive methods and their practical implementation
- Methods and possibilities for resource-oriented health promotion in workplaces with high risk of stress consequences
- Methods and facts supporting the awareness and increasing interest in the management and prevention of stress in enterprises
- Use of basic tools (questionnaires, feedback, group and organization development methods).

Approaches to coping with stress should be included in some manner in most basic leadership training programmes, at least the foreman's role in stress control and the benefits of good stress management. Furthermore, employees and their representatives (at least safety officers) need training in stress management processes (role and possibilities to make initiatives).

A national network for OH&S may include a systematic approach to essential data and the methods needed – as well as means for exchanging experiences with and guidelines for good stress management. The role and functions of the Occupational Health Center in the field of psychosocial work factors and the work environment should be discussed and defined (for research, information and support of professionals, such as psychologists). In addition, workshops should be organized for the exchange of practical experiences, questionnaires, plans, process descriptions and the like. A fact sheet on prevention of stress at work was prepared and distributed within the Information Element of the Twinning Project.

Conclusions of the workshop on multidisciplinary teamwork in occupational health and risk assessment

Multidisciplinary teamwork was considered a prerequisite for effective occupational health services in Estonia, as it has also been seen elsewhere in Europe. Thus obstacles for multidisciplinary teamwork were analysed and the following results of the analysis were presented in the session:

- A common language (agreement on the definitions of the occupational health terms) and a basic model (e.g. for risk assessment) are needed for OH&S in Estonia.
- The roles of occupational health services and labour inspection need clarifying.
- Training with respect to the severity and probability matrix is a possibility for systematic risk assessment.
- Exchanging experiences among different specialists concerning effective measures in risk management would be beneficial for certain hazards.
- Estonian experiences concerning good practices in risk assessment should be disseminated, compared and benchmarked under the umbrella of the Twinning Project (registers, flow charts, etc.).
- Models for combining adequate databases should be supported and delivered.
- Team members – across disciplines – should be trained in that additional training is important to further specialist competence.
- Support is needed for models, suitable materials and guides on specific sectors.

The High-level Policy Forum enhanced the awareness of the interest groups, decision-makers and social partners and thus helped to clarify the goals of Twinning activities to come. In the meeting it became obvious that, in addition to traditional work environment risks, psychosocial factors need emphasis in Estonia. Also, in the modern work life, collaborating in multidisciplinary teamwork is highly important in occupational health and safety, and improving the collaboration requires further training and models of collaboration.

Building networks on occupational health and safety in Estonia

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Occupational health and safety (OH&S) is an issue for ministries, employers' and workers' organizations, universities, training institutions, service providers, and many others. For this reason, OH&S is a multidisciplinary and intersectoral duty that often calls for inter-agency collaboration. No organization can master everything, but, from time to time, needs to resort to aid or services from others. Networking is a modern response to the multiplicity of OH&S issues.

The most obvious utility that can be used inter-organizationally is information. The Network aims at building a common Internet-based information accessibility system that relies on the entire national capacity. A decentralized information repository provides all parties with practical tools (best-practice procedures, benchmarks, check-lists, models), standards and guidelines, training materials (syllabuses, handouts, transparencies), press releases, and links to international information. The result is increased transparency and empowerment in OH&S material.

Objectives

The overall goal of the network was to establish a framework that enables efficient utilization of information and other OH&S capacities of governmental and non-governmental organizations. Such capacities have to be readily accessible when needed.

The operational objectives included:

- Establishment of national, local (county), and subject-oriented networks
- Foundation of a telematic support system for exchange of organizational information and a decentralized information repository, freely accessible to all parties and the public.
- Compilation of a Directory of OH&S Organizations and Agencies
- Undertaking a network analysis of inter-relationships between core OH&S organizations to determine sociometric parameters that provide guidance for improving interactions.

The Internet-based information system of the Network, established in collaboration with the information element of the Twinning Project, will also support the activities of the separate elements of the Est-Fin Twinning Project on Occupational Health.

Actions

The actions, in chronological order, included are:

- Agreement on the implementation strategy between the Est-Fin counterparts, Tallinn and Tartu, November 2000
- Workshop on the establishment of the National OH&S Network, Tallinn, January 2001
- Promotion of the network potential and strategy in the 1st International Symposium on Occupational Health 21: Quo vadis, Estonia?, Tartu, January 2001
- Designing and sending out questionnaires for the compilation of profiles of organizational capacities, February 2001
- Follow-up Workshop on the National Network, Tallinn, May 2001
- Promotion of the network potential and strategy at the Est-Fin Liaison Seminar, Saue Mõis, May 2001
- Technical training in skills for providing OH&S documents to a decentralized information repository on the Internet, Tallinn, May–June 2001
- Network session in the first Est-Fin Liaison Seminar, Saue Mõis, May 2001
- Workshop for the establishment of a Tartu County OH&S Network, Tartu, June 2001
- Establishment of the National Network's own website as a portal for the Network's decentralized information repository on Internet, October 2001
- Follow-up of network developments at the second Technical Inception Seminar, Tallinn, October 2001
- Acceptance by the tripartite Working Environment Council, Ministry of Social Affairs, to function as a Network steering committee, November 2001
- Workshop for the establishment of a subnetwork of OH&S training institutions, Tallinn, November 2001
- Promotion of the network potential and strategy to The 2nd International Symposium on Occupational Health 21: Quo vadis, Estonia?, Tartu, January 2002
- Setting up a sustainable system for technical management of the Network's telematic information repository, included in the state budget, February 2002
- Provision of a dynamic OH&S Infoserver on Internet with a telematic inquiry service, interactive survey instruments, telematic self-auditing tools with benchmarking, etc., March 2002
- Establishing a 'network analysis' for determining sociometric parameters of communication patterns between organizations, Tallinn–Tartu, April–May 2002
- Technical training in skills for feeding OH&S information into the Internet, Tartu, March 2002
- Publication of the Directory of OH&S Organizations and Agencies, April 2002
- Technical training in skills for feeding OH&S information into the Internet, Tallinn, April 2002
- Establishment of a strategy and an action plan for building an Internet-based inquiry service and expert support on OH&S problems, April 2002
- Follow-up seminar for the established networks (national, Tartu county, training institutions), Tallinn, May 2002.

Establishment of the National Network and its functions

At the inception of the Project, discussions with the Est-Fin counterparts identified 15 core organizations that were invited to a two-day workshop for the establishment of the National OH&S Network. At the workshop, the basic concepts of networking and options and examples for the purpose, architecture, strategy, functions, and operational principles were introduced to the participants. As an outcome of the workshop, several policy definitions and practical arrangements were agreed upon. The workshop was succeeded by follow-up workshops and special sessions during the project seminars.

The purpose of the National Network is to establish a base for collaboration between organizations, to strengthen communication between OH&S organizations, to pool information on their capacities, and to make such information publicly available and easily accessible from diverse sources, particularly the Internet.

The main functions are: (a) Sharing information between organizations, (b) Increasing OH&S awareness in the society, (c) Developing strategies, methods and instruments, and (d) Supporting training and education in OH&S. The Network encourages cooperation between organizations that have similar interests (e.g. ergonomics, agriculture).

The Network is a peer-to-peer alliance with equally shared ownership by its members. It is a voluntary decentralized arrangement of independent member organizations, which retain their full organizational autonomy. This kind of network cannot have a director that could order member organizations to do something against their will.

All members will eventually establish and maintain their own Internet sites for their OH&S information. The members are responsible for the quality of the information they put on their website. A reasonable level of standardization is necessary with regard to the structure of the presented information.

Each member organization appoints a key person (or a focal point) who acts as liaison with the other network members, who will be responsible for maintaining the Internet OH&S site of the member organization, and who provides and updates information at that site.

An important network task is to provide summaries of organizational responsibilities, capacities, and interests, i.e. organizational profiles. These cover human resources, expertise, analytical capabilities, training activities, information products, and service functions. The Secretariat has organized the compilation of the profiles through structured questionnaires. The organizational profiles constitute the backbone ot the Estonian Directory of OH&S Organizations which is now in press.

A competent Secretariat is a prerequisite for an efficient network. The participants selected a Secretariat (Ms Ester Rünkla, Ms Reet Pruul, Ms Eva Tammaru) handle the technical issues of the network. The Secretariat holds regular network meetings, arranges Internet training for the focal point persons, and manages the Network's Internet website. Network meetings will be held regularly to guide network policies and strategies, and to discuss issues of common interests. The Network encourages ad hoc member alliances (task forces) to accomplish specific tasks when need arises.

Tripartite steering committee

The National Network needs a steering committee to provide political support to the network. The Work Environment Council, under the Ministry of Social Affairs, is a tripartite advisory body that consists of government agencies, employers' and workers' representatives, academia, and professional associations. The Council deals with policy formulation, harmonization, and improvement of cooperation between social partners. The Council has decided to include the National Network on the regular agenda. This arrangement ensures the sustainability of the network in a prominent manner. Such an agreement also visibly places the Estonian Network on the national agenda as one of the strategic elements.

A National Network is a particularly useful instrument for national administrators and policy-makers. It can be used as an instrument to guide the development of OH&S in a desired direction. The Network provides an infrastructure and a quick channel for key OH&S actors in Estonia who already have developed a sense of and solidarity and commitment to a common cause.

Use of Internet tools

The National Network has established its own website (http://www.sm.ee/Telematic/eesti-tootervishoid.htm). Having a joint Network website is, as such, a statement to the effect that the major actors are working together to strengthen OH&S.

The Network website provides entries to documents that explain the purpose and policy of the National Network, and links to the websites of the member organizations. The member organizations are fully responsibile for the OH&S information that they show on their websites. The Network's information repository is thus largely made up of the combination of distributed information repositories maintained by the member organizations. The electronic repositories are free-of-charge, and they grow in volume as additional information, training packages and other tools are added to the common pool.

The Network's website thus opens a window to the national OH&S capacities, or functions as an umbrella under which OH&S is developed and managed. The website also has a link to the Network's Infoserver which is a portal to the latest OH&S information and discussion on current problems (http://www.tervishoid.ee/).

The Infoserver provides, among others, interactive tools for OH&S professionals, employers, employees, and the general public. Such tools include: a) a telematic forum for inquiries and experts' answers, b) interactive self-auditing tools with benchmarking feedback, and c) simple Internet-based opinion surveys.

Other networks

The Tartu County OH&S Network was established to strengthen OH&S activity at the county level. Ten organizations from the County of Tartu form the core of the network. The Network's strategy, architecture (decentralized, peer-to-peer), and operational principles follow the model of the National Network. A local network can have a more direct impact on the working conditions than a national one.

The Network of OH&S Training Institutes was established in November 2001 by 20 organizations. The strategy and operational principles of this subject-oriented network follow the model of the National Network. The Secretariat for the Training Network is the same as for the National Network.

Network analysis

The National Network is being surveyed with a structured questionnaire sent to all organizations. The Network analysis provides sociometric parameters on information flow between actors, regarding collaboration and information exchange. The analysis provides an understanding of the Network's functionality and the density of the interconnections. It will also clarify the structural positions of individual actors in the Network, i.e. measures of actor centrality.

Effects

The National Network has linked the core organizations to a system that enables efficient information exchange and provides a platform for co-operative efforts. The concept and the infrastructure are already well established.

On the whole, the National Network has reached a stage that probably well ensures its sustainability. This conclusion is justified by the following points:

- The tripartite Working Environment Council will act as the steering committee, and network issues are on the regular agenda.
- The member organizations are comfortable with the decentralized peer-to-peer arrangement that guarantees each organization's autonomy and independent decision making.
- The Secretariat is competent, motivated and well established in order to guarantee continuity and provide technical support to the members.
- The focal point persons of the member organizations have received sufficient basic technical training in Internet maintenance skills.
- Much useful information has been placed in the electronic OH&S repository (information pool kept up jointly by several agencies).
- The Network's Infoserver is dynamic and technically advanced, one of the most visionary OH&S portals in the world.

Particularly important from the viewpoint of sustainability is a large supply of information 'products' on Internet. Electronic repositories and interactive instruments on Internet are the Network's intellectual products that can hardly be lost any more.

The Tartu County Network and the Network of OH&S Training Institutes are in the early phase of development.

Impact

The most important impacts of the network element are the establishment and gradual maturation of the National OH&S Network, the initiation of a local (Tartu), and subject-oriented (training) networks, and the well-developed telematic information dissemination capacities.

The Network's distributed information repository and the Infoserver are major accomplishments with great utility value for a variety of users (OH&S professionals, administrators, employers, employees, the general public). Their potential to promote OH&S in Estonia is huge. These Internet approaches place Estonia on the international front line in the application of advanced technologies for OH&S.

Both the organizational and technical outcomes, i.e. the networks themselves, and their Internet products, have a great deal to give to the further development of OH&S activity in Estonia.

Risks or threats

The major risks for achieving the goals set for the Network were analysed during the second period of Twinning:

- Lack of an authoritative steering committee
- Absence of some key organizations
- Lack of technical Internet skills on the part of many focal point persons
- Some technical clumsiness on the Internet pages.

Actions against risks or threats

The Work Environment Council has accepted the responsibility to function as a steering committee. The missing key organizations were linked to the National Network. Training was arranged on technical Internet skills, both in Tallinn and in Tartu. The National Networks' Internet pages were improved technically.

The prospects for the sustainability of the National Network are good. The core organizations have been familiarized with the networking approach (co-operation, Internet utilization). It is clear to them that the Network provides a useful forum for discussing OH&S issues in Estonia. The Network website, the distributed information repositories, and the dynamic Infoserver are powerful tools that have become popular among many user groups, including university students. Such information instruments are modern, convenient and economical, and together they contribute an element that all the builders of the Network can be proud of.

Developing information activities

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Background

Information support is one of the cornerstones of any activity under development. Therefore, it was decided from the very beginning to include also an information element into the Est-Fin Twinning Project. This decision was also based on the fact that the Estonian and Finnish experts of occupational health and safety (OH&S) had collaborated for a long time in the field of information dissemination. This joint activity was incorporated already in the first planning phase into the structure of the Est-Fin Twinning Project.

Objectives

The information element of the Twinning Project was divided into three entities:

- Raising general awareness
- Disseminating information to OH&S professionals
- Establishing and managing the information sources.

It was expected that developing systematically these activities will improve the possibilities and capacities of the occupational health and safety experts to act both at the national and workplace levels in Estonia.

Actions

Raising general awareness

Media
In any free society, the power of the media in shaping attitudes and raising awareness is vital. It was also accepted as the starting-point in the Est-Fin Twinning Project, that one of the goals of the Information Element was to arouse interest among journalists to disseminate information on occupational health and safety matters in Estonia. The aim was to get as wide a coverage of occupational health and safety news as possible. This was anticipated to make people aware of the relationship between work and health, and to show how important it is to take the health effects of work into account when doing the work, and when designing and planning the work. Press conferences have been organized three times during the Twinning Project, in connection of the Occupational Health Day in 2000 and in 2001, and as a separate seminar for journalists, dealing with risk assessment and economic appraisal of OH&S measures. It can be assessed that a

start for a network of journalists interested in occupational health and safety information was created.

Brochures
In order to facilitate the communication about the project, a brochure was prepared of the Est-Fin Twinning Project in Estonian and in English. It describes the elements and goals of the Twinning Project. People who have come in contact with the project in one form or another have found it easier to understand what it is all about, and also how they can themselves participate in the collaboration.

Seminars
Seminars should be organized on topics of wide interest to raise the general awareness of the public and decision-makers at the local level in municipalities. Such seminars would raise the level of general knowledge on occupational health and safety among both employees and employers. One specific 2-day information seminar was organized during the project. It gathered more than 70 participants both from enterprises, employers' and workers' organizations, universities, Ministry of Social Affairs, Occupational Health Center, and other institutions active in the field of occupational health and safety. The seminar themes were risk assessment in the work environment and economic appraisal of occupational health and safety. The workshop for journalists was combined with this seminar in order to offer the journalists an opportunity to talk with OH&S experts and ask questions.

Fact sheets, guidelines, brochures
The aim of fact sheets is to provide an easy-to-understand information package that can be easily distributed also to workplaces. The priority topics should be selected on the basis of the feedback from the field, i.e. the opinions of the clients, trainees, and other customers would shed light on the problems that most urgently need to be tackled.

The process of preparing a fact sheet starts with the preparation of the first draft by some of the experts on the topic. The draft is then reviewed and commented, and the comments are analysed and taken into account as deemed necessary. The reviewed text is then condensed to fit on one page, copied and distributed as widely as possible. The contact person mentioned on the fact sheet will be able to give advice and guidance on any questions the readers may have on the topic.

Various guidelines and brochures should be produced on various topics and distributed as widely as possible to the experts, employers and employees. Good occupational health management models should be offered to the occupational health services.

During the Twinning Project, seven fact sheets have been prepared or are under preparation. They cover the following topics: Ergonomics, Work during pregnancy, Psychological stress at work, How to assess chemical hazards, Economic appraisal of OH&S activities, Health of hospital and health care employees, and Pesticides. Two of the themes, i.e. Psychological stress at work and How to assess chemical hazards were based on the discussions in the High-level Policy Forum meeting.

Information support to occupational health and safety experts

Information Strategy
In order to be able to make the right decisions concerning the priorities in occupational health and safety information and the development procedures, it was decided from the very beginning to prepare an Information Dissemination Strategy defining all the important elements of the information activities. This has been enlarged during the course of the project. The background work for the document has been done by experts in the Ministry of Social Affairs, Occupational Health Center, and The Finnish Institute of Occupational Health. It has been discussed twice in wide expert groups, once in the Network Seminar in May 2001 and the second time in the Second Technical Inception Seminar in October 2001. Both the producers and users of the information have participated in these seminars to carry out the development work. The information needs and availability of the electronic sources of the clients have also been analysed. The Information Strategy will guide the implementation of information activities also in the future.

Occupational Health Center
The Information Unit of the Occupational Health Center was strengthened in order to establish a well-working national information service centre. This Center would act as the storage of occupational health and safety information in Estonia, but would also provide information services to anybody needing occupational health and safety information. The Unit is well prepared for these tasks.

Estonian Newsletter on Occupational Health and Safety
The Editorial Office of the Estonian Newsletter on Occupational Health and Safety (the newsletter was established in 1992, in Estonian and in English, and was technically edited in FIOH, Helsinki) was transferred entirely to the Occupational Health Center in Tallinn during the project. The training and guidance of the editorial personnel was carried out during the project, in order for the Newsletter to be fully edited and published by the Occupational Health Center from 2001 on. A strategy and plan for the development of the Newsletter were drafted during the project. The Editorial Board was appointed consisting of all important stakeholders. The division of labour between the Editorial Board and the Editorial Office of the Newsletter was also discussed and agreed upon. Three issues of the newsletter came out in 2001, and four issues are scheduled for 2002. One of the issues dealt with risk assessment. The Estonian Newsletter is also available on Internet at www.ttk.ee.

Internet
A lot of information is retrieved and utilized through Internet. This means also a challenge for the Occupational Health Center to establish and develop further the Internet website on occupational health and safety. It is convenient for the user of the information if he/she can access all the relevant information through one portal. Well-functioning collaboration and division of labour need to be ensured with the Ministry of Social Affairs which is the focal point for the Baltic Sea Network in Estonia, and also handles the information networking of the Bilbao Agency on Safety and Health at Work.

Networks
In order to fully utilize all the already existing expertise and information, it is of utmost importance to establish and develop various networks both at the local, regional, na-

tional and international levels. A national and a regional network have been established within the framework of the Est-Fin Twinning Project on Occupational Health. Close collaboration has been encouraged between the Occupational Health Center and the already existing international network, Baltic Sea Network on Occupational Health and Safety, as well as the Bilbao Agency Network. The Estonian National Network is preparing a Directory of the institutions involved in the Network. This will provide another form of information dissemination, describing the organizations active in the field. The establishment of sub-networks in certain areas was stimulated. The Subnetwork on OH&S Training Agencies has been created. The networking was carried out under the Network Element of the Twinning Project.

Establishment and management of information sources

Library
The library of the Occupational Health Center will act as a normal library which lends books, journals and other materials to occupational health and safety experts, students and anybody interested in OH&S. An electronic catalogue has been established to systemize the library's existing collection of books. Databases and other electronic materials of international and Estonian libraries on Internet are available also for clients.

Databases
The identification of existing databases in Estonia has been done within the framework of the Twinning Project. It provides a good basis for the further development of new databases and their integration into the national information storage. Main characteristic indicators have been determined for the data that should be collected for relevant databases. These cover databases on occupational accidents, occupational diseases, occupational exposure in Estonia, etc.

Information services
Data concerning the status and development needs of working conditions in Estonia have been gathered within the project. In addition to the printed information material (newsletters and books), emphasis will be placed on information in an electronic form. Services for database information searching from international libraries and databases for clients have been developed and will be carried out by the Occupational Health Center in the future.

Evaluation

The information needs and the services available in Estonia on OH&S information should be periodically evaluated. Feedback on the services needs to be received from the customers and clients both in personal contacts, through questionnaires and Internet. Also the national programmes on occupational health and safety and on work environment need to be examined in order to take into account the information needs brought out in them.

Outcomes and impact

As the outcome of this element of the Est-Fin Twinning Project, well-developed practices for raising awareness, long-term information support to all professionals working in the field of OH&S, a regularly published newsletter, and well-working clearing-house activity feeding the national information centre with relevant sector-specific information were anticipated. All these objectives were achieved and there is now in Estonia an active unit for information dissemination, developing these activities in the long run.

Risks and threats

A clear risk for not achieving the objectives was faced during the project, and that was the lack and uncertainty of candidate country funding during the project for publishing the Newsletter.

Actions against risks and threats

Several discussions were held among the representatives of the Estonian Ministry of Social Affairs, Occupational Health Center and Finnish Institute of Occupational Health in order to find ways to solve the financial problem. In 2001, Occupational Health Center and Finnish Institute of Occupational Health together settled the funding problem through partial funding by the Occupational Health Center and the Finnish Institute of Occupational Health. The drafting of the Information Strategy with all the arguments emphasizing the importance of information in occupational health and safety helped in the preparation of the budget grant applications to Estonian Government for 2002, and sufficient funding was received. The Occupational Health Center has a challenge to find also in the future sufficient and stable funding for various information activities. This is important for the overall development of the work life and occupational health and safety in Estonia. No development can take place without adequate, reliable and well-targeted information.

Developing occupational health services

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Background

Although the OH&S law came into force in the late 1990s, in Estonia occupational health services (OHS) were provided only occasionally in 2000 and mainly in Tallinn and the biggest cities. There were 13 mainly private occupational health service (OHS) units, less than 50 occupational health physicians, less than 30 occupational health nurses, and less than 30 other occupational health professionals.

As part of the Twinning Project, the development of the occupational health service system was planned to be carried out via different approaches. One aspect was the evaluation of the present status of Estonian OHS. Simultaneously, a plan of activity for developing the OHS infrastructure was to be drawn up. Furthermore the preparation of lower-level norms and standards and codes of practice for the implementation of the Occupational Health and Safety Act was seen important. Guidelines for good occupational health practice were also seen essential to guarantee a high level of quality of the services provided. One aim was the better understanding of problems and regulations, attitudes, perceived responsibilities, practices, training needs, priority questions, development needs and expectations of various stakeholder groups of OHS. These issues were decided to be surveyed as a part of the project.

Objectives

The following objectives were chosen for the development of occupational health services:

1. Evaluation of the state-of-the art of OHS in Estonia
2. Launching the preparation of lower-level norms and codes of practice in line with the OH&S Act
3. The preparation of guidelines for good occupational health service practice (GOHP)
4. Developing and strengthening OHS activities
5. Collecting case studies to establish benchmark models
6. Surveys of the practices of professionals and stakeholders in OH&S, as described above.

Additionally, the training of OHS professionals was considered an important objective.

Actions

To achieve the above-mentioned objectives the following actions were planned:
1. Seminars for administrative personnel, researchers and practitioners
2. Case studies (Tartu University OHS Unit, Elcoteq Tallinn, Tallinn Harbour OHS)
3. Mailed questionnaire surveys to OHS units, occupational health professionals, and university teachers of relevant disciplines
4. Strengthening of OHS co-ordination, development and monitoring at the Occupational Health Center
5. Starting a process to develop GOHP guidelines in Estonia.

Case studies

Case studies were seen to promote better understanding of the rationale of current functions of occupational health services, the development needs and obstacles. Based on the information gained through case studies, starting the development of model systems for benchmarking by others in Estonia was seen feasible.

As a starting point for the case studies, each of the chosen units was visited in the autumn of 2000. During the visit, the basic data on the context, resources, activities and practices were inquired by interviewing the occupational health personnel as well as the main organizational stakeholders (in Tartu University and in Elcoteq Tallinn). The representatives of the participating units were later invited to join the national occupational health network.

Two objectives for the project were agreed upon in Elcoteq Tallinn,:
1. How to integrate OHS into the management system of the company with an existing quality standard
2. To search the possibilities to make the information exchange more fluent between the various external actors (family physicians, Sickness pension fund [Haigekassa]).

However, due to big changes in the production process of the company, a plan of the implementing the OHSAS 18001 management system was agreed upon at a follow-up meeting in May 2001. Meanwhile, negotiations concerning the second objective took place between Haigekassa and the OHS representative.

The Tallinn Harbour OHS unit (Profmed P) was just moving in to new premises from the harbour area in October 2000 when the evaluation visit took place. There was a possibility and a need to market the services to the local enterprises. The main goal of the case study was to evaluate the marketing of the occupational health services. The follow-up evaluation will be conducted in April 2002.

The Tartu University OHS unit was in planning phase in October 2000 when the first evaluation visit took place. The goal of the case study was to follow up, how to establish and run a new OHS unit in a university context. There were some obstacles in the starting phase of the unit, but at the end of 2001 the University administration approved the launching of the OHS unit. The follow-up evaluation will take place in April 2002.

Surveys

The plan for carrying out the surveys was first presented already in the project's starting seminar in September 2000. As a suitable, interested party was not found on the Estonian side, the issue was raised again in the National Network meeting in spring 2001. As there already were recent data on their working conditions (EMOR survey 2000), occupational health professionals, and university teachers of the relevant disciplines were chosen as the main target group for the surveys. Also the possibility of including family physicians and trade union representatives as targets was discussed.

A workshop for planning the surveys took place in October 2001 under the umbrella of the National Occupational Health Network. However, the interest of the Occupational Health Center personnel to collaborate in the surveys finally launched the planning in October 2001–January 2002. The questionnaires for the OHS units and the occupational health professionals were mailed at the end of February 2002.

The data analysis will be conducted in collaboration with the Occupational Health Center and the Finnish Institute of Occupational Health, and the results will be presented in May 2002.

A third, less comprehensive survey of occupational health issues to relevant university teachers is also planned for April. The survey for the family physicians was postponed, and the opinions of representatives of the trade unions' and employers' organizations will be charted by interviewing some of them later.

Guidelines for good occupational health practice

As a starting point for the development of Estonian good occupational health practice (GOHP) guidelines, the English version of the Finnish GOHP guideline is being translated into Estonian, and it will come out in May 2002. Also, a draft of an Estonian OHS Audit Matrix based on Norwegian and Finnish matrices will be prepared as a course task force assignment in connection with the evaluation course in February-April 2002.

Effects

The lower-level norms and codes of practice prepared by the Ministry of Social Affairs and Occupational Health Center will have an impact on the development of OHS towards higher coverage and better quality.

Current information from the case studies and surveys on the OHS situation will help in the planning of further developments in the field, both at the national level and locally. The examples from case studies can serve as benchmarks for other actors in the field of OHS. The further development of GOHP guidelines will also improve the quality of the services.

Impact

A work programme for OHS enables the further development of the OHS infrastructure nationally. The information obtained from the case studies and surveys will address some development needs in practice. Also, other OH&S actors can use the experiences from the case studies as benchmarks. The development of Estonian GOHP principles has started and it will provide a basis for comprehensive, multidisciplinary, ethical and cost-effective OHS.

Already now, at least one quantitative measure demonstrates the impact of the development process: in the year 2000 the number of licensed OHS units was 13, in March 2002 the corresponding figure has risen to 26.

Risks and threats

The risks and threats in the development of the OHS infrastructure, as analysed during the course of the project:

1. The work programme for OHS was essential as a plan for developing OH&S further.
2. The funding of the development of the OHS infrastructure is insufficient due to a lack of interest on the part of enterprises.
3. It is not possible to increase the coverage of OHS due to the lack of trained personnel, and difficulties in organizing services throughout the country.
4. It is difficult to get OHS professionals committed to developing GOHP guidelines.

Actions against threats

1. Involvement of the stakeholders (enterprises, employers' organizations, trade unions) in the development process by different activities that would increase awareness and recognition of the importance and benefits of well-functioning OHS and Occupational Health Center among high-level policy makers and authorities (negotiations, seminars).

2. A recommendation prepared by the Occupational Health Center including plans for developing various service models (integrated occupational health units, joint occupational health units of several enterprises, private occupational health units, public sector occupational health units) was accepted into the National Development Programme for OHS 2005–2010.

3. A realistic plan for training occupational health professionals by the year 2010 will be presented based on the goals of the above-mentioned programme.

4. The decision to translate the English version of the Finnish GOHP into Estonian will hopefully stimulate interest in developing the guidelines further for the Estonian context. Also, including the development of a draft of the Estonian OHS Audit Matrix in the evaluation course work will positively influence the attitude of occupational health professionals.

Evaluation of the Twinning as a process to support and develop Estonian occupational health services

The development of the OHS system is a multifunctional challenge requiring human and material resources. Twinning offers a possibility to use flexibly different specialists with varied competencies, depending on the needs and how they change.

Twinning also connects vertically the development of infrastructure with simultaneous developments in the legislation, regulations, and other national steering actions.

Practical-level development supplemented by the use of lighter surveys allows fact-based evaluation and planning for the further steps towards national, well-functioning occupational health services in Estonia.

The Occupational Heath Center

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Background

The establishment of a national centre for occupational health was regarded for many years as a central instrument and important requirement for the future development of occupational health in independent Estonia. The establishment of this kind of agency was expected to form a central unit for development, information dissemination, and training in the field of occupational health services (OHS) in Estonia. The agency should also have a role as a centre for scientific and applied research in OHS. With highly qualified specialists and with the necessary material-technical basis for the agency, improvement in the quality of specialists in the field of occupational health and safety was considered possible. In addition, a central agency would also have a positive impact on the development of OHS at workplaces.

This goal became real in 1999, when the Act on Occupational Health and Safety (OSHA) was passed. This act focuses on the development of a national system of OHS for employees. According to the act a national agency, the Occupational Health Center was to be established in August of 2000. The role of the Center had changed from its earlier concepts. The new Center was established to coordinate and provide methodological guidance for OHS activities and to support the increase of OHS coverage, including the development of monitoring, evaluation and preventive systems, as well as the dissemination of OH&S information.

The Twinning Project was considered as an opportunity to offer the necessary support to the Center and strengthen it. In the plan, goals and activities were defined concerning the strengthening of the Center.

Objectives of the Twinning

In the Twinning Project the following procedures were chosen to develop the Occupational Health Center to a well-functioning national agency able to give advice and provide services and information for OHS field workers and others:

1. Analyse the mission and functions of the Center and transferred them into operative functions
2. Define the structures and operative organization of the Center as needed for the implementation of the mission and functions
3. Define the facilities and other physical and material resources required for implementing the functions of the Center, and the purchase of such facilities
4. Define the personnel resources and the personnel competence and qualifications needed to implement the tasks of the Center

5. Train personnel for various activities in consideration of their forthcoming role as trainers
6. Plan the financing of Center activities on a long-term basis
7. Initiate key functions, research, development, training, and education, information services, and advisory services and prepare plans for good practices and further development for each of the functions.

Actions

To achieve the defined goals, the following key actions were chosen for the Twinning Project:

1. Define the mission, strategy, organization and core functions of the Center
2. Prepare plans (actions for 2002, long-term finances)
3. Plan for needed equipment
4. Define the personnel resources and training needed.

The Estonian Occupational Health Center was established in the beginning of the Twinning Project, and it was registered as a national agency in September of 2000. The new leader of the Center was appointed (Dr Urmas Krass). The chiefs of the departments (Dr Ahe Vilkis – Training, Ms Eva Tammaru – Information, Dr Ülle Sarap – Occupational Medicine, and Dr Ülle Lahe – Maritime Medicine) were soon appointed, as well.

The first year of Center activity was a time for forming the basic structures of everyday operation. Basic furniture and equipment for information exchange were purchased as well. Equipment for information services (library equipment, databases for information searches, etc.) for the Center were also necessary. To meet the requirements for OHS within the European Union, an investment component was included to support the institutional capacity for developing the Center itself, OHS and the Estonian National Labor Inspection. The investment component proceeded according to plan, and contracts concerning purchases were made in July 2001. The first equipment was the delivered in second half of 2001.

The strategy planning process for the Center was one of basic planning. Senior officers of the Center visited respective partner departments of the Finnish Institute of Occupational Health in Helsinki. Twinning Project supported the establishment of an Internet-based national network of Estonian institutions in occupational health and safety. Eleven universities, research institutes, state agencies, and non-governmental organizations agreed to maintain the network jointly. According to the objectives of the Center, the Ministry of Social Affairs established the Secretariat of the Network. Databases and library services also were created in the Center.

Numerous Estonian specialists and other parties interested in OH&S participated in seminars and short-term courses. The training department of the Center has become the initiator and central organizer in occupational health training. A special strategy for OH&S training has also been prepared in the Center.

The Center has also achieved a central role in the development and quality surveillance of OHS and its human resources jointly with the Ministry of Social Affairs. This joint

activity is based on a recent regulation of the Minister of Social Affairs, the "Procedure of Getting a License for the Provision of Occupational Health Service", which became effective on 1 July 2001. The diagnostics of occupational diseases has been clarified as well in a government regulation, "The Procedure for Investigation and Registration of Occupational Accidents and Occupational Diseases", which became effective on 1 October 2000.

In the Ministry of Social Affairs preparations for the following two development plans began with the support of the Twinning Project:

- National Programme for the Development of Occupational Health, 2005 and 2010
- National Work Programme Environment, 2005.

The main task of these programmes has been to design strategies for eliminating or reducing hazards and detrimental factors in the work environment. Promoting the Occupational Health Center has been considered as an important activity, through which to achieve the goals of these programmes.

Effects

Key functions of the Occupational Health Center (research, development, training, information dissemination, and advisory services) are in operation with defined strategies. All the key functions have a nominated leader, who is well aware of his or her duties. Action plans for all functions have been prepared for the year 2003 according to the strategies. The Center has created collaborative relationships with stakeholders and its most important partner organizations and institutions. The sustainability of key functions is assured with an annual programme for action planning.

Plans of actions in 2002 and 2003 have been taken into account in state budgeting, and basic data and a model for long-term finances have been prepared. Basic equipment and other material and facilities have been purchased and are in operation.

Impact

The Occupational Health Center has developed to a well-known agency with highly qualified personnel and activities. Nationally it has a central role in the development and steering of OHS. It is an important body in the field of OH&S. It will also have a central role in the sustainability of the newly established national network for occupational health. Through the network a dynamic development process can be supported with the competence and intellectual resources in most important organizations and institutions of occupational health in Estonia.

The Center has its most important impact through its increased professional level of OHS due to its development activities and quality control, its continuous training of occupational health specialists, its information dissemination in topics with high priorities, and its effective and up-to-date library services with high technical feasibility.

Training activities of the Center are continuously increasing the number of qualified occupational health personnel in Estonia. The opportunity to increase the coverage of services grows simultaneously.

Training and information with high actuality and expertise strengthen the trustworthiness and necessity of a central agency in the field of occupational health. Influential OHS activities are supported by the services and other activities of the Center.

Risks or threats

The most important risks to the effective operation of the Occupational Health Center were analysed in the Twinning Project. They were found to be the following:

1. The role of the Center as a national agency in OHS and coordination with other partner institutions may remain obscure at the practical level.
2. Strategies and activities are not focused on the most important targets. It is already obvious that the information and training strategies have developed with high validity when compared with the challenges in these areas. It is very important that the research strategy of the Center be developed with the same kind of target orientation.
3. Human and financial resources will not reach the level needed for a well-functioning agency.

Actions against risks or threats

To avoid the presented risks, the following additional activities were performed:

1. A coordination seminar with partner agencies and units was arranged, and the roles of different stakeholders were discussed and defined with agreements, if needed. The Twinning Project offered support for the strategy-making process within the Center with tools of strategy planning.
2. A separate research strategy was prepared jointly with other research institutions in the same field.
3. Activities were started to increase awareness and recognition among high-level policy makers and authorities, as to the importance and benefits of a well-functioning Occupational Health Center and efficiently operating OHS.

Evaluation of the Twinning Project as support for the Occupational Health Center

In the case of Occupational Health Center, the Twinning Project has been a tool for development since the establishment of the Center. Thus the Project has offered many possibilities to support the planning of a new agency. The creation of connections and the building of bridges with respective partner organizations has been one of the first goals and activities in this process, in addition to the internal strategic process of the Center during the project period.

The support of the Twinning Project for the establishment of information management and dissemination systems, training plans and programmes, as well as institutional building within the Center been keenly associated with the reality of the development of a new organization. Thus the process of development has been natural, and connected to realities and actual needs of the Center.

Conclusions

The primary guaranteed result of the Twinning Project in the case of the Estonian Occupational Health Center was the appropriate establishment of the Center with an organization, structures, and core staff able to provide advice, services, and information to occupational health professionals and others. This result has been achieved well.

Concerning the functions of the Center, following conclusions were drawn:

1) Scientific and applied research on OHS needs further strengthening of resources, and perhaps a research unit or department within own organizational structure is needed within the Center
2) Implementation of occupational health programmes became possible through the National Development Programme for Occupational Health, which was prepared with the support of the Twinning Project in the Ministry of Social Affairs
3) Expert assessments of occupational health issues should be provided along with expert analyses of diagnoses of occupational diseases
4) In-service training should be organized for occupational health physicians and nurses and other occupational health specialists
5) Occupational health information should be gathered, analysed and disseminated
6) Records of occupational diseases should be kept.

The strengthening of the diagnostics of occupational diseases and the development of good occupational health practices and OHS models needs good collaboration between the Center and the Clinic of Occupational Diseases. Such cooperation will also allow reasonable use of laboratory and other equipment purchased with the support of European Union Phare Programme.

Training of the occupational health experts

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Background

The goal of good occupational health practice is to produce occupational health services of good quality. One essential element of good quality is the professional skills of the occupational health personnel who deliver the services. A sufficient number of professionals with adequate skills is achievable only through training and education. Thus, the training of occupational health and safety (OH&S) personnel as well as the trainers of OH&S personnel has to be considered carefully. In this project we concentrated on the training of occupational health service personnel and their trainers at the Occupational Health Center and other training institutions.

Objectives

Training and education are essential for assuring human resources and for strengthening the professional competence of OH&S personnel. Therefore, training and education is included in virtually all elements as a penetrating principle even though it was not mentioned as a separate element in the covenant of the Twinning Project.

The objectives of the training element were to:
1. Estimate the occupational health training needs of the different professional groups
2. Strengthen the existing curriculum for the training of occupational health physicians (OHP) and occupational health nurses (OHN)
3. Provide training courses on topics selected according to the assessment of needs
4. Chart and bring together trainers from various organizations training occupational health personnel
5. Provide the trainers with theoretical knowledge on adult training methods found feasible in the member states, and practise them in actual situations
6. Formulate a training strategy for OH&S training in Estonia.

Actions

The training needs (see above list of objectives, points 1–3) based on the law on OH&S and the workers' health were discussed with health care professionals from the Tallinn district, and occupational health care trainers from Tartu University in the starting seminar in order to strengthen the training on occupational health in Estonia. The existing curriculum for occupational health physicians was analysed, and plans were made for the contribution of trainers from the member state in that course entity. Also, new

courses were planned on topics deemed necessary for providers of occupational health services. At first the courses which were integrated into the existing specialist curricula, were offered only for those registered in the programme, but very soon all courses under the Twinning Project were open to all Estonian occupational health personnel.

The role of occupational health nurses, physiotherapists and ergonomists was clarified, as well. In the equality component, different target groups (labour inspectors, authorities, administrative personnel, and social partners) are trained in the creation of a healthy and productive work organization.

The Liaison Seminar (see Objectives, list of objectives, point 4) brought together trainers in OH&S from a number of Estonian educational institutions and universities. The training director of the Occupational Health Center charted and invited interested trainers from these training institutions to the trainers' course. Thus, the OH&S trainers' network was strengthened.

Three courses were organized to provide the trainers with theoretical knowledge on some adult training methods (see Objectives, list of objectives, point 5). The courses offered a progressive continuum from general principles of training to detailed planning of curricula, courses and materials, as well as practical exercises.

Analysis of the critical success factors is the basis for formulating the strategy (see Objectives, list of objectives, point 6) for occupational health and safety training in Estonia. The strategy includes the estimation of the number of professionals needed in 2005, the characterization of the necessary skills, the list of possible members in the training network, and a proposal for the needed training curricula for occupational health personnel.

Effects

Training and education was seen important in strengthening and fortifying the activities of the Occupational Health Center, in training the staff of the Center, and in organizing courses for occupational health service managers and experts, with a special element for the training of trainers.

The contents of the course for OHPs and OHNs is being renewed and plans for the training in 2002 are drawn up by Dr Ahe Vilkis, Director of Training at the Occupational Health Center in Estonia. The quantitative needs, i.e. how many occupational health professionals have to be trained in order to fulfil the needs of occupational health services, have been estimated.

Impact

A great number of OH&S professionals and trainers were trained. This strengthens the capacity of the planners of the training, the trainers and OH&S personnel of the candidate country to produce relevant and good quality OH&S training and services.

Risks and threats

Possible risks remain, e.g. whether the training skills of the staff of the Occupational Health Center and of the OHS personnel have not been strengthened enough during the Twinning Project, or if the potential trainers in all relevant Estonian training institutions are not reached and informed about the training in the project. The strategy for OHS training has been drafted in the national policy for occupational health, and the participants of the training element have commented on the draft, but there is danger that the final strategy may not be completed within the time allotted for this project. The training needs and possibilities to train family doctors in OH&S were discussed, but the training plan has not yet been prepared, neither had any training been organized for them yet. This issue still needs to be dealt with in the future.

Actions against risks or threats

Further strengthening of the OHS course is needed by the Estonian experts continuously. Also, the trainers still need further training and practice in the training methods. The Network element can be used in the networking of the training activities. The training of family doctors should also be taken into account in the formulation of the strategy for occupational health training.

Gender equality

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Objectives of the equality element

The equality element was based on the new framework strategy of the European Union (EU) on gender equality starting in 2001 and running until December 2005 (1). Accordingly, equality should permeate all areas of action in the EU enlargement process. In parallel with the framework strategy, the equality element is aimed at enhancing and complementing the accession process by providing new incentives for promoting gender equality in Estonia.

To meet these objectives, the following actions were initiated:
- Awareness raising
- Analysing, and evaluating, and developing comparable statistics, methodologies and indicators
- Capacity building and exchanging data on good practice and also new information
- Increasing gender sensitivity and gender mainstreaming.

One of the key elements of the project was to develop and strengthen the functions of the Equality Bureau established in 1996 in the Ministry of Social Affairs in Estonia. Its main activity has been to coordinate the mainstreaming of the gender equality perspective into all social and political processes. In the accession negotiations, Estonia committed to the adoption of a gender equality act. The Equality Bureau has played a central role in its preparation.

During the project, it was important to demonstrate the social and economic benefits of enforcing the new equality law. The law should not be seen as a formal condition for acceptance to the European Union and involvement in the enlargement process. On the contrary, the law should be perceived as an internal obligation aimed at providing the maximum level of well-being to all people, both women and men. There are cases where it is actually the men who have been unfairly treated or discriminated against in work life, in some cases based on their gender. Research evidence shows that men benefit from the promotion of equality, especially in terms of better health and well-being. Comparative studies also show that the economy of countries with greater equality grows more quickly and that the growth trend is more stable.

During the Twinning Project, the following methods and tools proved appropriate for use in promoting gender equality: establishing gender equality plans, implementing gender mainstreaming aimed at changing policies, setting common indicators, benchmarking, and developing monitoring tools for measuring results and progress. This list constitutes some of the tools and methods required to achieve gender equality. In parallel with the EU legislation, sexual harassment was studied in two company-based surveys as one form of sexual discrimination. According to the European Commission, sexual harassment can amount to discrimination when "where any form of unwanted verbal, non-verbal or physical conduct of a sexual nature occurs with the purpose or effect of violating the dignity of a person. In particular when creating an intimidating, hostile, degrading, humiliating or offensive environment". The 1976 Equal Treatment Directive is being strengthened by a series of new amendments, including a paragraph on sexual harassment. In April 2002, The EU Parliament and the Council jointly adopted a new EU law extending the scope of the 1976 Directive on equality in the workplace. The amended Directive provides stronger support for any employee who feels she or he has been treated unfairly by an employer because of their gender. The new Directive also means that employers need to introduce preventive measures against sexual harassment and to give a regular equality report to every employee in the enterprise. For the first time at EU level, binding legislation now defines sexual harassment and establishes that it constitutes a form of sexual discrimination. The Directive enters into force in 2005. (2,3)

Draft for a gender equality law

The objective of the new Gender Equality Law is to promote equal opportunities for both women and men and the prevention of gender discrimination, either direct or indirect. The law will aim at establishing equality in work life, education, social security, and other spheres of life. Besides prohibiting discrimination, the law will allow certain positive measures to promote gender equality. According to the law, employers will be obliged to promote gender equality, to support the reconciliation of work and family life, and to combat sexual harassment at work. The work organization in both the private and public sector will have an important role in promoting equal opportunities. The draft of the Gender Equality Law passed its first reading in the Estonian Parliament in March 2002.

Healthy work organization survey

One of the objectives of the equality element was to produce new information for awareness raising and capacity building. Therefore, two company-based surveys were conducted in two factories in Tallinn. The surveys helped to map the Estonian workplaces from a gender perspective.

In both surveys the Healthy Work Organization barometer was used. The barometer was constructed in the Department of Psychology at the Finnish Institute of Occupational Health. It was supplemented by a set of questions measuring gender equality. The

equality questions were developed in cooperation with Estonian and Finnish experts. The Finnish Gender Barometer of 1998 was used as a model (4).

The typical features of a healthy work organization include an open and encouraging atmosphere, good leadership practices, sufficient information flow, possibilities to influence, and equality between different personnel groups and genders. When these features are positively realized in the workplace, the outcome is an organization which is both productive and innovative, and in which the well-being of staff members is high.

Altogether 650 respondents representing different hierarchical positions filled out the questionnaires, which were translated into Estonian and Russian. The response rate was high, being close to 90% in both surveys (in Finland the average response rate in similar surveys is about 75%).

The results were analysed by Finnish and Estonian researchers, and feedback seminars were arranged. In these seminars guidelines and practical tools (action plan, use of brain storming) were presented. In the analysis of results, a comparison with reference data is important, especially when a survey is conducted for the first time and there is no comparable data available. In this case, the results were compared with data from the Finnish Healthy Work Organization barometer (5).

The results showed that one-third of the respondents found the equality atmosphere good in their own work unit. The men found the equality atmosphere somewhat better than did the women. This finding agreed with that of the Finnish reference data. There were fewer subjective experiences of unfair treatment based on age than in the Finnish reference data. The women reported more unfair treatment based on gender and family situation than did the men. This was also the case in the Finnish reference data (5). Regarding the balance between work and family life, the women wished men would utilize family leaves more often than they did. The current situation, in which mostly the women take the responsibility for the children, was considered to harm women's positions at work (e.g. difficulty finding a new job or negotiating a better salary); about 40% of the women felt this way. This same finding was apparent in the Finnish reference data. In the Estonian data more women than men reported patronizing and disparaging behaviour. However, the gender difference in Estonia appeared to be significantly smaller than in the reference Finnish data.

In general, the differences in the results between the gender and ethnic groups (ethnic Estonian versus Russian speakers) in both surveys were smaller than the differences between people representing different hierarchical groups (managers, specialists and workers). Managers were more positive about the questions than the other groups were. This is a result that is also in accord with the Finnish reference data.

In discussions of the results with the company's representatives, it seemed that the representatives were able to interpret the results from various perspectives. The Healthy Work Organization barometer seemed to function well as a diagnostic tool regarding the strengths and problems found in organizations. However, before any reliable conclusions can be drawn, there must be several similar surveys in various types of Estonian workplaces, particularly in the service sector. According to the Estonian experts, the results from the items about gender equality showed that the awareness of equality is-

sues is lower than in Finland. Thus more company-based research is needed with a genuine gender perspective.

Community profile study

The study on community profiles in two minor cities in Estonia was a sub-project of the equality element. Its objective was to study violence in different forms and in different circumstances: domestic violence, workplace violence and violence in public places (parks, streets and public transportation). The theoretical framework was based on the concept of social capital and community empowerment intensively discussed in the Estonian Human Development Report (6).

The aim was to bring a gender perspective into the study of social capital and community empowerment. The hypothesis was that the more participation and the more mutual trust and help there was in a community, the better prepared it was for taking care of such destructive behaviours as violence, crime, and other types of stress-related problems. The statistics and information on violence are available both in Estonia and in Finland (6,7).

The statistics on violence and crime rates show a significant increase in Estonia. In 2000, the number of reported crimes was almost twice as high as in 1991. There are no satisfactory explanations for this increase, but one could suggest that the transition period has caused a lapse of State control and a deterioration in individual moral norms. According to the statistics, most of the persons involved in registered crimes, either as victims or as perpetrators, are men. These statistics do not prove the existence of violence involving women (7). However, the population survey carried out in 2001 revealed that, when issues like mental or physical abuse were inquired about, the share of women reporting that they had experienced such abuse was significantly higher than the share of men (7). There was a clear gender difference.

The community study was initiated in two smaller cities and county centres in southern Estonia (Viljandi and Valga).

The main research questions used were the following, and each of them were analysed according to gender:

- Is domestic or other types of violence considered a problem in the community?
- How well-prepared are workplaces for understanding the issue of violence?
- What is the role of occupational health and safety?
- What type of workplaces are more characterized by higher levels of violence?
- How do formal structures react to emergency situations?
- What kind of training programmes and activities are introduced to prevent violence and to deal with the issue, including those of occupational health and safety systems?
- What is the role of informal networks in prevention of violence and dealing with the issue?

Social capital reflects the social resources of the community; it is not related to individual indicators such as the level of education or intelligence quotient (IQ). There are various tools for evaluating the community profile (joint actions, solidarity, degree of cohesion, management style, ways of settling conflicts, number of non-governmental organizations, etc).
In this study, the community level indicators were as follows:

- Sense and identity of the community
- Ability to see and perceive social problems
- Readiness to react to asocial behaviour
- Participation in problem-solving and decision-making activities.

Violence against women arises from a combination of individual and psychological characteristics, as well as from social, economic and political factors. The diagram below (based on a World Bank 1999 report) depicts how the interaction of these individual and social characteristics can constitute protective or risk factors that shape the nature and the consequences of violence (9). All these factors are included in the study.

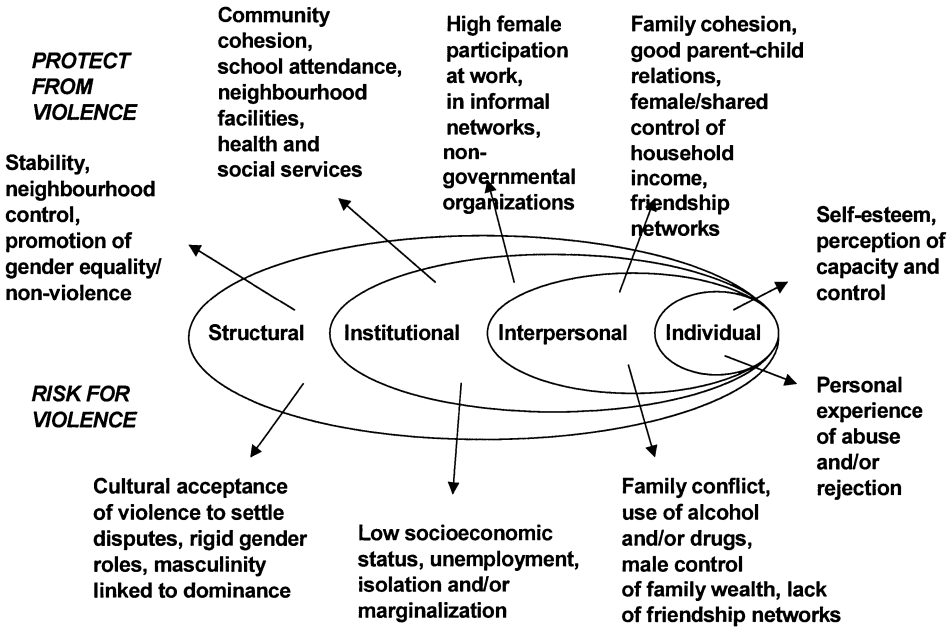

Diagram 1. The multifaceted risk factors of violence against women

Gender mainstreaming and preventing social risks at work

The new EU community strategy on health and safety at work in 2002–2006 emphasizes the meaning of preventing social risks at work. Accordingly, stress, harassment, violence at work, depression, anxiety, and risks related to dependence on alcohol, drugs and

medicines should all form part of the global approach to promoting well-being at work (2). Also the proposal for the new Finnish Occupational Safety and Health Act, the prevention of harassment and inappropriate treatment has well-defined regulations (10).

Even though many of these problems are associated with female jobs and they are seen as female problems, they play an important role in the life styles of many men. More prevention of social risks in male-dominated jobs should be initiated, there should be more research focused on the effects of dependence on drugs and alcohol on health and safety at work.

Mainstreaming the gender dimension into the health and safety systems at work does not mean focusing on women only; also the specific characteristics of men in terms of health and safety at work must be recognized. For gender equality to become a reality, both men and women must be involved as active participants. An important challenge today is incorporating men and issues connected to their roles into gender equality work (7).

Summary

One of the goals of the Twinning Project was to elaborate the tools and methods needed to provide advice for researching and developing gender equality in workplaces. For the first time in Estonia, gender-related issues (e.g. sexual harassment, sexual discrimination, equality atmosphere, bullying, etc.) were fully integrated into the study of work organization and work practices. The objective was to increase gender sensitivity when creating a healthy culture within work organizations. Addressing gender issues in work life requires a new type of awareness and a change in attitude.

It is vital in Estonian workplaces to invent new strategies to promote a better balance between work and family life. The birth rate has significantly dropped in Estonia, being today one of the lowest in the world. Because of a lack of 'family-friendly' practices young families, and particularly young women, find it difficult to have children if they pursue their careers at work. In this respect neither women nor men should find that the pursuit of family life results in discrimination in the workplace.

A good balance between work and family life can benefit all the parties involved: the employer, the workplace and the family. A 'family-friendly' workplace can be a new competitive factor when employers are competing in hiring and keeping the best people. When the situation in the workplace is satisfactory, it is reflected at home as better well-being and greater harmony, which again are reflected in job satisfaction. Both sides will gain from the interplay. It is important to encourage men to take responsibility over family issues. This is important in countries such as Estonia and Finland, where women are mostly employed full-time, not part-time, as is normally the case in many EU countries. Men's participation will both lighten women's double burden and create partnership and mutual understanding.

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Development of the Ministry of Social Affairs

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Background

Increasing of the awareness of the role and importance of developing work life and occupational health and safety (OH&S) at the highest policy-making and decision-making levels will lead to a distinct priority position of OH&S on the national agenda. It will also help meet the pre-accession criteria set by the European Union. The Ministry of Social Affairs has a central position in the transposition of the relevant European Union directives into the Estonian legislation, and it thus ensures the development of the health, safety and welfare of the working people and work life in general in Estonia. The purpose of the Est-Fin Twinning Project on Occupational health was aimed to support the Ministry of Social Affairs in the achievement of this major objective.

Objectives

The Twinning Project aimed to strengthen the institution building, policy-making and administrative capacity of Ministry of Social Affairs in the activities to develop OH&S. Other objectives were the achievement of high coverage of occupational health services throughout the country, the preparation of the Estonian OH&S for the accession and post-accession era, and strengthening of knowledge management and the management of information systems in occupational health and safety for the Ministry.

It was obvious that in Estonia the most feasible instruments for the achievement of the key national objectives for OH&S are the National Development Programmes. Thus, the preparation of the National Programme for the Development of Occupational Health and the National Programme for Working Environment and Safety were initiated by the Ministry of Social Affairs.

Actions

Under the umbrella of the Twinning, consultations were organized concerning the preparation of policies, strategies, legislation, regulations and development programmes for OH&S.

With the support of the Twinning Project, the following activities were carried out to develop the OH&S legislation:

- Implementation of the OH&S Act and appropriate resolutions of the Government and the Minister of Social Affairs (under the Act)
  - Preparation of the future and necessary amendments to the Act when needed

    - Preparation of criteria for the licensing of occupational health professionals and occupational health service (OHS) units
    - Preparation of respective OH&S directives
- Preparation of the Act on the Insurance System for Occupational Accidents and Diseases
- Preparation of the Equality Act.

At present, regulations and provisions stipulated by the directives of the European Union have been prepared according to the different acts as follows:

- OHSA: 24 completed (2 drafted)
- Chemical Safety Act: 21 completed (1 drafted)
- Act on the controlled use of genetically modified micro-organisms: 3 completed
- Ten separate regulations on the health examinations of workers have been adopted.

The Twinning Project also supported the implementation of the policy and strategy of OH&S through expert consultations. The main activities were:

- Development of the National Occupational Health Programme, 2005 and 2010
- Development of the National Working Environment and Safety Programme
- Development of the National Work Ability and Employability Programme
- Raising the awareness of social partners in tripartite joint organizations.

Programme drafts were prepared in collaboration and circulated among the social partners and other stakeholders.

Reviews of legal obligations for various actors were carried out, and the financing arrangements were estimated thoroughly to ensure the acceptability and feasibility of the programmes concerned. The preparation of the Estonian OH&S for the accession and post-accession era was supported by:

- Analysing the critical steps in the accession process
- Creating a vision for the post-accession era
- Analysing and describing the activities and capacities for Estonia's effective participation in the official European Union organs and programmes (EU interface).

In 1997 the Working Environment Department (WED) was established within the jurisdiction of the Ministry of Social Affairs. During the Twinning Project, in January 2002, the Working Environment Department and the Labour Relations Department in the Ministry were merged into a Labour Department. The new Department offers good possibilities for the continuous development of OH&S in close connection with other Departments of the Ministry of Social Affairs, other Government authorities and social partners, thus providing the links needed for genuine social dialogue.

Effects

The above actions generated policies and programmes in the field of OH&S to help Estonia in its accession to the European Union. The organizational changes concentrated on the policy-making and administrative responsibilities better than previously. The legislative reforms transposed the European Union directives into the national legislation. Key national programmes were drawn up. Thus, both short-term and long-term perspectives for OH&S policies in Estonia were strengthened, and the consensus

mechanisms for the support of further development of work life and OH&S were established. Additionally, enterprise-level information systems for OH&S have been developed, and a policy for human resources and training in OH&S was established. The training institutions were mobilized and networked to provide training in OH&S and to respond to the identified training needs.

Impact

The long-term development of occupational health policy, programmes, infrastructures and expert human resources assure an effective OH&S system and effective activities. Sustainable long-term development of OH&S at the State, provincial and enterprise levels has been started.

Estonia's accession into the European Union will be easier for the administration and social partners in practice, and the possibilities for full participation of Estonia in the Union after joining will be guaranteed.

Estonian interests in the European Union will also be better taken into consideration and Estonia will have better opportunities to contribute to the development of the European Union. Successful management of the transition in work life and the introduction of systems which meet the European Union accession criteria, as well as the development of OH&S infrastructures, will allow the Ministry of Social Affairs to lead the OH&S policies and strategies better than before.

Risks or threats

A delay in policy decisions will lead to uncoordinated activities of several types of actors (private, non-governmental, or public organizations), which later may be difficult to harness to efforts for implementation of a comprehensive national policy. Additionally, it can be expected that the full coverage of the population to the scope of occupational health services will be difficult to achieve. Gaps in the coverage of OHS, fragmentation of the OHS system, and the possibility to render OHS networking into a mere commercial business were also identified as potential risks. The young government suffers from a severe shortage of financial resources, and this may lead to setting objectives which in practice need to be achieved without the necessary resources. This calls for prioritization between the policy sectors and within the sectors. As OH&S is a key element in producing financial and other resources for the society, it should not be down-prioritized; on the contrary, it should be given a higher priority.

Actions for controlling risk and threats

The efforts to achieve a wide consensus agreement on occupational health policy with the Ministry of Social Affairs and the social partners and OH&S professionals are crucial. A clearly defined occupational health service provision model, appropriate content and high quality of services, financial arrangements including state subsidies, and human resources, all support the development of a sustainable occupational health

service infrastructure and assure the coverage and availability of occupational health services in the whole country. Collaboration between the occupational health services, other health services, and especially with the public health care system, supports the achievement of full coverage of the working population with OHS.

Evaluation of the Twinning Project as support for the Estonian Ministry of Social Affairs

Twinning is a very suitable tool for policy development, institution building and the strengthening of the administrative capacity of OH&S authorities. The training provided within the framework of the Twinning Project also benefited the staff of the Ministry of Social Affairs. As OH&S is a multidisciplinary domain, the Twinning Project was also planned and implemented by multidisciplinary senior expert groups representing several relevant professions and disciplines.

The Twinning method has the potential to bring together respective counterparts and specialists in the candidate country and the member state, who are in a key position in the preparation of legislation and development programmes in their own countries. Such collaboration will benefit both sides in the generation-long perspective.

Conclusions

Three national programmes (Occupational Health Programme, Employability/ Work Ability Programme and Working Environment Programme) will have a positive nation-wide effect on occupational health activities. It is important to pay continuous attention to the planning and design of the Programmes in order to keep them updated and to strive to implement them in practice.

The Estonian Ministry of Social Affairs has good possibilities to develop OH&S in Estonia in a sustainable way due to its multifunctional character in the field of health, labour, work environment and social welfare. Such a broad mandate is optimal, as it eliminates several obstacles arising from cross-sectoral barriers prevailing in countries where health, safety and labour issues are each the responsibility of a different ministry.

The pre-accession adviser as a long-term adviser in the Twinning Project

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The Twinning method offers a long-term adviser from a member state of the European Union to candidate countries for their benefit. Such adviser, known as a pre-accession adviser (PAA), is in a key position with respect to the success of the Twinning Project because he or she has contacts both with the short-term experts of the member state and the beneficiaries in the candidate country, and he or she has an opportunity to initiate and intensify collaboration. The pre-accession adviser is usually a senior specialist with respect to some of the key areas of the project. In the Est-Fin Twinning Project on Occupational Health, it was considered important that the adviser have both experience in occupational health and safety (OH&S) and knowledge of state administration and management of OH&S projects at large. Thus a chief medical officer from the Finnish Institute of Occupational Health, Dr Matti Ylikoski (MD, PhD), was invited by the member state to take this duty. In this case the adviser has more than 12 years of experience as a senior medical officer of occupational health in Finnish health and public administrations, as well as 20 years of experience in the preparation and the implementation of Finnish occupational health legislation. In addition, the adviser had many years' experience as an occupational health physician.

Expectations concerning the role of the pre-accession adviser

When the pre-accession adviser arrives in the candidate country he or she might find both over-expectations or under-expectations of varying degree, fears, old traditions or interests to radical reforms among various interest groups, bodies, organizations and individuals. It is very important to make all them aware of the real nature, the possibilities, opportunities, obstacles and limitations of the project and to get all involved fully and constructively. Sometimes it may not be easy but in the case of Estonia the key decision-makers and the interest groups were well prepared to contribute positively. Such constructive attitude was most encouraging to the adviser himself as well.

From the beginning of the project it was obvious that the following expectations would affect the collaboration and the daily activities of the adviser:

- Sensitivity of the adviser to understand organizational cultures and previous work methods in the administration and in other organizations and enterprises involved
- Ability to analyse rapidly the on-going changes in the surroundings and their influence on the implementation of the Twinning Project
- Ability to act as a bridge builder between different disciplines and professions involved in the multidisciplinary OH&S activities

- Ability to 'helicopterize' and 'see the forest for the trees'. The adviser was expected to help set priorities for the different activities necessary to achieve the level of an EU member state
- Sensitivity to 'alarm'. From the beginning the adviser was expected to react quickly and inform counterparts in the candidate country if something was going wrong, or going in an exceptional way, in relation to the covenant plan or budget
- Ability to adapt to rapid changes in the administrative and project environment. This function also covers the ability to meet frustrations and obstacles in a constructive and problem-solving way. In Estonia, rapid development is in progress. It is being followed by organizational and personnel changes in both the administration and other organizations involved in the project
- Ability to create confidential relationships with partners. This function was based on the adviser's own truthfulness and confidentiality in relation to his counterparts. The adviser was considered merely a colleague and not 'an outsider'. He was expected to act alongside the partner representatives. Therefore, for example, the adviser shared a work room with two local specialists in the Ministry of Social Affairs, in Tallinn
- Understanding the partner's administrative capabilities and problems and the ability to find creative solutions in these circumstances
- Assertiveness to create connections with respective partners of the candidate country. There was a risk that the adviser would remain a 'lonely rider' if he himself was not proactive in building connections to stake-holders
- Knowledge of the country and the language would help the adviser to become a part of the team.

Thus the second challenge for the adviser was to initiate and activate a kind of 'invisible joint organization' for the period of the Twinning Project. These connections should assure flexible but decisive goal-oriented joint work, and cooperation in the candidate country. However, it was also necessary to remember that the candidate country was the one to take the steps toward development and implement other activities, while the adviser was present to assist with the help of the short-term experts of the member state.

The pre-accession adviser in action: principles and practice

In the Twinning Project in Estonia the pre-accession adviser acted as an initiator and catalyst. It soon became obvious that the adviser should be a proactive promoter of Twinning activities and not merely react to forthcoming problems only. Because both the partners of the member state and candidate country had no experience with the Twinning method, a joint learning process was a natural way to proceed. Learning was based on a 'learning from experience' model in which, in a very transparent way, previous and recent mistakes, failures, and problems of both partner countries were openly discussed. One of the central roles and activities of the adviser was connected with 'marketing'. The adviser, as a senior civil servant and researcher, was offered many opportunities to inform different stakeholders about the benefits of OH&S, both in terms of cost-benefit and human values.

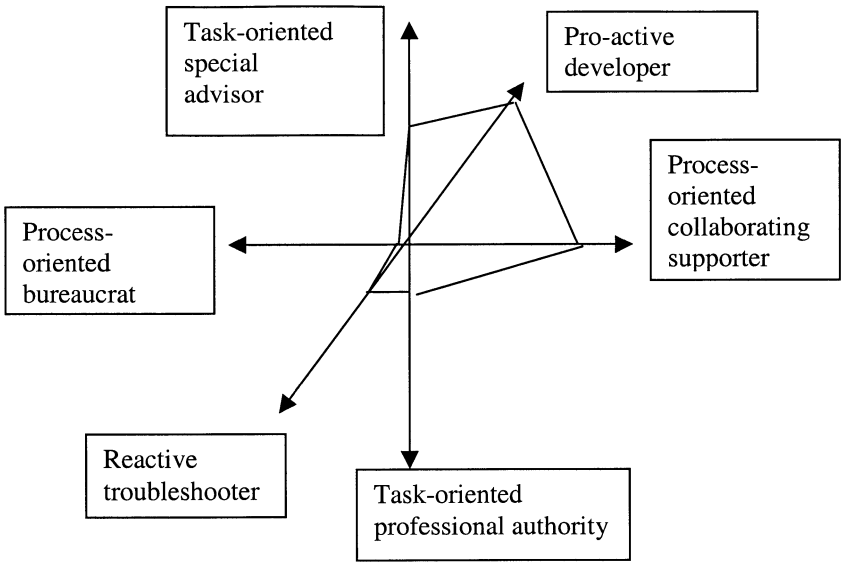

Figure 1. The principles of the actions of the adviser in the Twinning Project

As indicated in Figure 1, the adviser was the one who kept the project running smoothly through his initiatives and preparations before the events of the project. He supported the process by predicting possible risks and difficulties and by eliminating them beforehand in cooperation with the respective partners of the candidate country. In the Twinning Project, the adviser acted himself as a professional adviser and as a recognized professional authority on some issues. The main orientation of the adviser was future-oriented pro-activity and more developmental than neutral or reactive.

Short-term experts had the main responsibility for the professional quality and consistency of the plans and actions performed. They were a key professional resource in the strategy and action planning processes, in seminars, consultations, surveys and case studies, and in the formulation of guidelines for good practices, building databases, and information materials.

A pre-accession adviser or short-term experts?

The pre-accession adviser is a full-time expert, while short-term experts are 'visitors', although they may have intense contact with their counterparts in the candidate country. There are some benefits and disadvantages linked with the working models of both the pre-accession adviser with the short-term experts and the short-term experts alone (Table 1).

Table 1. Benefits and weaknesses of different models for implementing Twinning method

	PAA+STEs	STEs only
Benefits	• High validity of events • Coordinated operator • Minimal overlap • Good opportunities to systemize effects (at the policy making level) • High reactivity to changes in the environment high	• High responsibility of counterparts in the candidate country • Demand for knowledge and commitment of STEs • Flexibility of the operation • Increase of specialist role and impact on effectiveness of experts in the candidate country.
Weaknesses	• Alienation of experts from the member state • Avoidance of commitment and duties of counterparts in the candidate countries • Risk of 'superficiality' of activities • High need for joint meetings and the great amount of time allocated to them	• Separation of expert area from the comprehensive framework • Lack of synergism and collaboration between different expert areas • Target orientation may disappear • Schedules may not be kept

PAA = pre-accession adviser, STE = short-term experts

It can be concluded that the pre-accession adviser and the short-term experts are not alternative and competitive functions. The best model is that of a long-term pre-accession adviser with highly committed short-term experts. However, the solution depends on the situation, on the recognition of the risks and obstacles connected with the model chosen, the readiness of counterparts in the candidate country, and the preparedness of experts of the member state.

Challenges for the pre-accession adviser

During the Twinning Project the following activities were indicated as prerequisites for the success of the project:

1. The pre-accession adviser was very dependent on the support of his home administration in his work. For instance, the availability of short-term experts was a key factor during the project. The short-term experts had their normal duties and daily responsibilities with tight schedules at home. It was crucial that the pre-accession adviser understand this feature, and that he continually, and in advance, contact the short-term experts so that they would have enough preparation time.
2. In addition, the commitment of the project leaders from the member state and candidate country was a very crucial requirement for the success of the project. The project leaders from both countries were highly motivated to support the progress of the project and the necessary implementation activities. They both allocated much of their time to everyday discussions with the pre-accession adviser and supported him.

The project leader from the member state organized structured meetings between the managers of all the elements of the project and the pre-accession adviser monthly. The leader also planned tools for follow-up, evaluation and risk analysis. Both project leaders were active participants in the quarterly meetings of the Steering Committee meetings of the project.

3. The host administration in the candidate country ensured a well-functioning environment for the project and close contact between project activities and the development of legislation and other steering activities in the candidate country in the field of OH&S. This contact provides a good opportunity for sustaining the activities of this project and their later progress.
4. The commitment of the partners of the candidate country and the counterparts in agencies and enterprises was also a prerequisite for fruitful collaboration and future development in the candidate country. The Twinning Project had the good luck to work together with newly nominated specialists in the new national Occupational Health Center. The pre-accession adviser and the short-term experts met an enthusiasm to learn new models and practices in the field of OH&S, not only in the Occupational Health Centre but also among occupational health professionals in the field as a whole.
5. One of the tasks of the pre-accession adviser was to assess the burden of specialists in the candidate country and to regulate the speed, contents and frequency of events so that the absorption capacity of the people in the candidate country was not exceeded by an overwhelming supply of training or other project activities.
6. For the future of pre-accession advisers, it is important that they take precautions to insure their place in their home administration. In some cases, pre-accession adviser has returned home with no knowledge of his or her future there. A pre-accession adviser may also have a feeling of having been left behind by co-workers in the home administration. Thus it is crucial for all pre-accession advisers to insure that their situation will be stable after the project and to take care of their own competence development during the project.

What have we learnt – Summary and conclusions

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The Estonian accession process into the European Union has aimed to meet the requirements of the EU membership as expressed in Chapter 13 of the Accession Agenda, and at the same time, to take a step towards better quality of work life and competitiveness in the global economy. Both of these principal goals have been taken into consideration in the conclusions on the Twinning Project.

Evaluation of the project

Twinning was aimed to support both the building of the institutions and the strengthening of infrastructures for occupational health in Estonia. All elements of the project included special objectives, which were concrete and practical. The inputs have been mainly in the form of training and consultations. In addition, guidelines, informative material, and numerous methods were produced and developed, and surveys, analyses and case studies were carried out. The experts of the candidate country and member state in the Twinning Project have participated in the processes of drafting policy documents, strategies, legislation, regulations, and in the development and action programmes.

As a result of the Twinning Project, awareness of the importance and the role of occupational health has increased among decision-makers, stakeholders and the public in general. One of the most important results has been the increased competence of specialists and administrative personnel of authorities and of enterprises.

Development of the national occupational health policy

Estonia is expected to achieve the standard defined by the norms and practices of the European Union in a relatively short time, with a limited number of civil servants and with a comparatively new administration. Also, Finland had limited administrative resources for dealing with the EU issues during her own accession process. However, in Finland the legislation and lower level orders were developed gradually over the years in parallel with the respective development in the EU. Estonia is expected to take all these steps only in a few years, i.e. in a much shorter time than what was available to the present member states, such as Austria, Sweden and Finland.

From the very beginning, the achievement of the objectives of this Twinning has been highly dependent on the development of a national policy in the field of occupational health and safety (OH&S). Thus, one of the main objectives of the project activities has been the strengthening of the policy and strategy-making processes in the field of OH&S.

Although the Twinning Project is still a relatively new instrument in Phare for supporting the accession of applicant countries into the European Union, it seems to be a very feasible approach. It is especially valuable in strengthening the administrative capacity and policy making, as well as strategic steering of the accession process of the candidate country. The opportunity to utilize the highest available expertise of the member state offered a possibility to formulate and implement strategic goals and action plans comprehensively in this domain.

In the field of occupational health and safety, there were only a few, if any, private sector advisers available in Estonia to guide and assist the Ministry of Social Affairs, and the respective national agencies on questions concerning OH&S, particularly in view of the accession criteria. Additionally, OH&S is a sensitive and sometimes even controversial sphere of work life: Firstly, its goals support and promote the health of the workers and the healthiness of the work environment in enterprises. On the other hand, persons responsible for OH&S have to be very demanding and strict in the control of health hazards and the prevention of obvious risks of occupational accidents and diseases. Such activities in societies need strong government steering and support. The Twinning Project has offered and will still provide help to the Ministry of Social Affairs in strengthening its leading role in the development of OH&S in Estonia. This has been based on the building up of confidential relationships between the member state and the candidate country counterparts within the framework of the Twinning Project.

It has been very important that the experts from the member state were senior specialists in OH&S. Understanding the special aspects of life in Estonia has helped create an athmosphere of trust and respect between the experts.

Estonia was and still is in the process of socio-economic transition from the previous system to the new one, with rather limited human and financial resources at its disposal. Thus, it has been crucial that the member state and candidate country counterparts discuss continuously the goals and possibilities to adapt them in reality. In the beginning, the expectations of both the member state and the candidate country experts were too ambitious, but the goals were altered and made more realistic and practicable during the process.

During the preparation of a Twinning Project the candidate country's limited administrative capacity should be taken sufficiently into account.

Ensuring sustainability

The OH&S policy-making process at the Estonian Ministry of Social Affairs has been crucial because it is the key to the commitment and thus, sustainability concerning resources for the necessary structures in the country. "One can build more floors onto a house only if the foundation is strong enough".

In this Twinning Project, sustainability was ensured by the careful choice of civil servants, the elements of information dissemination, network building and training of people in practical work. The high quality of the occupational health and administrative services provided was also an important prerequisite. In addition to the drawing up of

regulations, it was seen equally important to train experts to implement and enforce these laws, regulations and guidelines for good practices.

The Twinning Project was also a strong stimulus to the previous 30 years of collaboration between Finland and Estonia in the field of occupational health and safety. The flexibility characterizing the design and implementation of the project is critical to its outcome, and such flexibility was therefore greatly emphasized at the planning stage.

Evaluation of the pre-accession adviser's role as a long-term adviser

The success of Twinning depends on good bilateral planning and well-functioning relationships between individuals during the implementation of the project. The member state pre-accession adviser had a key role in building the mutual understanding with his counterpart in the administration of the candidate country, as well as between the short-term experts of the member state and their respective counterparts in the candidate country. The pre-accession adviser is a driving force of the project, and his possibility to concentrate fully on the project dictates to a great extent the success of the project. It is crucial that the pre-accession advisor has every opportunity to work in close collaboration with the respective persons in the candidate country's organizations.

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