

A grey silhouette of a person is shown falling from a red diagonal line that runs from the top left towards the bottom right. The person's arms are outstretched, and their legs are trailing behind them, suggesting a loss of balance or a fall.

*ILO World Day on
Safety and Health
at Work*

28 April 2010

**Emerging Risks and
New Patterns of Prevention
in a Changing World of Work**

International
Labour
Office



The New Context

Significant technological advances in the workplace and rapid globalization have had both positive and negative effects on occupational safety and health (OSH).

- Some traditional hazards and risks have been reduced or eliminated, for example through plant automation
- Many workers are exposed to 'new' risks emerging from new technologies and changing patterns of work



Emerging Risks at Work

New and emerging occupational risks may be caused by technical innovation or by social or organizational change, such as:

- **New technologies and production processes, e.g. nanotechnology, biotechnology.**
- **New working conditions, e.g. higher workloads, work intensification from downsizing, poor conditions associated with migration for work, jobs in the informal economy.**
- **Emerging forms of employment, e.g. self-employment, outsourcing, temporary contracts.**
- **They may be more widely recognized through better scientific understanding, e.g. the effects of ergonomic risks on musculoskeletal disorders.**
- **They may be influenced by changes in perceptions about the importance of certain risk factors, e.g. the effects of psychosocial factors on work-related stress.**

Emerging Risks at Work

New Technologies and Production Processes

For example: By 2020 approximately 20% of all goods manufactured around the world will be based to some extent on the use of nanotechnology.

As it is an emerging technology the risks associated with the manufacture and uses of nanomaterials are largely unknown

Changing Patterns of Employment

Restructuring in work organization, downsizing, subcontracting and out-sourcing, precarious employment and increased pressures to meet the demands of modern working life had an impact on working conditions making it harder to achieve a healthy work-life balance



New Technologies and Production Processes



Nanotechnology and Manufactured Nanomaterials

Due to the extensive and highly diversified use of nanomaterials in industry, the number of workers exposed is difficult to measure. While little is known about the health and environmental impact of these new materials, it is likely that workers will be among the first to experience high rates of exposure

Biological risks and Biotechnologies

Biological risks arising from the application of new technologies can affect workers in many sectors, ranging from health care, emergency and rescue workers to those employed in agriculture, waste management and the biotechnology industry

Chemical Risks

In the last 20 years, there has been an enormous growth in the number of chemicals that are used in the industrial environment, many of which are not adequately tested. The impracticability of systematically testing all new materials means that many risks may go undetected until there is a threat to human health or the environment



Changing Patterns of Employment

The Informal Economy

- Involves more than 80% of the working population
- The majority of informal economy workers are not registered, regulated or protected under labour legislation



Migrant Workers

- Increasing in numbers for both political and economic reasons
- Tend to work in high risk jobs and in the informal economy



Changing Patterns of Employment

Older Workers

- Population is ageing with the increase of older workers. More vulnerable to certain risks, such as infectious diseases and musculoskeletal disorders

Younger Workers

- Young workers are often engaged in hazardous and precarious work



Gender Considerations

- There are well-known gender-related differences concerning the physical demands of heavy work, the ergonomic design of workplaces and the length of the working day



Current trends in work-related accidents and diseases

- **Global estimates for occupational accidents and work-related diseases continue to be cause for concern with an estimate of more than 2.3 million fatalities per year**
- **In developed countries there has been a lower incidence of injuries and fatalities in recent years, but stress at work and some long-term health disorders, such as, work-related cancer, musculoskeletal disorders and cardiovascular diseases are becoming an increased concern to workers' health**
- **Many occupational accidents and diseases continue to be unreported due to the weakness in the reporting systems in many developing countries. Countries where accident reporting systems are efficient showed that the expansion of industrial activities has resulted in an increase in the incidence of occupational accidents when proper safety and health measures were not in place**
- **There is a need to improve national systems for recording and notification in line with the Protocol to the Occupational Safety and Health Convention No. 155. Action is also needed to improve national systems for workers' health surveillance and preventive and diagnostic measures for occupational diseases**



New Patterns of Prevention

New Approaches to Knowledge Sharing

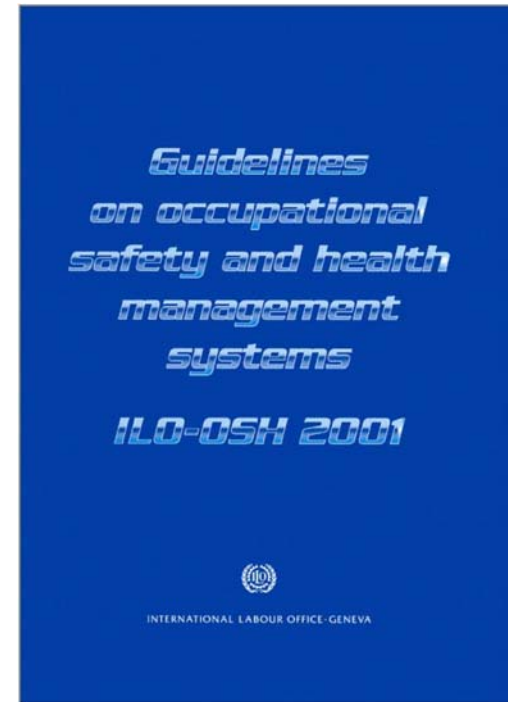
A comprehensive approach by governments and by workers' and employers' organizations, as well as by practitioners, academics and researchers, is needed to face the challenges of emerging risks and develop new patterns of prevention



New Patterns of Prevention

Risk Assessment and Risk Management

- OSH management includes hazard identification, risk assessment, implementation of prevention measures, monitoring and review
- National OSH policies should promote risk management strategies and research methods to evaluate the impact of change. Traditional prevention and control tools need to be complemented by tools designed to anticipate, identify, evaluate and control emerging risks arising from new technologies and changes in the world of work



The ILO Guidelines on OSH Management Systems (ILO-OSH 2001) provides a comprehensive guidance.



New Patterns of Prevention

Health Promotion at the Workplace

- There is a growing tendency to integrate general health promotion into OSH programmes
- Health promotion programmes are often designed to encourage and help build healthy behaviour
- Many successful workplace health promotion activities are also found to have positive impacts on productivity



Promoting a National Preventative Safety and Health Culture

A national preventative safety and health culture is one in which:

- The right to a safe and healthy working environment is respected at all levels,
- Where governments, employers and workers actively participate in securing a safe and healthy working environment through a system of defined rights, responsibilities and duties, and
- Where the highest priority is accorded to the principle of prevention.



Promoting a National Preventative Safety and Health Culture

- The progressive development of a preventative culture would have a significant impact on strengthening national occupational safety and health capacities
- A coherent policy implemented through concrete programmes and actions can convert commitment by management and workers into practice
- In 2008 the Seoul Declaration on Safety and Health at Work was adopted. It reaffirms the principle that the right to a safe and healthy working environment should be recognised as a fundamental human right



The ILO and the Changing World of Work

- **International labour standards on OSH continue to be used as the reference for member States in the development and strengthening of their national OSH systems, regulations and practices**
- **Most ILO member States have committed to implement Decent Work Country Programmes and some of them to incorporate in their National Occupational Safety and Health Systems the principles of Convention No. 187**
- **ILO SafeWork Programme promotes an integrated approach to occupational safety and health taking into consideration the physical, mental and social well being of men and women in the workplace**

