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## NEW OSH ERA Mid-term Conference, Krakow, 29-30 May 2008



*Beata Oleszek, CIOP-PIB*

The Mid-term Conference was held on 29-30 May 2008 in Krakow, Poland. Its primary objective was to present the first results of the NEW OSH ERA project and to discuss further ideas, i.e. the structure of communication and co-operation with proposals for effective preparation of joint actions.

The event was attended by the NEW OSH ERA partners, both current and future partners, and also by OSH stakeholders, including representatives of social partners, national and EU level

policy-makers and OSH experts. A total of 40 participants representing 13 EU Member Countries attended the Krakow event.

The presentations and discussions evolved around five sessions:

- Progress so far in the NEW OSH ERA project
- The outcomes of the information exchange phase - OSH Research Thematic Approaches and Programme Management Approaches
- Working-out a roadmap for implementation of joint activities
- Vision on the future of NEW OSH ERA
- Next steps for NEW OSH ERA.

The Conference was opened by Professor Danuta Koradecka, Director of Central Institute of Labour Protection National



Research Institute (CIOP-PIB), the host and organiser of the Conference.

Professor Kai Savolainen, Coordinator of the project, outlined the origin of the NEW OSH ERA concept, stressed the main objectives and strategies of NEW OSH ERA and the need to profile OSH issues higher on the political agenda within the EU. Dr. Eusebio Rial Gonzalez, Head of the European Risk Observatory (ERO) at the EU-OSHA delivered a brief overview of the ERO's mission and presented its role in implementing the Community Strategy. He highlighted common long term aims of both NEW OSH ERA and of ERO, and emphasized the need for NEW OSH ERA to raise the profile of OSH research at the EU level.

The first day of the Conference was devoted to reviewing the progress hitherto accomplished, i.e. summarising the results of the two project phases: information exchange and strategic activities. Dr. Daniel Podgórski, CIOP-PIB, provided an account of the findings of two reports: Overview of research funding programmes on OSH-related new and emerging risks and Complementarities, gaps and new opportunities in research on OSH-related new and emerging risks<sup>(1)</sup>. Dr. Stephanie Becker, PT-DLR, Germany reviewed the findings of the report on management approaches in the OSH-related research funding programmes in the NEW OSH ERA countries. The data collected by project partners dealt with administrative procedures, implementation approaches, dissemination of the results as well as evaluation practices.

Ms. Henrietta Orban, BAuA, Germany reported the final results of the foresight study which included an overview of innovative experts and institutions and of qualitative interviews with both OSH and non-OSH experts.

The most important part of the Conference was the endorsement of the Memorandum of Common Understanding. This document closes the second phase of NEW OSH ERA and is an important milestone of the whole project. It represents an agreement within the Consortium on the NEW OSH ERA strategy, including the vision, mission, values, objectives and priorities for joint activities. The document was presented by Ms. Katalin Sas, FIOH Finland.

The Conference was also an opportunity to discuss the visions for the future of NEW OSH ERA. This subject was dealt with during the second day of the Conference. Points of view were expressed by representatives acceding NEW OSH ERA partners i.e. by AFSSET - the French Agency for Environmental and Occupational Health Safety (Ms. Adrienne Pittman), and TNO Work and Employment and the Dutch Ministry of Social Affairs and Employment (Prof. Paulien Bongers) as well as by a representative of social partners, i.e. Mr. Viktor Kempa from the European Trade Union Institute for Research, Education and Health and Safety in Brussels.

<sup>(1)</sup> The reports are available on the NEW OSH ERA website <http://www.newoshera.eu>

The speakers briefly described the range of their institutions' activities related to the NEW OSH ERA's scope of interest and the contribution they can make to the project. They also shared their thoughts on the planned actions, expressed their support for the general idea of the NEW OSH ERA project and for the Memorandum.

The Conference also addressed the next steps for NEW OSH ERA. Dr. Stephanie Becker referred to a document drawn up by her institution - PT-DLR - a Guide for a Joint Call. The Guide highlights preconditions for launching a common call, i.a. agreement on the financial framework (preference given to the virtual common pot) and also on thematic priorities which should be based on the outcome of the reports on thematic approaches. In turn, Ms. Katalin Sas from FIOH presented the Action plan for NEW OSH ERA. Based on a preliminary declaration of interest expressed by project partners about their participation in a joint call, action groups will be established. Ms. Sas recapitulated the seven topics chosen by the NEW OSH ERA Consortium as priorities for future research:

- Combined exposure to multiple risk factors (the scope will be defined later; one possibility would be to focus on one sector, e.g. waste treatment and recycling)
- Specific health problems caused by dangerous substances (e.g. work-related cancers, cardiovascular diseases, reproductive health disorders, allergies and asthma)
- Psychosocial risks associated with organisational changes and new working and employment patterns (e.g. impact of precarious work), illnesses associated with psychological stress
- New groups at risk due to the demographic and structural changes in the European workforce, including migrants, women, ageing and temporary workers
- Nanosafety and safe nanotechnologies
- Biological hazards in the work environment
- Complex human-machine interfaces

In the closing part of the Conference, Professor Kai Savolainen, FIOH emphasised how much progress had been achieved by the project during the first two years of its implementation and the role EU-OSHA has played in the exchange of information phase. Professor Savolainen recapitulated the major findings mentioned by the speakers during the Conference. Professor Savolainen stressed the wide spectrum of OSH research in EU Member States, a fact which though problematic can be overcome with time and will. He also underlined a very low proportion of research funding received by OSH out of the total research funding in nine partner countries and indicated that this low status of OSH research calls for a portfolio of actions.

Professor Savolainen expressed satisfaction with the fact that the Memorandum of Common Understanding was tentatively accepted by representatives of the partner organisations and also that the Action Plan for NEW OSH ERA had been agreed. He concluded by pointing out that though management cultures among partners in different EU Member States vary significantly, common calls can be implemented thanks to close coordination.

## The NEW OSH ERA Memorandum of Common Understanding

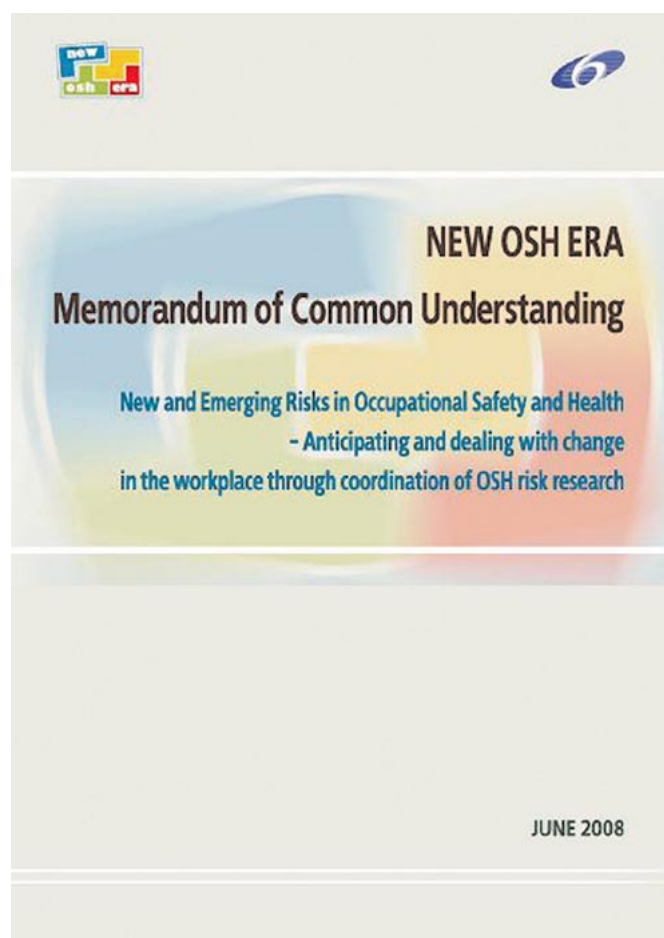
**“Every worker has the right to working conditions which respect his or her health, safety and dignity.”<sup>(?)</sup>**



*Katalin Sas, FIOH/EU-OSHA*

The Memorandum, endorsed at the Mid-term Conference in Krakow, closes the second phase of NEW OSH ERA. The document is the result of a strategic consultation process and it defines the general direction for NEW OSH ERA for the remaining two years of the project and beyond inasmuch as it includes the agreed thematic priorities for joint activities and the NEW OSH ERA strategy for 2008-12.

Although the Memorandum is not legally binding, it represents an important milestone for NEW OSH ERA as it will be the basis for concrete planning and implementing of joint activities.



The Memorandum not only includes the strategy but places NEW OSH ERA in a broader context. It links the project to the Lisbon objectives and to the Community strategy 2007-2012 on health and safety at work as well as to other policy areas, describes the current situation of OSH research funding and highlights the clear demand for coordinating OSH funding in Europe.

The Lisbon goals, economic growth and employment, can be achieved only through a healthy and well-motivated workforce. By promoting the generation of the scientific basis for prevention and sound OSH policies NEW OSH ERA promotes well-being and productivity at work and contributes in this way to the achievement of Lisbon goals. In addition, through better coordination of OSH research, NEW OSH ERA advances the creation of the European Research Area, which is one of the cornerstones of the Lisbon strategy.

The goals set by NEW OSH ERA are also in line with the Community strategy 2007-2012 on health and safety at work which emphasises the importance of research into new and emerging risks and which indicates that more coordination between national research programmes is necessary. The challenges and priorities for OSH research listed in the Strategy also have been taken into consideration when defining the priorities for NEW OSH ERA joint activities. By pursuing its objectives, NEW OSH ERA can significantly contribute to the implementation of the Community strategy.

With respect to OSH research funding, the Memorandum concludes that OSH research funding is fragmented, often lacking continuity both at national and European level and it is difficult for researchers to obtain an overview on funding opportunities. There is a lack of coordination of funding and implementation of OSH research which is needed to effectively meet the challenges for OSH in a changing work environment. NEW OSH ERA will address this demand for better coordination of OSH research funding.

All these aspects are reflected in the consolidated vision for NEW OSH ERA

- to become a European OSH research funding network supporting research into new and emerging risks as a precondition for effective prevention and sound

and in its mission formulated as

- to contribute to the development of the European Research Area in the field of OSH with a specific focus on new and emerging risks by reducing the fragmentation of research through the coordination of research activities carried out at national level and promotion of OSH research at European level.

The core objective of NEW OSH ERA is to improve the quality and increase the overall scale of research related to new and

<sup>(?)</sup> Charter of fundamental rights of the European Union, Article 31-1

emerging risks in the field of OSH in Europe – more, better and more relevant research. It includes the development of a jointly financed research programme involving common priorities, joint evaluations and coordinated implementation. During the next months, the NEW OSH ERA Partners will focus on elaborating the contractual, financial and administrative framework for joint activities. Once the procedures are elaborated, the implementation of joint activities in terms of content, participation, funding scale will be flexible within the jointly agreed framework.

Research results need to be “translated”/made available to policy-makers and other stakeholders. Therefore, promoting the exchange of information related to new and emerging risks is an important objective of NEW OSH ERA and communicating information related to new and emerging risks will be one of the key activities of the project. The Consortium plans to initiate a Forum on new and emerging OSH risks – a yearly event – which would function as a link between the research community, the Commission, national governments, policy/decision makers, funding bodies and social partners.

One of the NEW OSH ERA objectives is to promote OSH research priority setting and influence OSH research funding policies at the national and European level, which requires “looking forward”. As one of its future joint initiatives, NEW OSH ERA will extend foresight activities based on the experiences of its foresight study carried out in 2007-08. Pooling the resources will lead to increased range and scope of these activities.

The Consortium recognises that forming strategic alliances is an important strategic instrument. Therefore, the NEW OSH ERA Members will be actively looking for new partnerships and new ways of cooperation.

Lobbying and communication are crucial for NEW OSH ERA in order to ensure political and financial support. NEW OSH ERA will enhance lobbying and communication at the European and national level to promote the visibility of NEW OSH ERA, to move OSH higher on the European political agenda, and to increase awareness of the importance of research into new and emerging risks. This is needed to involve OSH stakeholders at the policy level, including social partners, and other interested parties so that they will support the consortium in achieving its objectives.

In order to become truly European, NEW OSH ERA needs to extend the network to cover more Member States. Therefore, the Consortium Members commit themselves to more actively identifying potential new partners. At present, the NEW OSH ERA Consortium has 21 Members, including the organisations which recently joined the Consortium, the French Agency for Environmental and Occupational Health Safety, AFSSET and TNO, Netherlands with the Dutch Ministry of Social Affairs and Employment and one affiliated partner, the AFA Insurance (AFA Försäkring) from Sweden.

At the moment, the Memorandum of Common Understanding is in the process of being signed. As agreed at the Mid-Term Conference in Krakow, the document will be signed at the Director level, as with other important documents of NEW OSH ERA.

The Memorandum is available on the NEW OSH ERA website, <http://www.newoshera.eu/>

### Extension of the NEW OSH ERA Consortium — New partners

*At its meeting held in Krakow on 28 May 2008, the NEW OSH ERA Steering Committee approved the accession of two new partners to the Consortium: the French Agency for Environmental and Occupational Health Safety, Afsset and an institutional couple, formed by TNO and the Ministry of Social Affairs and Employment, Netherlands.*

*The Steering Committee has also approved AFA Insurance, Sweden as an affiliated partner of the NEW OSH ERA from 1 September 2008 onwards.*

### Afsset, the French Agency for Environmental and Occupational Health Safety



*Adrienne Pittman, Afsset*

The French Agency for Environmental Health Safety (Afsse), a public administrative establishment, was created by a 2001 law supplementing the 1998 law setting up the health safety and monitoring system in France. In 2005, Afsse became Afsset, **the French Agency for Environmental and Occupational Health Safety (Agence française de sécurité sanitaire de l'environnement et du travail)**, with an extended mission covering occupational health. Its creation was one of the actions defined in the French Occupational Health Plan (*Plan Santé au Travail - PST*) of 2005.

Afsset is a public body reporting to the French Ministers of ecology, health and employment. In order to fulfil its aim of protecting human health, the Agency's missions are to:

- Contribute to ensuring health protection from all types of surroundings, including occupational environments.
- Assess environmental health risks, and more specifically within occupational environment.
- Coordinate environmental health and occupational health expertise.

- Use all means to provide the government with the expertise and scientific and technical support needed to develop and implement legislation and regulations.
- Inform the public and contribute to public debate.
- Promote environmental and occupational health research.

The Agency plays a central role in the provision of information and scientific expertise in the area of environmental and occupational health. While Afsset focuses particularly on coordinating expertise in assessing risks related to chemical substances, its activities encompass a wide scope of topics, from chemicals to electromagnetic fields, from atmospheric to noise pollution, and occupational exposures. To carry out these risk assessments, Afsset relies on Committees of Specialised Experts: scientific consultative bodies providing collective and independent expertise to support public decision-making. Through the organisation of this collective assessment, Afsset encourages contrasting opinions and points of view to be discussed and taken into account. The quality standard for expert assessments (NFX 50-110) guarantees the independence, traceability and transparency of expert assessments. Afsset organises a network of bodies with scientific expertise relevant to its areas of competence and is working in partnership with over thirty institutes. The Agency also provides incentive-raising funding via environmental and occupational health research programmes.

Since 2005, Afsset plays an essential role in occupational health risk assessment which provides a basis to decision-makers for policy proposals. The Occupational Health Plan 2005-2009 which aims at improving the prevention of occupational health risks, led the Agency to reorganise its missions, in order that it would be able to provide independent scientific expertise on occupational risk assessment through:

- Permanent missions such as the expert appraisal phase required for the elaboration of occupational exposure threshold limits, and the coordination of the national network for monitoring and prevention of occupational disease (RNV3P).
- Expert appraisal and assessment of occupational health risks, for example through solicited requests concerning occupational exposure to formaldehyde, glycol ethers, liquid nitrogen, man-made mineral fibres, etc.)
- Afsset is also directly responsible of the implementation of a number of actions of the PST, such as action 4.9 which involved a study on the substitution of CMR substances, and action 1.4 by developing the Environment & Occupational Health Research Programme. This research programme account for about 10% of Afsset's budget and the occupational health projects account for about half of the research projects selected for funding.

Ongoing and future activities within occupational health in Afsset fit well with the NEW OSH ERA strategy. Additional Afsset missions in the future will look in more detail at occupational health social and economical impacts and at emerging occupational risks. For these missions, Afsset will have to search for complementarities with European partners and international

bodies. Furthermore, Afsset is expected by the French government to develop the European and international orientation in its calls for research projects to be funded. This is already being implemented for environmental health research, as Afsset is the coordinator of an Environment and Health ERA-NET, whose first transnational call was launched in March 2008. As a full partner in NEW OSH ERA, Afsset is interested in creating a sustainable partnership for funding and stimulating intra-European occupational health research as well.

### AFA Insurance Company – one of the key Swedish funding actors in OSH research



*Carin Håkansta, FAS*

The main purpose of AFA, a labour market insurance company owned by the social partners, is to administer insurances agreed upon by the social partners. The insurance agreements cover around three million Swedes in the areas of unemployment, illness, parental leave, and occupational injuries and deaths.

In addition to administering insurances, AFA is one of the largest sources of funding of occupational health research in Sweden. The purpose of the preventive activities of AFA is to decrease the number of occupational injuries and ill health at work, but also to decrease the level of sick leave from work. AFA prevention includes several activities, one of which is to handle an extensive occupational injury database. AFA also sponsors information activities, such as a work environment portal on the internet as well as funding calls in research areas considered relevant by the social partners.

AFA organises open calls for research grants four times every year, but calls in specific research areas are also organised. Projects receiving funding should lead to the prevention of ill health and occupational injuries in the private as well as the public sector. Financial support is also granted research in medicine and for development of treatment and rehabilitation methods. The main point of departure for the selection process is the occupational injury database. The owners, i.e. the social partners, then make the final decision on how the funds should be distributed.

In 2007, two calls specifically related to new and emerging risks at work were launched: 1) A three year research and development programme on noise at work (30 million SEK or 3.2 million EUR); and 2) A three year research and development programme on occupational health of women working in industry (15 million SEK or 1.6 million EUR).

## FAS centres - developing leading edge competence



*Carin Håkansta, FAS*

One of the funding instruments available from FAS is financial support to research centres. The centre grants constitute a higher annual amount and longer duration than other grants and are restricted to the most prominent research environments. The grants should promote the establishment of strong research environments within FAS' sphere of responsibility in order to develop leading edge competence. It is also important that new emerging research groups are given the opportunity to attain this higher form of basic funding. Presently ten research centres receive centre funding, two of which are in the field of occupational health. Both will be funded throughout the years 2008-2018.

The first FAS centre related to occupational health research is METALUND – Centre for medicine and technology for working life and society. The main concept behind METALUND is that medical and technological research must be coordinated in order to find and reduce the risk factors for major public health diseases. The focus of the centre therefore lies on identifying risk factors in the workplace and the external environment that have a definite impact on human health.

The research group also strives for interdisciplinary collaboration, resulting in knowledge being applied in practice and used preventatively, before injuries occur or people become affected by ill health. This applies equally to designing new technology, developing new production systems within industry, and reviewing the permitted threshold levels of harmful air particles in the workplace.

Researchers working at METALUND have appointments in the Department of Occupational and Environmental Health, Faculty of Medicine and the Department of Ergonomics and Aerosol Technology at the Lund Institute of Technology. "We have already collaborated on various research projects, but the funding from FAS allows us to address these issues in a more concerted manner", says Maria Albin, Associate Professor of Occupational and Environmental Medicine and project leader for METALUND.

The researchers have focused on factors of importance to public health, such as air pollution in the workplace and external environment, and what effects they have on respiratory diseases, cardiovascular disease and birth weight. Conversely, if one examines cardiovascular disease one can note that noise in the workplace and the external environment is a risk factor, as are certain heavy metals. "We will examine this type of relationship and also look at protective effects such as natural sounds and

certain landscape images", explains Maria Albin. "Our ongoing projects include studying how people like the areas where they live and we can already see that certain landscape types such as natural diversity, wilderness and a rich variety of plant species are associated with people liking their neighbourhoods better, exercising more, being less obese and so forth. This is important knowledge from the social planning standpoint."

METALUND works very broadly at the intersection between work environment, external environment and health. A total of six research groups focus their studies on the topics of respiratory disease, cardiovascular disease, renal disease and diabetes, cancer and reproductive health, stress related health problems and methods for risk assessment and risk management. A national research school is also associated with METALUND.

The second FAS centre is dedicated to research on hearing loss in working life. It operates as a special project within the present organisation of the Centre for Hearing and Communication Research at Karolinska Institute (KI) in Stockholm.

"Research on hearing loss is not a new field, but the investments now being made at the Karolinska Institute are something of a pioneering effort." So says project leader Professor Mats Ulfendahl who is also Director of the Centre for Hearing and Communication Research at KI. "We are engaging entirely new types of researchers and focusing more on research related to working life, both in terms of identifying risk factors and finding effective protection and rehabilitation methods." Mats Ulfendahl stresses that work-related hearing loss is a major problem. Over 14 percent of the Swedish population suffers from hearing problems that affect their daily communication. "You often think this only applies to older individuals, but that's wrong. Over 60 percent are actually working age people. In addition we're seeing a big increase in hearing loss among younger and middle-aged individuals." He therefore considers it important for research also to address problems that arise in working life.

Eight senior researchers have established research groups around three themes.

One theme is epidemiological studies to identify risk factors in working life linked to genetic predispositions. "This is an entirely new area with respect to hearing loss and we will be collaborating with world-leading epidemiologists not previously involved in research on hearing problems", explains Mats Ulfendahl. "One of the databases we will use is the Swedish Twin Registry at KI. If we learn more about this, we may find out how to prevent or eliminate risks in working life."

The second theme deals with the relationship between biological body processes and the development of hearing loss. For instance, what happens in the body when it is exposed to noise? How does stress affect the incidence of hearing loss? "Research in this field is still limited, although we know that the hearing impaired are overrepresented among those who are on sick leave because of burnout", says Mats Ulfendahl.

The third theme deals among others with psychosocial factors: which mechanisms lead to exclusion in working life, and how rehabilitation should be designed in order to be successful.

## BAuA activities in occupational safety of nanotechnology



*Dr. Bruno Orthen, BAuA*

Nanotechnology as a new technology is of special interest not only to the general public, politicians and industry. The potential toxicological and ecotoxicological risks linked to this expanding technology cannot be assessed sufficiently. Extensive research and development activities have to be conducted in various scientific disciplines. It is essential to map and structure the different research activities and to set priorities. Furthermore it is important to promote research activities that lead to results which are appropriate in the undertaking of a comprehensive risk assessment framework and which would be adequate to conclude on regulatory activities (classification, limit values, handling recommendations).

The Federal Institute for Occupational Safety and Health, BAuA, initiator and coordinator of the project, the Federal Environment Agency, UBA, and Federal Institute for Risk Assessment, BfR, have developed a joint research strategy to address in particular health and environmental risks of engineered nanoparticles. The strategy has been finalised in December 2007.

In addition, in spring 2006 the German Chemical Industry Association (Verband der Chemischen Industrie/VCI) and BAuA conducted, among VCI member companies, a joint survey on occupational health and safety in the handling and use of nanomaterials. The purpose of the survey was to obtain an overview of the occupational health and safety methods currently applied in the chemical industry in activities involving nanomaterials. The results of the survey have been published in October 2007 (Gefahrstoffe - Reinhaltung der Luft 10/2007, pp. 419-424, in German) and April 2008 (in English).

A further aim was to use the results of the survey to prepare a "Guidance for handling and use of nanomaterials at the workplace" - with recommendations and operating instructions for the handling of nanomaterials. This guidance has been finalised in August 2007 and can be found under [http://www.baua.de/nn\\_49456/en/Topics-from-A-to-Z/Hazardous-Substances/Nanotechnology/pdf/guidance.pdf](http://www.baua.de/nn_49456/en/Topics-from-A-to-Z/Hazardous-Substances/Nanotechnology/pdf/guidance.pdf)

## The European Risk Observatory: Violence and harassment at work – the European perspective



*Malgorzata Milczarek, EU-OSHA*

The data on violence and harassment in European workplaces periodically obtained from the European Working Conditions Survey indicated that in general the level of violence in the EU had increased slightly during the period 1995-2005. In 2005 <sup>(2)</sup> about 5% of all workers from the EU said they were subject to some form of violence or harassment (bullying), and about 2% reported experiencing unwanted sexual attention. However, **there are significant differences in the reported prevalence of violence and, particularly, harassment in different European countries.** The highest level of harassment was reported in Finland (17%), followed by the Netherlands (12%), and Lithuania (10%); the lowest levels were reported in Italy and Bulgaria (2%). Physical violence was also reported more often in Northern European countries, the Netherlands and the United Kingdom, where between 10 and 12% workers reported that they had been threatened with physical violence while at work.



The figures have to be interpreted with caution, as they are also dependent on the level of awareness and cultural norms in particular organisations or countries. Nonetheless, given the serious negative effects that result from violence and harassment, it is of great importance to further scrutinise these differences, since the level of awareness is directly related to both preventive and reactive measures taken in companies.

<sup>(2)</sup> Fourth European Working Conditions Survey (2006). European Foundation for the Improvement of Living and Working Conditions. <http://www.eurofound.europa.eu/ewco/surveys/EWCS2005/index.htm>

In 2008, the European Risk Observatory is conducting a **project on “Violence and harassment”**, which aims at obtaining a comprehensive overview of the level of prevalence and awareness of this problem in EU Member States by **analysing international and national statistics, cultural definitions and norms, methodology, data sources, and preventive measures** taken to deal with violence and harassment. The project has particularly focused on:

- **third party violence**, which refers to physical violence, verbal aggression, or the threat of physical violence where the aggressor is not a work colleague, e.g. the person, customer, client or patient receiving the goods or services,
- **harassment**, which refers to “repeated, unreasonable behaviour directed towards an employee, or group of employees, aimed at victimising, humiliating, undermining or threatening them” (also sometimes known as *bullying, mobbing or psychological harassment*). Harassment at work may also take the form of sexual harassment (*unwanted sexual attention*).

The report will be followed up by a high-level workshop in 2009, to discuss and consolidate the results, and to explore concrete, practical ways to tackle third party violence and harassment in EU Member States.

Further information on these topics from EU-OSHA can be found at <http://osha.europa.eu> and <http://osha.europa.eu/en/riskobservatory>

## Presentation of a tool for evaluating Mobbing: the “Val.Mob.” Scale



*P. Deitinger, C. Nardella, M. Bonafede, ISPEL*

**Background:** The evaluation of mobbing in organizational environments reveals a problem of growing complexity for the scientific disciplines oriented towards the study of behavior - such as the occupational and organizational psychology. What clearly emerges is a growing need to analyze the phenomenon by means of reliable tools, validated with a reference sample which is as wide in number and representative as possible.

**Objectives:** The objective of this study – within the context of social ergonomics which provides the background context for our approach - is to formulate a specific psychometric tool aimed at the assessment of aspects and characteristics of mobbing as well as of factors contributing to mobbing, from a multidisciplinary point of view. We expect this tool to be valid and reliable so that it can be applied to the planning of interventions aimed at mobbing prediction/prevention.

**Methods:** To determine the nature of Mobbing, after having examined the existing evaluation tools, an exploratory study of the phenomenon was carried out, using the initial report forms from one trade union anti-mobbing centre, compiled by 141 subjects. The open questions of these forms were turned into closed standardized variables.

The **Val.Mob. Scale** was formulated on the basis of the elements revealed from the results of the exploratory investigation and from an examination of the literature.

The questionnaire consists of three sections:

**a) the Mobbing Scale:** 48 items on a 7-level Likert scale; the subject expresses himself/herself in terms of the degree of agreement/disagreement with each statement (from 1 = Completely Disagree to 7 = Completely Agree) which is assigned to one of the following 7 thematic areas: (1) Elements of discomfort, (2) Threats and violence, (3) Isolation, (4) Communication, (5) Horizontal and vertical sociality (6) Attachment to one’s work, (7) affective/emotional climate.

**b) Symptomatology Scale:** This scale, which forms an integral part of the Val.Mob. tool, comprises 23 items assessed on the Likert-type 1 to 5 response scale (from 1 = never to 5 = always) and refers mainly to the primary diagnostic categories currently applied in the field of forensic medicine for the purposes of establishing the existence of Mobbing.

**c) Personal and social data:** Socio-demographic and organizational data.

The Scale was administered to a sample of 441 persons, of whom 188 were male (average age = 44,5; sd = 10,4) and 253 female (average age = 39,7; sd = 9,7) divided into the experimental (A) and the control (B) groups. The group (A) comprised those 249 subjects who considered themselves as mobbing victims, having responded “Yes” to the filter question: “In general, on considering your working environment, do you consider that you are suffering/have suffered systematic and repeated injustice and/ or psychological violence?”

The group (B) consisted of 192 subjects who did not consider that they had been subject to mobbing, in that they replied “No” to the same filter question.

The sample was heterogeneous with regard to age, qualifications, type of organization and type of position held within the organization.

Descriptive analyses and analyses on normality of the *items* were carried out. To survey the factorial structure and validity of the tool, the Exploratory Factor Analysis (EFA) technique was used, applying the oblique rotation method (Oblimin).

The Cronbach’s Alpha calculation allowed an empirical assessment of the reliability of the tool.

Table 1. Results of the classification (b, c)

	Test samples	Predicted group membership		Total
		persons who identify themselves as subject to mobbing	persons who identify themselves as not subject to mobbing	
Original percentages	persons who identify themselves as subject to mobbing	<b>79,1%</b> <b>(197 cases)</b>	<b>20,9%</b> <b>(52 cases)</b>	100,0%
	persons who identify themselves as not subject to mobbing	<b>9,4%</b> <b>(18 cases)</b>	<b>90,6%</b> <b>(174 cases)</b>	100,0%
Cross-validated percentages	persons who identify themselves as subject to mobbing	<b>78,7%</b> <b>(196 cases)</b>	<b>21,3%</b> <b>(53 cases)</b>	100,0%
	persons who identify themselves as not subject to mobbing	<b>9,4%</b> <b>(18 cases)</b>	<b>90,6%</b> <b>(174 cases)</b>	100,0%

(b) **84,1** % of original grouped cases correctly classified

(c) **83,9** % of cross-validated grouped cases correctly classified

Then the One Way ANOVA (ANalysis Of Variance) technique was applied so that the possible differences with the socio-demographic variables could be analysed.

Finally, the discriminating value of the entire Val.Mob. scale was tested through the analysis of the Discriminant Function (DF) between the two different groups considered in the research plan.

**Results:** The statistical analysis demonstrated that the Val.Mob scale is characterized by: a factorial structure made up of four factors which explain 57,8% of the variance (the Relational factor " $\alpha = .97$ ", the Intrusiveness/Interference factor " $\alpha = .87$ ", the Deskilling factor " $\alpha = .90$ ", the Attachment to work and affective/emotional climate " $\alpha = .70$ "), a monofactorial Symptomatology

scale which explains 56,4% of the variance and a discriminating function, capable of significantly discriminating between persons subject to mobbing or otherwise, demonstrating a correct predictive discrimination in 84% of cases (Table 1) and a fairly high canonical correlation (.74).

In order to progressively refine the tool and to enhance its psychometric validity, this study has already been expanded and extended to occupational and socio-organisational contexts which are highly diversified from many points of view, in order to strengthen the generalisability (external validity) and the verification of the relationships between mobbing and the other variables which impact on organizational wellbeing (construct validity).

## Chemical Hazards in Electronics Recycling



Christina Rosenberg, FIOH  
Work Environment Development  
New Technologies and Risks team

Recycling of electrical and electronic equipment (EEE) is principally governed by three EU Directives. Directive 2002/96 on Waste Electrical and Electronic Equipment (WEEE), adopted

in 2003 in the EU, seeks to improve the environmental performance of all operators involved in the life cycle of electrical and electronic equipment. The focus is in particular on operators directly involved in the treatment of EEE waste but also others are involved, e.g. producers, distributors and consumers. The directive deals with the collection, recovery, reuse and recycling of WEEE. The purpose of the Directive is prevention of waste and promotion of reuse and recycling in order to reduce the disposal of waste.

The Directive 2002/95 on the Restriction of the use of certain Hazardous Substances (RoHS) in electrical and electronic equipment, adopted in 2003 in the EU including an Annex Amend in 2005, seeks to contribute to the protection of human health and promotes the environmentally sound recovery and



disposal of EEE waste. The Directive states that from 1 July 2006 new EEE put on the market will not contain lead, mercury, cadmium, hexavalent chromium or the brominated flame retardants polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE). However, there are exemptions for applications (listed in the Annex) where the requirements of the Directive do not apply. For instance, decabrominated diphenyl ether (Deca BDE) is allowed in polymeric applications or lead is allowed in lead-bronze bearing shells and bushes.

A third Directive, which was adopted in the EU in 2006, is closely linked to recycling and disposal of materials. This is Directive 2006/66 on batteries and accumulators and waste batteries and accumulators. The primary objective is to minimize the negative impact of said products on the environment thus contributing to the protection of human health and to the preservation and improvement of the environment. The Directive applies to all batteries and accumulators, regardless of their shape, volume, weight, material composition or use. The laws, regulations and administrative requirements in the Member States shall be brought into force to comply with this Directive by 26 September 2008.

The amount of WEE generated all over the world is growing rapidly, 20-50 million tons yearly and the corresponding figure for Finland is estimated to be roughly 100 000 tonnes. The Finnish Institute of Occupational Health has initiated a research project on health risks associated with work on material recycling from electrical and electronic equipment (EEE). The focus is placed on worker's exposure to hazardous chemical components, specifically exposure to metals and flame retardants.

During dismantling and sorting, dust and particles are spread into the work environment. Thus workers can be exposed to a

multitude of components including metals from EEE and flame retardants released from plastic components. The electronic industry use many metals that are systemically toxic and/or sensitizing when an individual is exposed either by inhalation or through skin contact. Known adverse health effects are carcinogenicity (Be, Cr, Co, Ni, As, Cd), neurotoxicity (Be, As, Pb, Hg, Tl), effects on the respiratory organs (Be, V, Cr, Co, Ni, As, Sb) and skin allergy (Cr, Co, Ni, Pt). A variety of flame retardants are used in plastic components. These range from inorganic (e.g. aluminium and magnesium hydroxides, antimonytrioxide), chlorinated and non chlorinated organophosphorous compounds [e.g. tris(1-chloro-2-propyl)-phosphate (TCPP), and triphenyl phosphate (TPP)] to brominated and chlorinated organic flame retardants [e.g. PBDEs, PBBs, polychlorinated biphenyls (PCB), polychlorinated naphthalenes (PCN), tetrabromobisphenol A (TBBPA), hexabromocyclododecanes (HBCD)].

The health concerns related to exposure to brominated flame retardants include evidence from animal studies that these compounds are endocrine disruptors that affect the function of the thyroid hormone. Brominated flame retardants have also been reported to act as neurological and developmental reproductive toxicants. Carcinogenic risk derived from exposure to more or less planar compounds like all PCN congeners and also non-ortho and mono-ortho-PCBs is also well-known.

Workers' exposure to hazardous chemicals in recycling of EEE can occur through inhalation of airborne dust or particles, through skin contact or by ingestion via contaminated hands or in conjunction with smoking etc. The exposure assessment in the project is carried out by air sampling in the workers' breathing zones, area sampling and skin exposure sampling. All workers participating in the study also provide urine and blood samples which are analysed for metal content. The exposure assessment campaign is being conducted twice on two consecutive years in four recycling enterprises. Two of these are engaged in sorting, dismantling and separation of material fractions. One facility is a so-called third section company where only sorting and dismantling is performed. The fourth facility is undertaking recycling of batteries and accumulators.

This research project started in September 2007 and will be completed by 2009. The first results are expected to be published during 2010.

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**Työsuojelurahasto**  
Arbetskyddsfonden  
The Finnish Work Environment Fund

*Sponsored by the Finnish Work Environment Fund*

## ERA-NET Learning Platform and NETWATCH Launch Event, 13-14 March, 2008

The Launch Event indicated the start of two initiatives. The first, the Learning Platform for ERA-NETs, will provide a structured framework for collecting and synthesising experiences and lessons to be learnt from ERANETs. The second initiative, NETWATCH, will constitute a central Information Platform on ERA-NETs within the ERAWATCH research inventory. It will provide a single entry point for information related to the ERA-NETs and is expected to contribute to mutual learning amongst the members of ERA -NETs, as well as to enhance the visibility of ERA-NETs.

The Launch event lasted two half -days. On the first day, representatives of ERA-NET schemes provided country views on the future of the ERA-NET scheme and then took part in a policy round table discussion. The day ended with examples of good practice relevant to the development of common procedures for ERA-NETs. The second day consisted of four parallel work -shops, each one dedicated to a specific discussion theme:

- Workshop 1: Towards common procedures from call preparation to project monitoring
- Workshop 2: Evaluation and proposal selection – the key to ensure high quality projects
- Workshop 3: User requirements for a central ERA-NET information platform
- Workshop 4: Governance and future topics for the ERA-NET Learning Platform

The day closed with presentations of the main conclusions of the work-shop discussions.

Report Mutual Learning via the ERA-NET Learning Platform and NETWATCH

[ftp://ftp.cordis.europa.eu/pub/fp7/coordination/docs/report\\_eranet\\_learning\\_platform.pdf](ftp://ftp.cordis.europa.eu/pub/fp7/coordination/docs/report_eranet_learning_platform.pdf)

## Upcoming events

### NEW OSH ERA Seminar on psychosocial issues at work and work-related stress, January 21-22, Athens

#### Background

According to the preliminary declaration of interest by the NEW OSH ERA Partners, which was requested to rank the research priorities agreed in the Memorandum of Common Understanding, the topic “Psychosocial risks associated with organisational changes and new working and employment patterns (e.g. impact of precarious work), illnesses associated with psychological stress” attracted the greatest interest. Consequently, the NEW OSH ERA Partners agreed, that this will be the theme of the first NEW OSH ERA call for proposals for research projects. In order to further specify this broad theme, the NEW OSH ERA Partners decided to organise a seminar involving the research community, more specifically experts on work related stress, to discuss the scientific content of the call. The seminar will involve experts from the participating organisations and if possible representatives of social partners.

#### Aim of the seminar

To develop the scientific content for the NEW OSH ERA call

#### Expected outcome

Call specification for the NEW OSH ERA call, including a recommendation for sub-topics (3-4), description, rationale and research questions for each sub-topic.



26–29 August 2009

Helsinki Congress Paasitorni, Helsinki, Finland

The Conference will discuss global health and safety issues surrounding engineered nanoparticles and nanotechnologies, especially in connection with occupational and environmental health. The conference will also provide insights into the latest research results and actions to assure the safety and thereby the future success of nanotechnologies.

[www.ttl.fi/nanoeh2009](http://www.ttl.fi/nanoeh2009)

## About NEW OSH ERA

NEW OSH ERA is a project funded by the European Commission within the ERA-NET scheme in context of the specific programme 'Integrating and strengthening the European Research Area'. It aims at building a European dimension in research on new and emerging risks in the workplace by rationalising and pooling of resources.

## Members of the Consortium

### Coordinator

- Finnish Institute of Occupational Health, FIOH, Finland

### Partners

- Finnish Work Environment Fund, TSR, Finland
- Finnish Ministry of Social Affairs and Health, Finland
- Federal Institute for Occupational Safety and Health, BAUA, Germany
- Central Institute for Labour Protection - National Research Institute, CIOP-PIB, Poland
- Project Management Organization at DLR, Project Management Organization for the Federal Ministry of Education and Research, PT-DLR, Germany
- German Social Accident Insurance, DGUV, Germany
- National Research Centre for the Working Environment, NRCWE, Denmark
- Research Unit for the Improvement of Working Conditions DIOVA/DiRACT, General Directorate for the Humanization of Work, Ministry of Labour, FOD WASO, Belgium
- Italian National Institute for Prevention and Safety at Work, ISPESL, Italy
- Swedish Council for Working Life and Social Research, FAS, Sweden
- Hungarian Institute of Occupational Health, OMFI, Hungary
- European Agency for Safety and Health at Work, EU-OSHA, EU
- Hellenic Institute for Occupational Health & Safety, ELINYAE, Greece
- Ministry of Employment and Social Protection, Greece
- Federal Ministry of Labour and Social Affairs, Germany
- Ministry of Health, Italy
- Ministry of Labour and Social Policy, Poland
- French Agency for Environmental and Occupational Health Safety, Afsset, France
- TNO, Netherlands
- Ministry of Social Affairs and Employment, Netherlands

### Affiliated partner

- AFA Insurance, Sweden

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