POLICY REQUIREMENTS AND PERFORMANCE INDICATORS FOR GOOD PRACTICE IN WORKPLACE HEALTH: PUBLIC HEALTH PERSPECTIVES

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Abstract. The author lists the main objectives, work areas and benefits of good practice in health, environment and social management in enterprises (GP HESME). History of this cross-sectoral and multidisciplinary approach to management of occupational, lifestyle, environmental and social health determinants is outlined. Health policy requirements and performance indicators are provided to facilitate GP HESME implementation at the enterprise and local levels. The role of local authorities and networking of enterprises, representing various sectors is highlighted.

Key words: Workplace health, Health promotion, Occupational health, Environmental health, Environmental management, Social capital, Health policy, Indicators

CONCEPT AND OBJECTIVES OF WORKPLACE HEALTH

The enterprises are an essential element of the national public health system. The employers, but also employees, make at work a huge number of decisions which have an influence on the use of natural resources, the ambient environment, quality of living and working environment, work organization and work cultures. These decisions have an obvious impact on their own health, as well as on that of their families, neighbours and customers [1–2]. Murray and Lopez [3] have calculated the total deaths or lost disability-adjusted life years (DALYs) that could be prevented in the absence of occupational, lifestyle or environmental exposures. Based on their data it was estimated that 30% of total mortality and 30% of total loss of disability-adjusted life years in the European Region might be prevented through health protection and promotion activities undertaken at the workplaces [4]. The quality of the enterprise human resource management supported by the national unemployment and social policies contributes to the level of social capital and health of working people and their families. The health management at work has also a link with the ability of the national health care and social security system to meet continuously growing demands [5–11].

Good practice in workplace health is a process of continuous improvement of health, environmental, safety and social (HESS) performance involving partners inside and outside of an enterprise. This comprehensive workplace health promotion process aims at empowering employers and employees to take control over their own health and their family’s health considering environmental, lifestyle,
occupational and social health determinants. Due to the fact that this holistic approach covers all aspects of health, environment, safety and social management in enterprises (HESME) it is also known as good practice in HESME. The occupational health services, very often financed by employers, are well placed to play a major role in promoting GP HESME. This new approach addressing public health needs is much broader than occupational health that is primarily focused on the control of occupational health determinants. However, the occupational health is a core element of workplace health.

The main objectives of GP HESME (comprehensive workplace health) are:
- to provide safe and healthy work environment;
- to prevent injuries, diseases and illnesses caused or influenced by occupation, environment, life style and social health determinants;
- to maintain ability for work and to reduce premature retirement and excessive sickness absenteeism, particularly due to non-communicable diseases;
- to preserve the general environment and health of people living outside the premises;
- to ensure an optimal balance between economic and business interests on the one hand, and the working ability and health of the entire staff on the other;
- to provide healthy and environmentally friendly products and services.

A healthy workplace is the one that has:
(a) developed and implemented processes of GP HESME; and
(b) endeavoured to demonstrate its GP HESME system to employees, the general public, suppliers, customers and authorities.

While using existing legislative framework, which may be when necessary strengthened, the GP HESME lays emphasis on self-regulation and voluntary participation of all stakeholders, first of all enterprises and local communities.

There are four forces, which may drive an enterprise to implement good practice in HESME:
- Need for compliance with current national regulatory frameworks.
- Positive outcome of socio-economic appraisal of investments in HESME.
- Increased market value of the enterprise in the society as a result of a solid social image produced by voluntary initiatives and agreements related to health, environment and safety.
- An effective enterprise management system, in which health, environment, safety and social (HESS) issues have been integrated within an enterprise sustainable development strategy.

New issues brought in by HESME
Compared with traditional methods for occupational health, safety and environment protection, which so far have been quite isolated, GP HESME introduces new elements:
- Co-ordination among the separated elements of HESME in the enterprise.
- Inclusion of health promotion at the workplace into the overall policy of the enterprise.
- Communication between those responsible for health, environment, safety and social management.
- Considering working ability as part of enterprise policy.
- Taking into account employability of current and future employees.
- Providing a platform for national, provincial and branch co-operation in health, safety and environment policies of different actors engaged in HES.
- Economic appraisal of HESME investments and returns.
- Linkage of workplace health with social capital and community health development.

MAIN AREAS OF WORKPLACE HEALTH
To be comprehensive the GP HESME approach has to be multidisciplinary and cover four major areas: occupational health and safety, workplace health promotion (covering promotion of healthy life styles, maintenance of work ability and employee assistance programs), environmental management and social capital management.
Occupational health and safety

Occupational health and safety are all managerial activities aimed to minimize the risk to employees' health from harmful factors at work, and prevent occupational diseases and accidents. Occupational safety denotes the principles and procedures used to prevent occupational accidents and injuries in all types of production and servicing facility. Occupational health in practice is driven by the legislative requirements. However, the new trend in occupational health has been initiated by the joint ILO/WHO Committee (1995) stating that the main focus of occupational health is on three different objectives:

a) maintenance and promotion of workers' health and working capacity;

b) improvement of working environments and work practices, to ensure they are conducive to safety and health; and

c) development of work organization and working cultures in a direction that supports health and safety at work and, in so doing, also promotes a positive social climate and smooth operation, and may enhance the productivity of the enterprise.

Work place health promotion

An essential quality of health promotion is the direct involvement of people in maintaining or improving their own health. The assessment of health promotion needs in an enterprise and the evaluation of work towards meeting them are the essential components of health promotion management [12–21]. Health promotion is sometimes limited to promotion of healthy lifestyles although that process can be used to assist a control of other health determinants. For the fruitful development of workplace health promotion it is important:

- to recognize the central role of the empowerment of employees, in terms of competency, level of autonomy, and sense of coherence;
- to ensure an appropriate balance between the processes of rationalization and the capacities of the workforce;
- to include a comprehensive understanding of health in company policies and in all procedures involved in a continuous improvement process;
- to ensure the establishment of an enterprise-wide participatory infrastructure;
- to enable all levels of employees to share their interests and expertise with the key players.

Promoting healthy life styles is a strategy complementary to occupational health. They target at different health problems and their causes. Health promotion should not be used as a guise to shift responsibility for protection of worker's health at workplace from employer to the worker herself or himself.

Environmental management and environmental health

To ensure optimal health for employees and the population at large, the environmental management of an enterprise should include the sustainable use of natural resources, energy efficiency, waste minimization, cleaner production, and the minimization of risks to human health [2,22–23]. Each enterprise is expected to apply an integrated, preventive environmental strategy to production processes, and to products throughout their life cycle. Pollution prevention should gradually replace pollution control.

Environmental health in this context refers to the health consequences of exposure to factors present in the environment outside the enterprise premises. Every enterprise, but particularly those emitting pollutants to the ambient environment, has the potential to affect the health of people living in its neighborhood. Integrated environmental and occupational health impact assessment should be used to assess the effect of an enterprise on the health of society, including the workforce.

Social capital

Social capital is an element of national wealth. It can be measured or assessed by the quality of life and quality of living and working conditions. Ability of people to act collectively in society create social capital. The size or level of social capital in a country determines the extent to which
one can make full use of his or her physical, mental, and social capacities.

Nowadays, enterprises are paying more and more attention to social and ethical responsibility. Alongside economic values, interest in the environment and the welfare of people has reached a high level of importance. Upholding these values is a prerequisite to success and long-term profitability for any business.

Social responsibility entails implementing good working practices in all relations with stakeholders. It includes personnel health, well being and competence, product safety and consumer protection, and fluid teamwork within the corporate network. It also includes cooperation with local communities, donations and other activities for the public good.

**ORIGIN OF THE GP HESME CONCEPT**

In the period January 1998 – May 1999, the WHO Regional Office for Europe convened a series of meetings in Belgium, France, the Netherlands, Poland, Ukraine, and the United Kingdom to formulate a holistic concept of good practice (GP) in health, environment and safety management in enterprises (HESME).

In 1999, the Ministerial Conference on Environment and Health recommended in the London Declaration the implementation of good practice in health, environment and safety management in enterprises in all Member States in collaboration with all relevant national stakeholders. Ministers invited WHO and ILO to work together and in cooperation with the European Commission. They committed themselves to create or strengthen information systems on health, environment and safety management and performance in enterprises, making them accessible to employers and employees as well as to national and foreign investors.

The first meeting of the HESME focal points nominated by the Ministries of Health and Environment (coming also in few cases from the Labor sector), and by ILO, UNEP, the European Commission and other international organizations was held in Bilthoven, the Netherlands, on 23–24 March 2000. The meeting concluded that the holistic concept of good practice in HESME is needed in all countries to strengthen and facilitate the enforcement of occupational health and safety law and environmental law in enterprises. The second meeting of the HESME/Workplace health promotion focal points held in Turku, Finland on 21–22 May 2001, reviewed and amended the WHO/EURO working document on GP HESME policy requirements and performance indicators. This meeting has emphasized the importance of workplace health promotion in public health. The European WHO Collaborating Centres in Occupational Health at the meeting held on 11–12 September in Łódź, Poland, agreed that the HESME concept complement the traditional occupational health and safety with health promotion and healthy environment, and it may have important role in the further integration of efforts in these related areas. The usefulness of GP HESME concept was also recognized by the European Insurance Network for Work and Health in Reykjavik, Iceland on 29–30 March 2001.

**GP HESME CRITERIA AT ENTERPRISE LEVEL**

The good health of employees is one of the major assets of an enterprise. Good workplace health management helps to maintain health and prolong work ability. Implementation of GP HESME at enterprise level requires employers or top executive managers to undertake step-by-step action guided by the following requirements:

1. **Commitment.** The top manager of the enterprise demonstrates that he/she recognizes own responsibilities for health, safety and the environment, and is acting on them. The senior enterprise manager makes available a signed statement of commitment to good practice in HESME, stating the enterprise policy, and plan for implementation. The statement includes a commitment to ensure adequate training, participation of employees, and descriptions of the roles of managers and technical experts.

2. **Health promotion needs assessment.** It is a key element in development of GP HESME. A team composed out of the representatives of employer, employees and health professionals prepares questionnaire to collect views of all
employees on their own health, their knowledge on health, environment and safety, work conditions, work organizations, social program and management culture [12,15,19,21]. The results of this health needs survey jointly with occupational health risk assessment are the foundation for preparing the enterprise HESME plan.

3. Occupational risk assessment and management. The management process can follow broadly similar principles for health and safety at work and environment and work ability. It covers health and safety at work responsibilities of the employers as defined by legislation [24–26] and follows the risk management process:
- Hazard identification
- Risk assessment
- Risk communication
- Planning and implementation of the risk control
- Monitoring of exposure to risk and effectiveness of controls
- Monitoring of health, safety environmental and employability outcomes.

4. Participation of employees. Health, environment and safety committees or groups, and worker representatives, facilitate employee involvement in planning, implementation, and audit of GP HESME.

5. Competence. Employers, managers and employees must acquire sufficient knowledge on health, safety and environmental issues, to be effective in management and participation, and in the appropriate use of experts.

6. HESME plan. Decisions on the scope and targets of the enterprise program should take into account regulations, the needs for maintenance of health (general and occupational), work ability and employability (going beyond legal requirements), the environmental needs, the potential for improvement, and the social and economic benefits. The action plan has to be approved by top manager and supported by employees.

7. Effective management. Enterprise managers, in consultation with employees, develop effective management systems for health, environment and safety, integral to the overall management of the enterprise [25–27]. Adequate resources are provided. The International Labor Organization has recently developed guidelines on OSH management systems, which can be used for GP HESME, although it is broader than traditional occupational health and safety as outlined above [9].

8. Reporting requirements. Reporting is required to communicate progress internally and externally. Indicators are needed to measure performance, manage the issues, measure success and determine future performance [2,6,7,9,6,21,22,23,28]. An annual report on health, safety, social and environment performance is published, and the enterprise participates in comparisons with other enterprises in similar sectors or locations. Since the majority of workers are in small enterprises, the local authorities could summarize for them the local HESME performance and organize the HESME benchmarking.

9. Performance indicators. Indicators are commonly designed to provide different stakeholders information on the effectiveness and efficiency of the workplace health management in the enterprises and that of the occupational health services [28]. The competencies to construct measure and analyze the indicators and to build up the evaluation system should be included to a program of continuous education of occupational health professionals [29,30].

The indicators at the enterprise level would be used:
- to prepare an annual enterprise report on HESME performance;
- to carry out socio-economic analysis of HESME investment revenues;
- to benchmark performance in HESME between different enterprises of the same industrial branch or located within the same community.

Each enterprise or a network of enterprises are expected to develop their own set of indicators which will satisfy the health, environment and social needs of their social partners and other stakeholders. In general, a comprehensive set of HESME indicators would cover input, process and output indicators. Below the examples of possible indicators for the enterprise are listed.

**Input indicators**
- Commitment of top enterprise manager to implement GP HESME.
Financial investment in HESME as the percentage of the enterprise total budget or gross income.

Contract with external preventive services (occupational health services and others) specifying their role in HESME.

**Process indicators**

- Percentage of employees under regular assessment of health promotion needs by age, gender, occupation.
- Percentage of employees undergoing self-assessment of health by age, gender, occupation.
- Percentage of employees regularly undergoing prophylactic medical examinations by age, gender, occupation.
- Percentage of employees participating in specified workplace health promotion programs (e.g. smoking cessation, physical exercise) by age, gender, and occupation.
- Percentage of employees participating in vaccinations (HBV, influenza) programs by age, gender, occupation.
- Percentage of disabled persons of working age in regular occupational activity by cause, age, gender, occupation.
- Percentage of employees participating in programs aimed at improving their work ability and employability.
- Participation of the enterprise in HESME benchmarking comparison with enterprises or the same industrial sector or the same province.
- Exposure assessment to harmful factors present in the enterprises (by type of factors: physical, chemical, biological, and affecting mental health).
- Percentage of employees exposed to harmful factors (by type of factors: physical, chemical, biological, and affecting mental health) at concentration or intensity higher than national occupational exposure limit for that factor.
- Percentage of employees exposed to carcinogenic factors including environmental tobacco smoke (ETS).
- Occupational health risk assessment of employees grouped according to type of exposure, occupation, gender and age.

**Output indicators**

- Occupational injury fatality rate.
- Incidence of serious non-fatal injuries.
- Rate of injuries (over a 3 day sick leave).
- Incidence and prevalence of occupational compensated diseases by cause, age, gender, occupation.
- Recorded rate of work related diseases/incidence prevalence/mortality.
- Morbidity rate by cause, age, gender, occupation.
- Sickness absenteeism at work by cause, age, gender, occupation.
- Percentage of smokers by age, gender, occupation.
- Production of annual report on HESME performance.
- Occurrence of harmful factors in the enterprise (by type of factors: physical, chemical, biological, and affecting mental health).
- Total energy use.
- Energy use per unit of production or per unit of total gross income.
- Total water use.
- Total wastes volume generated (reused, recycled, incinerated, dumped).
- Solid wastes generation by the enterprise (tons).
- Hazardous wastes generation by the enterprise (tons).
- Emission to air.
- Discharges to water.

**POLICY REQUIREMENTS AT PROVINCIAL (MUNICIPAL) LEVEL**

The aim of the policy at local (municipal or provincial) level is to support enterprises in their efforts to develop and maintain GP HESME. In addition to enforcement of legal requirements, it is suggested to develop a dialog on the benefits and tools of GP HESME between authorities, social and health insurance organizations, employers, trade unions and other stakeholders (e.g. research and educational institutions, environmental and health NGOs, political parties). The set of usually required actions presented below describes a step-wise approach to develop and maintain local HESME programs, however, a division
of responsibility between local and national authorities should be observed.

1. Analysis of the current situation in HESME. The office of local self-governing councils (City Council, Community Council) prepares an initial analysis of impact of the existing workplace health and environment management practices on public health and environment situation in the province or community. In this analysis, the compliance with legal requirements and use of voluntary, self-regulatory tools are taken into account.

2. Declaration of local authority and other major stakeholders. Based on the assessment of the current legislative and self-regulatory approaches used in the community, the local authority and major stakeholders prepare and adopt a declaration on the main activities to be undertaken within the local community or province to improve HESME. Such a declaration could designate responsibilities for the preparation of:
   - local policy criteria and indicators of good practice in HESME;
   - methodology for evaluation of the effectiveness of protective and preventative services (e.g. occupational health services);
   - mechanisms of voluntary benchmarking in HESME performance between enterprises;
   - methodology for assessment of the impact of existing vocational education systems for adults on their employability and HESS competencies of employees;
   - rules for financing of activities for improvement of HESME.

3. Evaluation of the HES service providers. The quality of services depends, among others, on the continuous improvement of the structure and processes of the organizations. Local authorities should facilitate the elaboration of local criteria and methods for evaluation of HES professionals and their services.

4. Support to networking and benchmarking. Networking is an effective way to learn each other’s strong point and to offset one’s own weakness. It allows drawing on each other’s merit in order to achieve common progress and improvement. Networking could be instrumental in showing the capacity of industrial and other enterprises for self-regulation in HESME and the willingness of industry to collaborate with governments and international organizations. The performance of one enterprise, presented as a set of quantitative and qualitative indicators, would be used as a reference or a benchmark for evaluating the performance of other enterprises that share the same set of indicators. The results would enable participating enterprises to assess their own situation. Networks can prepare guidelines for GP HESME implementation in enterprises in specific economic sectors.

Independent benchmarking firms usually carry out the benchmarking exercise. They are paid by the participating enterprises. The strategy of local authorities for improvement of HESME may foresee different kinds of financial and logistic support to organization of benchmarking.

The majority of employees in most of the European countries already work in small or medium size enterprises (SMEs); The local authorities are encouraged to consider establishing inter-enterprise multidisciplinary prevention services to assist SMEs in GP HESME implementation [31]. These could be co-financed by central or local governments and/or insurance organizations. The implementation of GP HESME in many small enterprises could have social and economic benefits for the sponsoring authorities and for health and social insurance organizations.

Large national or multinational companies can provide major assistance to developing GP HESME in SMEs operating within their supply chain or through the program of Good Neighbour. Other channels are trade associations, branch organizations and networks of companies.

5. Education and training. If they are to collaborate in developing GP HESME, employers and their organizations, employees and their trade unions must have a sound understanding of the basic principles used to control and act on environmental, social, occupational and lifestyle determinants of health. Therefore, the municipal program is expected to facilitate their access to information on health and safety legislative requirements, management of key health determinants, cleaner and safer production and pollution prevention, particularly applicable in their own industrial branch. Use of the Internet could
facilitate communication of HESME issues to large numbers of employees and employers.
Small and medium-sized enterprises have the same responsibility as other enterprises for health, environment and safety management. Some of them do not have full competence or resources needed to implement GP HESME on their own, thus they need external support. Vocational education and training of employed and unemployed people will be beneficial for maintenance of their health, work ability and employability. The quality of such courses should be assured to avoid a propensity towards corruption.

6. Socio-economic appraisal. There is increasing concern of externalization by the enterprises of the costs incurred as a result of work-related injuries and ill health due to poor health, environment and social management. Internalization of such costs can help to reduce this economic burden on society.

Socio-economic appraisal is the process of assessing and establishing the economic effects of HESME. This consists in a wide range of measures that may vary from evaluating the total cost to society of work-related ill health, to forecasting the economic and social returns of a better workplace in an enterprise [32–33]. The national financial, fiscal and insurance systems may provide incentives for implementation and demonstration of good performance in health, environment and social management in the enterprises. This is additional measure to the appropriate enforcement of HES legal requirements. Economic appraisal is a useful tool to stimulate GP HESME for a number of reasons. It can increase awareness in both society and the enterprise by highlighting the importance of the economic effects of health and environment management in the workplaces.

7. Research. Research institutions, mainly from the same province or municipality, could assist local HESME development by designing and undertaking applied research projects. Such projects would specifically aim at providing data and products required for developing, monitoring and assessing GP HESME at the local and enterprise levels (e.g. methodology of socio-economic appraisal of HESME, health promotion needs assessment, environmental management, HES communication and public participation).

Local authorities, e.g. by the use of a questionnaire, would collect opinions among the major stakeholders (employers, employees, trade unions, enforcement agencies such as Labor Inspectorate, Environment Protection Inspectorate, Sanitary Inspectorate) on the health needs and research needs of the working population of province or municipality.

8. Health impact assessment. The evaluation of health impact of the processes carried out within GP HESME are important to assess their contribution to the health status of the workforce, but also to the general health status of population and to the community health development [21,34–36]. Local authorities and NGOs to monitor the progress of improvement should carry out regular surveys.

9. Collection and dissemination of good examples. Examples of successful implementation of GP HESME are usually more convincing than sophisticated presentations and discussions. The public should be informed about the good examples of HESME in the province or municipality and of the methods used by these enterprises. GP HESME award system supported by all stakeholders would be beneficial for developing the mechanisms for the collection of examples of good practice [12,15].

10. Adoption of the indicators. Each municipality or region is expected to develop their own set of indicators, which will satisfy the health, environment, and social needs of the local stakeholders. The basic data to develop or calculate HESME indicators are collected by various organizations such as social and health insurers, labor inspectorate, public health (sanitary) inspectorate, environment protection inspectorate, own sources of local authorities, employers associations, trade unions, scientific institutions and non-governmental organizations. Some data are collected routinely; some can be obtained by special surveys [21,36]. Surveys may provide more precise and validated data, quite often at lower cost than setting a permanent infrastructure for data collection. Below the examples of possible indicators are listed.
Basic information on socio-economic situation of local community or province

- Average individual income per capita.
- Demographic structure of local population.
- Total unemployment (by gender and age).
- Proportion of those employed to total population by gender.
- Percentage of people aged 18–29 years employed by gender.
- Percentage of people aged 55–65 years employed by gender.
- Total number of enterprises.
- Absolute number and percentage of enterprises with 20 or less employees by economic sector.
- Absolute number and percentage of enterprises with 21 to 50 employees by economic sector.
- Absolute number and percentage of enterprises with 51 to 250 employees by economic sector.
- Absolute number and percentage of enterprises with more than 250 employees by economic sector.

Health indicators in the local working community

- Occupational injury fatality rate by cause, age, gender, industrial sector, occupation.
- Rate of injuries (over a 3 day sick leave) by cause, age, gender, industrial sector, occupation.
- Incidence and prevalence of occupational compensated diseases by cause, age, gender, industrial sector, occupation.
- Estimated rate of work related diseases: incidence/prevalence/mortality by cause, age, gender, industrial sector, occupation.
- Disability free life expectancy of males and females at the age of 35 and 50 years in municipality or province by industrial sector, occupation.
- New invalidity/disability cases per 100 000 population by cause, age, gender, industrial sector, occupation.
- Sickness absenteeism at work by cause, age, gender, industrial sector, occupation.
- Mortality rate in the working population (18–65 years old) by cause, age, gender, industrial sector, occupation.
- Morbidity rate in the working population (e.g. ischemic heart diseases (ICD-10, I20–I25), musculoskeletal disorders (M00–M99), mental and behavioral disorders (F00–F99) by cause, age, gender, industrial sector, occupation.
- Rate of early retirement as a result of occupational accidents or diseases per 100 000 employees or per 1000 occupational accidents (in total and in selected economic sectors).
- Rate of early retirement due to ischemic heart diseases (ICD-10, I20-I25) per 100 000 employed (total and in selected economic sectors).
- Rate of early retirement due to musculoskeletal disorders (M00–M99) per 100 000 employed (in total and in selected economic sectors).
- Rate of early retirement due to mental and behavioral disorders (F00–F99) per 100 000 employed (in total and in selected economic sectors).

Work environment

- Major occupational hazards occurring in the enterprises of the municipality or province (physical, chemical, biological, and affecting mental health) by economic sectors and size of enterprises.
- Percentage of employees exposed to harmful factors (physical, chemical, biological, and affecting mental health) at concentration or intensity higher than national occupational exposure limit.
- Percentage of employees with high workplace health risk (physical, chemical, biological, and affecting mental health) by size of enterprises and economic sector.
- Percentage of employees exposed to carcinogenic factors, including environmental tobacco smoke (ETS).
- Percentage of disabled persons in working age in regular occupational activity by disability cause, age, gender, occupation.

Ambient environment

- Total energy use by enterprises grouped by economic sectors and size of enterprise.
- Energy use per unit of production or per unit of total gross income by economic sectors and size of enterprise.
- Total water use by economic sectors and size of enterprise.
Total wastes volume generated (reused, recycled, incinerated, dumped) by economic sectors and group size of enterprise.

Solid wastes generation (tons) by economic sectors and size of enterprise.

Hazardous wastes generation by economic sectors and size of enterprise.

Emission to air by economic sectors and size of enterprise.

Discharges to water by economic sectors and size of enterprise.

Number of sites containing large amounts of chemicals in the province.

Estimated risk of major chemical accidents in the municipality or province.

Preparedness of local government to chemical and other environmental emergencies.

Availability of human and financial resources

Numbers of occupational physicians, nurses, safety engineers, environmental engineers, occupational hygienist, ergonomists, health promotion leaders and other HES specialists employed in the enterprises or occupational health external services per 1000 of working population (separately for each HES profession) by economic sector and size group of enterprise.

Numbers of occupational physicians, nurses, safety engineers, environmental engineers, occupational hygienist, ergonomists, health promotion leaders and other HES specialists employed in the HES enforcement local agencies per 1000 of working population (separately for each HES profession).

Percentage of enterprises and of employees in the municipality or province covered by Occupational Health Services and other HES services, including enterprises owned by local authorities.

Percentage of total gross local product invested in scientific research and development studies aimed at providing data for improvement of HESME.

Availability of centers providing education and training to improve work ability and employability – assurance of quality of such services.

Health and environment promotion process indicators

Percentage of population at working age under regular assessment of health promotion needs by age, gender, occupation.

Percentage of population employed in the enterprises which offer specific workplace health promotion programs by e.g. maintenance of work ability, education and training programs to increase employability, smoking cessation, prevention and treatment programs for employees with alcohol abuse, consultation on healthy nutrition, promotion of physical activity.

Percentage of employed population regularly undergoing prophylactic medical examinations by industrial sector, age, gender, occupation.

Percentage of enterprises with good occupational health and safety management system documented by relevant enforcement authorities by size and economic sector.

Number and percentage of enterprises that have demonstrated implementation of Cleaner Production technologies or quality environmental management system documented by relevant enforcement authorities or auditing institutions, total and by economic sectors and size of enterprise.

Number and percentage of enterprises that have demonstrated implementation of GP HESME, total and by economic sectors and by size of enterprise.

Percentage of enterprises participating in GP HESME benchmarking comparisons by size and economic sector.

Percentage of enterprises in the municipality or province which managed to prove that they provide healthy and environmentally friendly products and services, and provide product stewardships throughout the products’ life cycles.

Percentage of working population participating in vaccinations (e.g. HBV, influenza) programs by age, gender, occupation.
PREREQUISITES AT THE NATIONAL LEVEL

The successful implementation of an integrated HESME approach at the enterprise level depends on the action of social partners at work; however, it depends also on the concerted support from the relevant ministries and governmental agencies concerned with health, environment, labor and social policies. Thus there is a need for commitment of governmental ministries and major agencies (Ministries of Health, Labor, Environment, and others, if necessary) to exchange views and agree on actions to be taken to involve enterprises and their working communities in achieving the objectives of national public health, occupational health and environmental policies. In addition to the use of proper legislative framework the non-legislative tools can be very effective.

At the country, provincial and local levels the following actions would be needed to implement integrated workplace health management:

- Cross-sectoral workshops to analyze the effectiveness of existing policies and to initiate action encouraging enterprises to implement good practice in HESME.
- Development of criteria and indicators to assess performance of HESME.
- Development of surveys to assess health needs of the working population.
- Involvement of businesses and insurance institutions in their community’s environment and health policy development and implementation.
- Carrying out performance reviews on HESME and its impact on public health.
- Evaluation of quality and effectiveness of preventative services supporting different aspects of HESME, first of all, the occupational health services [37].
- Collection and dissemination of examples of good practice in HESME.
- Training of employers and employees in implementation of HESME.
- Initiation of networking and benchmarking in HESME performance between enterprises, municipalities or rural areas.

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