



## Deliverables

- More systematic knowledge about the relationship between risks and effects of various accident prevention-methods to effectively target and select the most effective preventive measures.
- Development of diagnostic tools for the long term effects and sustainability of safety interventions (resilience), and to further develop diagnostic tools related to safety culture, including approaches to improve safety culture at European workplaces, e.g. NOSACQ-50<sup>7</sup> and the HSL Safety Climate Tool<sup>8</sup>.
- Elaboration of cost effective preventive strategies and tools adapted to the individual needs of enterprises, thereby making implementation of occupational safety and health measures more feasible for enterprises, particularly for small and medium sized enterprises.

# Safety culture to prevent occupational accidents

## Summary

Accidents at work continue to result in high rates of fatal and serious injuries, hospitalisation, work absence, disability and premature retirement. An estimated 6.9 million people in the EU27 had one or more accidents at work in 2007, 5,580 of which were fatal. There is therefore a need for new evidence-based knowledge about the most effective initiatives for preventing accidents at work, particularly among vulnerable persons such as young workers, migrant workers and in small and medium sized enterprises. Heightening of 'safety culture' in European enterprises and organisations can have a positive impact on occupational safety and health awareness, and on how they are perceived and dealt with. Diagnostic tools such as the Safety Climate Tool and the Nordic Occupational Safety Climate Questionnaire are an important contribution to promoting a strong safety culture in enterprises. In addition, adoption of a 'Zero accident vision' has shown to be an ethically sustainable commitment strategy based on the idea that all accidents at work are preventable. Research in these areas should contribute to a better understanding of more tangible conditions that contribute to establishing a positive safety culture in enterprises, to develop comprehensive instruments for the assessment of safety culture and through the expansion of a 'Zero accident vision' in the European Member States.

<sup>1</sup> Eurostat, *Health and safety at work in Europe (1999–2007) – A Statistical Portrait*, Luxembourg: Publications Office of the European Union, 2010.

<sup>2</sup> Com (2007) 62 final. *Improving quality and productivity at work: Community strategy 2007-2012 on health and safety at work*

<sup>3</sup> Eurostat, *Health and safety at work in Europe (1999–2007) – A Statistical Portrait*, Luxembourg: Publications Office of the European Union, 2010.

<sup>4</sup> ILO, *Safety in numbers - Painters for global safety culture at work*. International Labour Organization, Geneva, 2003.

<sup>5</sup> An example of such an instrument is the Nordic Occupational Safety Climate Questionnaire (NOSACQ-50), which can easily be adapted to European Member States. Additionally, the Health and Safety Laboratory's Safety Climate Tool enables enterprises to gain insight into their safety culture.

<sup>6</sup> European Agency for Safety and Health at Work. *Occupational Safety and Health culture assessment - A review of main approaches and selected tools*. Luxembourg: Publications Office of the European Union, 2011.

<sup>7</sup> Kines, Lappalainen, Mikkelsen, Pousette, Tharaldsen, Tömansson, Törner, *Nordic Safety Climate Questionnaire (NOSACQ-50): a new tool for measuring occupational safety climate*. *International Journal of Industrial Ergonomics*, 41, 634-646, 2011. ([www.nrcwe.dk/NOSACQ](http://www.nrcwe.dk/NOSACQ))

<sup>8</sup> Sugden et al., *The Development of HSL's Safety Climate Tool*. *Contemporary Ergonomics*, 245-252, London: Taylor & Francis. ISBN 978-0-415-80433-2, 2009. For information on how organisations are using the Safety Climate Tool, the benefits they are gaining, and a video demonstration of the tool, see [www.hsl.gov.uk/health-and-safety-products/safety-climate-tool.aspx](http://www.hsl.gov.uk/health-and-safety-products/safety-climate-tool.aspx)

### Further information:

This research challenge is part of the PEROSH report "Sustainable workplaces of the future – European research challenges for Occupational Safety and Health". The full report, as well as each of the research challenges separately, can be downloaded in pdf-format from the PEROSH website: <http://www.perosh.eu/p/OSHresearch2020>

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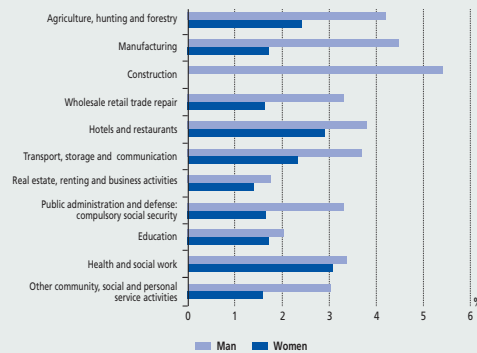


## 1. Description of the priority. What is at stake? Why is it a priority?

In spite of technological and organisational improvements, accidents at work continue to result in high rates of fatal and serious injuries, hospitalisation, work absence, disability and premature retirement. An estimated 6.9 million people in the EU27 had one or more accidents at work in 2007 (see figure), 5,580 of which were fatal<sup>1</sup>. There is therefore a need for new evidence-based knowledge on the most effective initiatives for preventing accidents at work, particularly among vulnerable persons such as young workers, migrant workers and in small and medium sized enterprises. This will contribute towards fulfilling the EU action plans aimed at a 25 % reduction in the number of accidents at work by 2020, and thereby support the community strategy 2007-2012 on improving quality and productivity at work<sup>2</sup>.

**Figure 1. Workers in the EU27 reporting one or more accidental injuries at work or in the course of work in the past 12 months in their main job in different sectors (%).**

*(sample size below publication limit for 'fishing', 'mining and quarrying', 'electricity gas and water supply', 'construction' (women), 'financial mediation', 'private households with employed persons' and 'extra-territorial organisations and bodies').*



Source: Eurostat, *Health and safety at work in Europe (1999-2007) – A Statistical Portrait*. Luxembourg: Publications Office of the European Union, 2010.

European statistics show that small and medium enterprises account for 82% of all occupational injuries and 90% of all fatal accidents, and that rates for accidents at work have been increasing for young workers (under the age of 25). Workforce migration is increasing in the EU27, and particularly female and young migrant employees work in sectors and occupations with unsatisfactory occupational safe and healthy (OSH) conditions<sup>3</sup>.

EU enterprises have come a long way in the 20th century with technological and organisational approaches to reduce accidents at work and to promote corporate social responsibility. Formal safety policies and procedures, however, continue to be challenged when being put into practice. The current economic crisis (following 2008) has exacerbated this problem resulting in reduced OSH investments in favour of productivity and financial goals.

Workplace safety culture is generally recognised as being an important concept in the prevention of accidents at work and ill-health, and can be seen as a concept for exploring how formal and informal organisational aspects influence OSH in a positive or negative way. Heightening of 'safety culture' in European enterprises and organisations can have a positive impact on occupational safety and health awareness, and on how they are perceived and dealt with.

Finally, a 'Zero accident vision' has shown to be an ethically sustainable commitment strategy based on the idea that all accidents at work are preventable. There is a need to increase European added value through the expansion of a 'Zero accident vision'. It is estimated that if all ILO Member States would use the best accident prevention strategies and practices that are already easily available, some 300,000 deaths and 200 million accidents could be prevented annually<sup>4</sup>.

## 2. Research needs at European level

At the European level there is a need:

- For research that provides knowledge regarding the more tangible conditions that contribute to establishing a positive safety culture in enterprises of any size. This includes looking at conditions such as regulations, social responsibility, leadership commitment, communication and safety climate.
- To study which factors influence why certain groups of workers have an increased accident risk (aetiology), e.g. young workers, older workers, migrant workers, newly appointed staff, and also groups in high injury risk industries, such as the building industry, manufacturing industry and transport.
- For research on how enterprises prioritise occupational safety and health in relation to other competing tasks and measures (e.g. safety versus productivity and quality), and how this can be addressed.
- To develop comprehensive instruments for the assessment of an enterprise's safety climate<sup>5</sup>, as well as other occupational and health factors, in order to promote a strong safety culture within enterprises and to gain a better picture of the prevention climate in European Member States and enterprises<sup>6</sup>.

- To investigate the influence of safety culture on sustaining a high and long-range level of safety in European enterprises, including work carried out under flexible and dynamic conditions (resilience).

- To conduct a review of which company-oriented approaches are most effective in improving safety and safety culture and preventing accidents at work, in order to develop the most effective approaches to accident prevention.

- To gather evidence of the effectiveness of methods to promote a 'zero accident vision' and workplace safety culture (at enterprise level), and to identify key success factors for the development of a zero accident culture.