



Working with dangerous substances: The European policy challenge

Results of the closing event of the European Week for Safety and Health at Work 2003, Bilbao, Spain, Monday 24 November 2003

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1. Introduction

The European Week for Safety and Health at Work in 2003 focused on reducing the risks arising from the use of dangerous substances. It was launched in May 2003, and spread out across the European Union Member States and EU candidate and EFTA countries with national campaigns promoted under the slogan 'Dangerous substances — Handle with care!'.

This was the first pan-European campaign to combat the occupational risks of dangerous substances, including chemicals, biological agents and fibres. The closing event as the highlight of the campaign was jointly organised by the European Agency for Safety and Health at Work and the Italian Presidency of the European Union on 24 November in Bilbao.

The closing event of the European week 2003 started with three workshops dealing with successful examples of substitution, occupational safety and health communication, and strategies and policies to manage dangerous substances effectively. Consequent colloquium discussions tackled the situation with keynote speeches and three round table discussions on the topics considered at the morning workshops.

This Forum publication is based on the speeches given at the workshops, the following communication of the keynote speakers and the round table discussions during the colloquium.

2. Key facts

- Global production of chemicals is now running at 400 million tonnes each year and there are more than 100 000

- different substances registered for sale in the European Union ⁽¹⁾.
- Dangerous substances are found in nearly all workplaces from farms and factories to hairdressers and hospitals. Twenty-eight million workers inhale fumes and vapours for at least a quarter of their working time ⁽²⁾, while between 6 and 9 million people are exposed to biological agents at work. Skin complaints, lung disorders and cancers are just some of the risks.
- Occupational skin diseases cost an estimated EUR 600 million per year and occupational asthma EUR 400 to 800 million per year alone.
- Ninety-six percent of all businesses in the chemical industry — some 36 000 firms in total in the EU area — are small to medium-sized with little or no toxicological expertise. This high percentage of small and medium-sized enterprises (SMEs) is the same as in other industries that use chemicals in their processes and work operations such as the construction sector or the metal industry.
- A UK study demonstrated that only 12 % of EU enterprises complied with their regulatory duties in risk prevention with regard to dangerous substances ⁽³⁾.

Objectives of the closing event

The closing event brought together an audience of representatives of social partners, leading European health and safety experts, labour inspection authorities, the European Parliament, the European Economic and Social Committee, the European Commission and European enterprises to exchange knowledge and experiences on effective management of dangerous substances and to discuss related policies and strategies. The main objective of the closing event was to promote the collaboration of these major players to address the risks arising from dangerous substances. Since 1999, the Agency has recognised companies or organisations that have made outstanding and innovative contributions to the prevention of occupational safety and health risks. The annual good practice award aims to demonstrate, by example, to all European employers and workers the benefits of following good safety and health practices to prevent risks at work. Each workplace is different. Therefore work practices and solutions to problems must be matched to the particular situation by carrying out an assessment of the risks at the actual workplace concerned. Nevertheless, risks from dangerous substances are rarely unique and solutions can be transferred across various sectors and sizes of enterprises, and Member States. This year, the awarded examples have successfully combated against the risks from dangerous substances, including both chemical and biological substances.

⁽¹⁾ White Paper on a strategy for a future chemicals policy, European Commission, Brussels, 2001.

⁽²⁾ Third European survey on working conditions 2000, European Foundation for the Improvement of Living and Working Conditions, Dublin.

⁽³⁾ Forum, 10, 'Hazardous substances in the workplace — minimising the risks', European Agency for Safety and Health at Work 2003.

3. Workshops — presentations and conclusions

One of the aims of the Agency is to encourage and catalyse the translation of knowledge and research into practical solutions at the workplace level. Therefore, good practice examples both at enterprise level and from the authorities were presented particularly during the workshop sessions on communication and substitution of dangerous substances. The third workshop addressed current developments in the policies related to dangerous substances and strategic approaches to risk management.

The risks posed by chemical substances can be minimised in several ways. European Union legislation ⁽⁴⁾ describes a hierarchy of options, which puts elimination or substitution above all strategies to manage the exposure to dangerous substances. This 'Chemical agents directive' also obliges employers to train their workers in the safe use of the substances. Key pieces of information for both the employers and the workers are the safety data sheets (SDSs), which the chemical supplier must provide to the purchaser on all dangerous substances and preparations ⁽⁵⁾.

The European Commission has prepared a proposal for a new EU regulatory framework for the management of chemicals, the REACH (Registration, evaluation and authorisation of chemicals) system. It aims to improve the protection of human health and the environment while maintaining the competitiveness and enhancing the innovative capability of the EU chemicals industry. Steps have also been taken to improve the overall management of dangerous substances via the supply chain, the setting of occupational limit values, the registration of the substances in preparations and risk assessment procedures.

The substitution, communication and strategies for effective management of chemicals were discussed in detail during the workshops.

3.1. Workshop 1: Successful substitution: The EU's top priority risk reduction strategy

Elimination and substitution are the first control measures to be taken by employers using dangerous substances. Successful substitution is possible. This workshop presented practical examples of how it can be achieved, and also practical substitution policies.

The chair of the workshop was Vassilios Makropoulos (President of the Hellenic Institute for Occupational Health, Elinyae, Greece) and the rapporteur was Elke Schneider (European Agency for Safety and Health at Work).

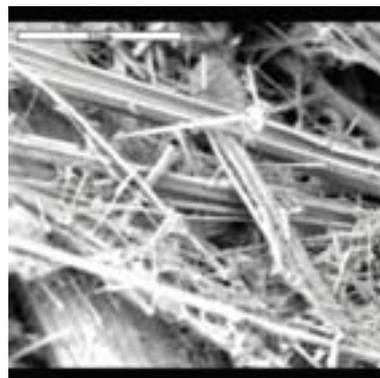
Kåre Hendriksen (Rambøll A/S, Denmark) Solvents reduction in the printing industry

Through a Danish research project, and later the EU-supported research and communications project SUBSPRINT, it was shown that non-volatile vegetable oils and similar products can be used to wash the offset printing press. This prompted the development in the late 1980s of a series of vegetable cleaning agents (VCAs), to substitute volatile



organic compounds (VOCs) in the graphic industry. The substitutes can be applied in many work processes. They are non-toxic to humans, and the substitution contributes to a reduction of VOC emission and is cost free. Since then, this substitution has spread to a series of countries and to other industries, amongst others due to the European project.

Rolf Packroff (Bundesanstalt für Arbeitsschutz und Arbeitsmedizin, BAuA, Germany) Substitution of asbestos and carcinogenic man-made mineral fibres — the development of biosoluble fibres



Asbestos has been known as a potent human carcinogen since the 1930s. Asbestos and man-made mineral fibres (MMMMF) share the needle-like structure of dust particles. Risk assessments predict significant health risks for workers, if bio-persistent fibres become airborne during working procedures. But the bio-persistence of MMMF depends also on the chemical composition — a chance for the development of new and safer fibre types. The systematic development of asbestos substitutes started in Germany in 1980 and was completed in 1995. A 'positive list' is published on the Internet by EU mineral wool producers.

Pieter van Broekhuizen (IVAM, University of Amsterdam, Netherlands) Substitution of release oils for concrete moulds by water-based products

Concrete casting takes place in a wide variety of production processes in the construction industry and in the manufacturing of precast concrete products. Mould release agents based on mineral oil (petroleum) are still predominant. Their use has negative impacts on the environment and workers' health and safety. Non-toxic release agents, so-called VERAs (vegetable-oil based release agents), are

⁽⁴⁾ Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work (14th individual directive within the meaning of Article 16(1) of Directive 89/391/EEC).

⁽⁵⁾ Commission Directive 2001/58/EC of 27 July 2001 amending Directive 91/155/EEC defining the detailed arrangements for the system of specific information relating to dangerous preparations in implementation of Article 14 of European Parliament and Council Directive 1999/45/EC and in relation to dangerous substances in implementation of Article 27 of Council Directive 67/548/EC (safety data sheets).



available. Unlike mineral-oil based release agents, the VERAs are not flammable, but mild smelling, biodegradable products produced from renewable resources. They do not contain volatile solvents or need labelling, produce hazardous wastes, harm materials or irritate skin. The substitution project SUMOVERA (substitution of mineral-oil based concrete mould release agents by VERAs in the construction and precast concrete industries) supported a significant market change towards these less hazardous products. In recent years, workers' awareness and the performance of VERAs has significantly increased.

Successful substitution is possible

It requires:

- enterprises willing to try
- expertise
- active support of research
- a broad partner network
- adaptation of the work process with worker training
- information transfer to other enterprises
- advertising the solutions and market transparency (e.g. by additional labelling)
- adaptation of (machine) technology.

Benefits of substitution

- lower emission control costs
- less hazardous waste
- lower costs of chemicals
- less risk to workers and of liability claims
- better reputation
- innovation.

Lars Gustafsson (National Chemicals Inspectorate, KEMI, Sweden)
15 years of substitution practice in Sweden

Substitution as a principle was introduced at a high level via the governmental proposal for the act on chemical products of 1986. In 1990, the principle was explicitly expressed as part of a general duty of care provision. The provision on substitution has functioned as a very strong pointer to the need to consider substitution, or rather more or less, as a cornerstone for substitution work. However, the requirement taken alone is very general and thus not very suitable for legal enforcement in individual cases. Hence the Swedish authorities have taken several measures to promote the substitution principle:

- the setting, in 1990, of official (government) targets for the substitution of certain substances;

- Chemicals Inspectorate lists of substances prioritised for substitution, 'observation lists';
- lists of 'good examples' of substitution and guidance for public procurement eco-labelling (Nordic programme);
- dialogue between Chemicals Inspectorate, Environment Agency and individual industrial sectors;
- demands from the Chemicals Inspectorate to companies to report substitution efforts.

The most successful initiatives:

- are based on a problem solving approach;
- are supported by both the employer and workers;
- have a specific focus or are sector-related;
- have a broad support network involving all stakeholders;
- have expert support and guidelines that cannot be ignored;
- provide good worker information, adequate training and consultation.

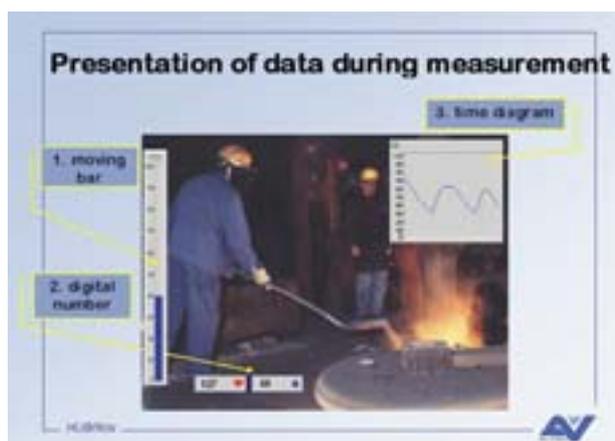
3.2. Workshop 2: Getting the safety message across: communication of information about dangerous substances

Examples of written information (such as brochures, leaflets, etc.) about dangerous substances are plentiful and readily available. Nevertheless, awareness and knowledge about the hazards and how to combat them is scarce, especially in the majority of Europe's companies: SMEs. This workshop aimed to show how information about dangerous substances can be communicated effectively and to present some successful initiatives.

The workshop was chaired by Henk Schrama (Ministry of Social Affairs and Employment, the Netherlands), and Paolo Onelli (Ministry of Labour and Social Affairs, Italy) summarised the results of the workshop as rapporteur.

Hubert Novak (Allgemeine Unfallversicherungsanstalt, AUVA, Austria)
PIMEX — visualising risks at workplaces by video and monitoring

PIMEX is a method that combines video-filming and simultaneous measurements of different workplace exposures using fast response real-time reading instruments. The method was originally developed at the Swedish Institute of Working Life. In the current Austrian version, it is possible to measure up to six exposure parameters simultaneously.



All data are stored on hard disc and can later be studied in different combinations. The PIMEX method can be used in risk assessment and evaluation of measures in workplaces and is aimed at reducing exposure to air pollutants, and at finding reasons for high exposure. Additionally, it is a useful method to train employees at the workplace; by watching the film workers recognise the connections between exposure and the working situation, they are able to optimise their working style. It may also motivate the management of a factory to invest in safety and health of the working environment.



John Thompson (Health and Safety Executive, HSE, United Kingdom)
UK experiences in the workplace with safety data sheets and COSHH Essentials

COSHH (control of substances hazardous to health) Essentials was developed as a result of UK research that found that although employers wanted to control workers' exposure to chemicals, smaller businesses, in particular, understood little of the relevant regulations which require employers to control exposure to chemicals and to protect employees and others who may be exposed by work activities. HSE produced the paper-based tool, *COSHH Essentials: easy steps to control chemicals*; and the extremely successful free Internet-based version, e-COSHH, followed in 2002, targeted at smaller businesses.

e-COSHH provides employers with free, easy to understand, practical advice tailored to the tasks that workers carry out, and the chemicals they use — via an online risk assessment. e-COSHH, Phase 2, launched during the European Week for Safety and Health at Work 2003, differs from the original e-COSHH in that it includes specific tasks in specific industries; users enter their industry and task, and are taken directly to the answer, without necessarily having to complete an online risk assessment.

The use of safety data sheets

- Safety data sheets are the most available and utilised source.
- There is a need to complement them with workplace and other information.
- Problems with confidentiality cannot be an obstacle for informing workers within an enterprise.
- Some SDSs do not comply with regulations or are poor in content.
- Improvements are needed especially for SDSs concerning raw materials and preparations.

Colette Le Bâcle (Institut national de recherche et de sécurité, INRS, France)
Awareness-raising campaign on biological agents' risks in the meat sector



At the end of 1999, in the context of the BSE epidemic in France, the Ministries of Labour and Agriculture asked the INRS to assess the risks of contamination by prions for meat industry workers. The INRS decided to extend the framework of this study to the more general context of the assessment of all biological risks. Activities and available information cover slaughterhouses, the knackery industry and the risks related to the incineration of meat-and-bone meal in cement factories.

The slaughterhouse phase was conducted with the various partners of the butchery industry: employer federations, workers' unions, ministries concerned, the French national and regional health insurance fund, and INRS experts. For the knackery industry study, members of the hygiene, safety and working conditions committee and company management were asked to conduct a preparatory study, assisted by their occupational health physician with job description forms, a video describing the various steps of the activity (collection, sorting, recovery of skins, etc.). A brochure was published in October 2002 entitled *Knackery centres: why and how to assess biological risks*.

Antonio Niro (Polimeri Europa, Italy)
Inter-company database for communication about dangerous substances

Polimeri Europa is a manufacturing company of basic chemical products, with 19 production factories in the world, 11 of which are based in Italy. An information system for data sheets was planned and realised. The system consists of:

- a safety data sheet databank containing all safety data sheets regarding both Polimeri Europa chemical products and purchased or transformed chemical products (about 2 000 data sheets);
- a substances classification databank, where substances classified by law are reported (about 4 000 substances): appropriate software allows querying or targeted research.

This information system works via the company's intranet, which can be reached by all the workers from any production plant (national or foreign factory). Moreover, information is available to authorities in the case of emergency. The permanent availability of information contributes to creating a greater awareness of the possible risks during working activities, and an active participation by workers at each level.

Success factors for communicating information to the workplaces include:

- information adapted to the target group
- communication from specialists to lay people
- consultation before and during the communication process
- legislation translated to the specific context and needs.

3.3. Workshop 3: Strategies and policies

To protect workers, employers who use dangerous substances are legally required to carry out a risk assessment and modify the working environment accordingly. Also, the EU is adapting its chemicals policy to address the use of the still rising number of dangerous substances. This workshop aimed to present important features and developments in the EU's overall protection policy against dangerous substances.



Kai Savolainen (Finnish Institute of Occupational Health, Finland) chaired the workshop and the rapporteur was Lothar Lissner (Co-operation Centre Hamburg, Ministry of Science and Research, Hamburg, Germany).

Antonis Angelidis (Health, Safety and Hygiene at Work, Employment and Social Affairs DG, European Commission)
Risk assessment guidelines for dangerous substances

Article 12(2) of Directive 98/24/EC on chemical agents foresees that the Commission shall draw up practical guidelines of a non-binding nature. The Commission has prepared a working document, which was extensively discussed within the framework of the Advisory Committee on Safety, Hygiene and Health Protection at Work.

This document addresses methods for measuring concentrations of hazardous chemical agents in the air at the workplace in relation to occupational exposure limit values (OELVs), the identification, evaluation and control of risks arising from the presence of hazardous chemical agents at the workplace and the health surveillance of workers exposed to lead and its ionic derivatives.

The final guidelines paper will be addressed to the national competent authorities, who, in their turn, will use it as a tool in drawing up their national policies.

It includes guidance on:

- standard methods for measuring hazardous chemical agents for which indicative occupational exposure limit values have been established at Community level ⁽⁶⁾;
- identification, evaluation and control of risks:
 - sources of information about the hazardous nature of chemical agents;
 - risk evaluation procedures and general principles of risk prevention;
 - specific preventive and protective measures for the control of chemical risks;
 - preventive measures in the product's life cycle (from production through handling and storage to disposal and waste treatment);
- health surveillance of workers exposed to lead and its ionic derivatives;
- bibliographical references related in particular to European legislation and standards and collections of analytical methods.

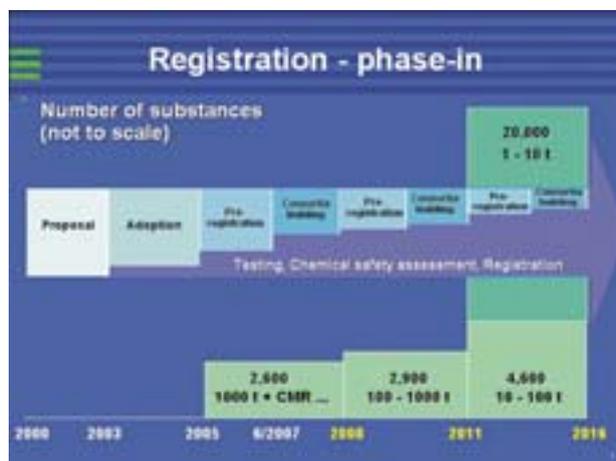
Karola Grodzki (Chemicals Unit, Enterprise DG, European Commission)

The new European chemicals policy and the REACH system and its possible implications for workplaces

On 29 October 2003, the European Commission presented its proposal for a new EU regulatory framework for chemicals, which aims to improve the protection of human health and the environment while maintaining the competitiveness and enhancing the innovative capability of the EU chemicals industry. Companies that manufacture or import chemicals in quantities of more than 1 tonne per enterprise and per year will be required to assess the risks arising from their use and to take the necessary measures to manage any risk they identify.

The core elements of REACH are explained below.

Registration: Chemicals that were manufactured or imported in quantities of more than 1 tonne per year and per manufacturer/importer will be registered in a central database. Registration includes information on properties, uses and safe ways of handling the chemicals. Information required is proportional to production volumes and the risks that a substance poses.



⁽⁶⁾ Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values at European Community level in implementation of Council Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work, OJ L 142, pp. 47-50.

Evaluation: An evaluation of registration dossiers will be carried out on all animal-testing proposals with the aim of minimising animal testing. This includes the obligation for industry to share data obtained in animal tests and encourages the use of alternative sources of information.

In addition, the competent authorities may evaluate any substance where they have reason to suspect that there is a risk to human health or the environment.

Authorisation: Substances of very high concern will require authorisations for particular uses from the Commission. Substances of very high concern include carcinogenic, mutagenic, and/or toxic to reproduction, category 1 and 2, persistent, bio-accumulative and toxic, very persistent, very bio-accumulative and substances identified as having serious and irreversible effects on humans or on the environment equivalent to the other three categories.

Albert Hollander (Ministry of Social Affairs and Employment, the Netherlands)
The Dutch dangerous substances strategy on management of substances — practical experiences

In 2001, the Dutch Government introduced a new strategy on management of substances (SOMS). Within the new programme, 'Intensification of the policy on health and safety risks of chemicals', the industry is primarily responsible for safe and clean production and use of substances, preparations and products. The government stimulates and facilitates the initiatives of the industry, in which the small and medium-sized enterprises receive particular support.

The main targets are the intensification of the product chain responsibility (communicating and sharing information relevant to hazards, risks and control measures in various stages of the product chain, from producer to end-user) and achieving synergy between policies covering the environment and the health and safety of workers and consumers. The strategy also aims to strengthen substitution as a main measure of control, especially when using carcinogenic, mutagenic, reprotoxic or allergenic substances.

The industry has run 12 pilot projects in order to gain practical experience with implementing these elements, such as work for the product chain responsibility in the paper industry and the hairdressers' sector. In 2003, the Ministry of Social Affairs and Employment also started the programme VAST, which aims to intensify together with the industry the health policy on chemicals in various high-risk production chains and branches to anchor the chain responsibility and build stronger knowledge.

Gunnar Johanson (Karolinska Institute, Sweden, Chairman of the Nordic Expert Group)
The Nordic expert group for criteria documentation of health risks from chemicals — a possible way forward in pan-European OEL setting?

The Nordic expert group for criteria documentation of health risks from chemicals consists of five industry-independent scientific experts and a scientific secretary from the Nordic countries representing different fields of science, such as toxicology, occupational hygiene and occupational medicine. The main task is to produce criteria documents to be used by the regulatory authorities of the Nordic countries in setting occupational exposure limits (OELs) for chemical substances. The group has bilateral collaboration with the Dutch Expert Committee on Occupational Standards (DECOS) and the US NIOSH. Benefits of this Nordic collaboration are: concordant views in risk assessment, shared burden in producing

documents, and decreased duplication of work. The Scientific Committee on Occupational Exposure Limits (SCOEL) uses some of the criteria documents at European level.

The Nordic expert group also runs a project on a database of substances in preparations in the Nordic countries (SPIN). SPIN contains over 18 000 substances and is available in two versions, on CD and on the Internet at www.spin2000.net. Data on the use of chemical compounds (number of preparations, tonnes/per year) may be viewed by total as well as by country, year, type of industry, and type of use. The database is continuously updated from the different Nordic product registries. These registries have already been shown to be useful tools in prioritising risk management efforts.

Points to consider for future policies:

- the information chain to downstream users;
- how to tackle unintended uses of products;
- harmonisation needs for risk assessment;
- sufficient risk assessment capacities in Europe;
- the need of SMEs for better communication, qualification, expertise, training, good safety data sheets and other information on dangerous substances;
- reinforcement of communication at branch and company level, including practical support to improve knowledge, skills and awareness;
- support for voluntary initiatives;
- transfer of national experiences to European level;
- the development of OEL needs for excellent scientific work and international collaboration and networking.

4. Colloquium: keynote speeches and round table discussions



The colloquium started with keynote speeches and was opened by **Hans-Horst Konkolewsky**, Director of the European Agency for Safety and Health at Work: 'With this year's campaign we have focused on the risks of working with dangerous substances. This is hardly a new safety and health issue. In fact, if we were to look back to the end of the 19th century, we would find that the list of work-related medical conditions caused by exposure to dangerous chemicals or biological agents was a long one.'

Hans-Horst Konkolewsky highlighted the dramatic rise in importance of chemicals for our society. 'Since the 1930s, for example, the volume of chemicals produced globally has rocketed from 1 million to 400 million tonnes. Enzymes and biological agents are also used more extensively, for example in agriculture and food processing industries.'

Carmen de Miguel y García, Secretary of State, Spanish Ministry of Employment and Social Affairs, emphasised the importance of public attention to the topic of dangerous substances. 'Dangerous substances have become a focus of con-



cern for all EU countries. Millions of workers are exposed to dangerous substances in the workplace every day, and a lack of monitoring of associated risks could have seri-

ous repercussions on people's health. For that reason, the European Week provides a unique opportunity to focus attention on reducing the risks to health the use of these substances may have.'



are in temporary or precarious employment or, even worse, where they are not employed under legal conditions.'

Roberto Maroni, Minister for Labour and Social Affairs, EU Italian Presidency: 'The risk of harm due to dangerous substances is particularly high where workers



Odile Quintin, Director-General, Employment and Social Affairs DG, European Commission, emphasised the high economic impact of occupational diseases and promoted the new Community

strategy on health and safety at work 2002-06, presented by the Commission. Moreover, she demanded clear methods for substitution. 'Therefore, we should promote an effective substitution policy capable of formulating concrete methods to compare substitutes with conventional chemical products, both in human health terms and from an economic and social standpoint.'



The round table discussions were chaired by **Bertil Remaeus**, 2003 Chair of the Administrative Board of the European Agency for Safety and Health at Work. They brought together representatives of the employees, employers, policy-makers, scientists and OSH experts. The discussions were moderated by the rapporteurs of the morning workshops, Elke Schneider, Paolo Onelli and Lothar Lissner.

Each round table discussion was preceded by a five-minute presentation of the main conclusions of the relevant morning workshop.

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Elke Schneider, European Agency for Safety and Health at Work, introduced **Round Table 1, 'Successful substitution: the EU's top priority risk reduction strategy'**, by presenting the main conclusions of the morning workshop.

'We need to think where we substitute, what we substitute and what we should target with substitution. We need clear criteria for where to promote research and promote substitution at the enterprise level. We have seen from the morning presentations that sector-related initiatives or targeted interventions are very successful. If all partners, the producers of chemicals, the equipment producers, the enterprises, the workers, the trainers of the worker cooperate, then it can really work. But we need to transfer this knowledge to the EU level. We need tools for substitution and a more targeted cooperation at EU level. EU legislation needs to take into account the considerable national and sectorial experiences on substitution.'



Paul Glynn, Employment and Social Affairs DG, European Commission: 'There are still only a small number of examples of successful substitution. Two

problems are to be addressed. First we need to get information through to the enterprises, and then a company needs to have the necessary tools for making a decision.'



Manuel Pérez Álvarez, MEP, Member of the Employment and Social Affairs Committee, European Parliament, emphasised the impact of better safety and health at workplaces for the whole society.

'The substitution of dangerous substances and the improvement of working conditions is not only an improvement for workers, but for the whole society.'



Patrick Levy, Corporate Medical Adviser, Rhodia Group, France, employers' representative, explained the difficulties of substitution with a number of examples. He concluded

that substitution must include a total assessment of all risks and suggested that risk assessment should also be part of the social dialogue.

'Substitution needs a complete risk assessment of the whole life-cycle. The evaluation of a single substance in one step of the production process is not enough. Rather than the amount produced we should take into account the inherent risk and effect of a substance and the actual exposure situation of the workers. I believe that the workers should also participate in the risk evaluation process.'



Vassilios Makropoulos, President of Elinyae, Greece, mentioned also how necessary a scientifically sound assessment of a substitute is.

'Substitution has had a very changeful history. The inventor of DDT got the Nobel Prize for medicine in 1948. In the beginning of the 1970s, DDT was restricted or banned. In the 1990s, we found that this substance is an endocrine disruptor. This example demonstrates we have too little knowledge about the substances we use. We need to consider how in our research networks we can use the limited resources more effectively. Also, we have to consider that at workplaces we are not only exposed to one, but to several substances at the same time.'



Marc Sapir, Director of the ETUC's Technical Bureau, TUTB, workers' representative, emphasised the role of the workers and of regulations.

'Strategies for substitution are not in opposition to technological development, but

rather give it a clear orientation: replace processes with ones that avoid the use or emission of dangerous substances. Every exposure that can be should be avoided. We believe that the workers and the persons responsible for OSH must have the tools and means necessary. They also need more resources to improve the unsatisfactory situation. The Member States need national strategies to support them. Some of the Member States' successful initiatives have been at the root of important directives such as the carcinogens directive and its stringent substitution requirement.'

Round Table 2 dealt with the problems of raising awareness and transferring quality information to all concerned. It was entitled '**Getting the safety message across: communication of information about dangerous substances.**'



Paolo Onelli, Moderator and rapporteur of **Workshop 2**, Director-General from the Ministry of Labour and Social Affairs, Italy, in-

troduced the discussion with a fundamental result from the workshop.

'The quality lies in the quality of the information process. The information has to be available and understandable to both employers and workers in the enterprise and discussed within the company. They have to know how to concretely apply this information. I think it is in the interest of institutions to follow a problem-solving approach in this respect.'



Giuseppina Camilletti, Ministry of Labour and Social Affairs, Italy (EU Presidency) mentioned some national initiatives tackling the problem of how to communicate complex information.

'At the national level, I would like to refer to the example of an ISPEL (Istituto Superiore per la Prevenzione e la Sicurezza del Lavoro) initiative, focusing particularly on SMEs and including all risks. This guidance also provides instruments to assess the understanding of the information received. Another example is the national inventory of chemical substances with thousands of entries.'



Derek Hunter, Member of the Employment and Social Affairs Section of the European Economic and Social Committee commented on the challenges of bringing a complex matter to all people at workplaces. 'Awareness and knowledge about hazards of dangerous substances and how

to combat them can sometimes be scarce and can be difficult to communicate. That can be due to the ability of management to understand that information but equally it can be the difficulties faced on the workers' side. When asking people to absorb complex information or even understand health and safety policies at the workplace, we have to look very, very closely at the words used to communicate these policies. We also need to think of workers coming to our countries from elsewhere, as we are soon going to import labour.'



Karola Grodzki, Chemicals Unit, Enterprise DG, European Commission: 'REACH would give greater responsibility to the industry to manage the risks from chemicals and to provide safety information on the substances. This information would be passed down the chain of production.

Manufacturers have to address all foreseen uses and include exposure scenarios into the safety data sheet information. Users have to report back on unforeseen uses.

The proposal has been drafted in close consultation with all interested parties, including via an Internet consultation. This has allowed the Commission to propose a streamlined and cost-effective system. The proposal is now being considered by the European Parliament and the EU's Council of Ministers for adoption under the so-called co-decision procedure.'



Lena Perenius, from CEFIC, the European Chemical Industry Employers Organisation, offered the support of the producer. 'The chemical industry is committed to a high level of environment, safety and health protection. Our Responsible Care programme includes a product stewardship section, promoting the safe handling of chemicals down the supply chain.'

A memorandum of understanding between social partners regarding this initiative has been agreed recently. The chemical industry could perhaps contribute: by facilitating access to this information by sharing and trying to pull together experiences from different sectors and making that available to the users. The most successful initiatives are those which are specific and directed to specific sectors. The CEFIC is funding a project to design a web-based risk assessment tool that will be freely available for SMEs.'

Reinhard Reibsch, General Secretary, EMCEF, workers' representative, emphasised the value of dialogue between workers and employers. 'We see in many examples that the risks, the number of accidents and the work load are lowest where the dialogue between employers and the labour force is working well. The Toulouse accident, for example, has led to an agreement between workers and employers. This is why we are promoting European works councils especially in transnational companies and the social dialogue at a sectorial level. First steps have been taken in the chemical industry.'



Lothar Lissner, Cooperation Centre Hamburg, Germany, introduced **Round Table 3, 'Strategies and policies'**, by presenting the main conclusions of the morning workshop. He pointed out that in general all parties agreed on the following necessary policy measures. 'More enforcement in SMEs, more information and communication, more resources for pilot and reference projects, more dissemination of good practice, more research and more data, more transfer from science into practice and more substitution wherever it is possible.'

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Mark Blainey, Environment DG, European Commission, valued the total positive impact of REACH on substitution and the cooperative approach of REACH. 'There has been a lot of consultation of stakeholders in the development of the new strategy. Part of the development of REACH has been looking back on experiences with existing regulations. Under the Existing Substances regulation, risk assessment was the duty of authorities and the procedure very comprehensive. We have turned around the burden of proof, so that industry will have to do the risk assessment. It can be done on limited end-points where the exposure justifies that. Guidance for a harmonised approach to the various aspects of REACH is particularly important with enlargement.'



Cándido Méndez, ETUC, workers' representative, highlighted the large deficits of workers' protection in general and concerning dangerous substances. For him, one of the reasons is the lack of sufficient data. 'We believe that there are still too few data about substances and preparations available. A recent Belgian comparative study of OELs and carcinogens' classification has shown that some substances had an exposure level in one country and others were classified carcinogens in another, with major differences. There clearly needs to be more cooperation to put more efforts in these fields of application of the EU legislation.'

Pat Donnellan, Programme Manager, Health and Safety Authority, Ireland, commented on the expected design of future REACH legislation. 'One issue will be of concern to the Irish Presidency: A comprehensive impact assessment of new legislation taking into account the effect on SMEs. We want something practical and realistic. We also want something that is enforceable. We don't want EU industry put at a disadvantage.'



Patrick Levy, Corporate Medical Adviser, Rhodia Group, France, employers' representative, pointed to successful examples of risk management. 'We are trying to transfer the successful experience with Responsible Care to other areas. Some companies are also revising their safety data sheets for substances on a regular three-year basis. But a lot remains to be done for raw materials and preparations. We also need adequate tools to carry out these duties and to assess carefully the resources needed to comply with new regulations.'

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Bernhard Jansen, Director, Employment and Social Affairs DG, European Commission, **closed the colloquium** with his statement, 'This exchange of available information in a format that is intelligible to the public to whom it is addressed is a very valuable contribution to the ongoing search for risk avoidance and risk reduction strategies. As the debate throughout the conference has shown, there are realistic perspectives of making important progress by sharing such information throughout the European Union. There is a role for the Agency there.'

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5. Overall conclusions and perspectives

- Awareness about the hazards and how to combat them is scarce, especially in small and medium-sized enterprises. Safe use of chemicals is highly dependent on the quality and efforts of communication from specialists to lay people.
- Successful substitution of dangerous substances is possible but it must be supported by expertise, targeted research and good practice information.
- The key to any successful approach to minimise the risks of working with dangerous substance lies in social dialogue. An example is the guidebook for the safe handling of chemical substances in the cleaning industry the European social partners have agreed upon.
- National authorities together with the EU need to develop an integrated chemicals policy not only on health and safety at work, but also on the environment, on consumer health and on public health.
- With regards to the new proposed EU-wide system of regulation of chemicals — REACH — all participants agreed upon the importance of having a single integrated system for the registration of new chemicals.
- Chemical producers are committed to a high level of safety and health, and will intensify efforts to provide more accurate information and to support SMEs to carry out risk assessment.
- Safety data sheet quality needs to be improved. Surveys have shown that many are not complying with regulations and are particularly poor in content regarding preventive measures in the workplace.
- Information about successful initiatives from the Member States needs to be transferred to EU level. More cooperation is needed at EU level regarding sector initiatives, substitution policies, and targeted research.
- It will be the task of the European Agency for Health and Safety at Work to bring together existing information about health risks from the use of dangerous substances and to spread them throughout the present and future Member States, together with risk avoidance and risk reduction strategies which have been shown to be successful.

6. Good practice awards

The Agency also wanted to recognise and reward those who are already taking effective action against dangerous substances, and therefore the event closed with the presentation of the European Week for Safety and Health at

Work 2003 good practice awards in a ceremony organised at the Guggenheim Museum in Bilbao. These annual awards aim to promote initiatives to reduce work-related risks and encourage further activities by disseminating good practice information at the European level and promoting the application of 'practical solutions' in workplaces in Member States and across Europe.

In selecting the examples, the judging panel of specialists and social partners for the Agency competition looked for solutions that showed:

- tackling risks at source;
- real improvements;
- sustainability over time;
- good consultation between management and the workforce;
- compliance with relevant legal requirements, preferably going beyond minimum requirements; and
- the possibility of transfer to other workplaces, preferably including those in other Member States and to SMEs.



Good practice award

Preventing exposure in vehicle repair *Autoberardi SRL — Concessionari Peugeot — Italy*

A car repair and bodywork shop took several measures to prevent exposure to harmful substances. The problems were first discussed with the occupational physician and the workforce and later the company adopted several changes in the working environment and processes in cooperation with its employees. Adaptations included adjustment of the processing areas; provision of automated machines for washing, painting and drying, exhausts ventilation, water-based products, and the introduction of correct operating procedures for preparing and spraying paint or varnish. For the repair workshop, the company implemented a new, closed-circuit distribution system for oils.

As a result of these enhancements, management of the dangerous substances has significantly improved and the exposure to harmful substances has decreased. The new water-based products have, in addition to being healthier to working staff, increased working efficacy and quality of the products.

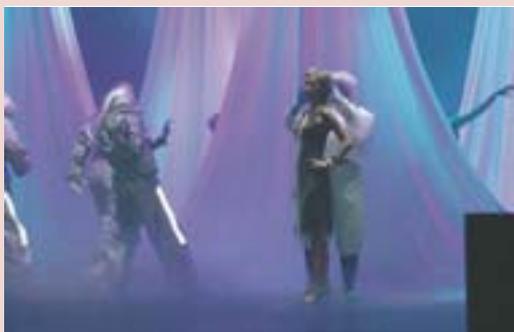
For more information about how to substitute hazardous substances effectively, please refer to factsheet 34, *Elimination and substitution of dangerous substances* available at: <http://agency.osha.eu.int/publications/factsheets/34/en/index.htm>

Good practice awards 2003: Award winners and commended entries

Country	Award	Title	Sector/Task	Issue	Main intervention
Austria	y	Dust capture in metal grinding	Iron and steel component production	Grinding dust and welding smoke	Technical solutions, control of dust
		Lock out — measures for maintenance	Mining, production of mineral materials	Maintenance	Lock-out system
Belgium	y	Safety for chemistry students	Education — universities	Controlling risks to chemistry students	Risk assessment and control methodology
		Chemical risk prevention in school laboratories	Education — schools	Controlling risks to staff and pupils	Information and communication tools
Denmark	y	Environmental assessment and chemical management	Galvanised steel and stone roofing production	Inadequate policy and procedures	Chemical management system
		Metal degreasing — from solvents to demineralised water	Metal component manufacture	Solvents	Substitution with demineralised water and low alkaline degreaser
		Chemical safety on merchant sea vessels	Maritime	Poor management, lack of specific information	Sector-based electronic resources: management and product information support
Finland	y	24-hour safety — in cooperation	Chemical industry	Reaching companies	A cooperation network
	y	Training in safe and environmentally friendly use of chemicals	Various SMEs	Practical support for SMEs	Risk assessment support scheme
France	y	Chemical products 'use/sector' matrix	Various SMEs	Sector-specific product information	Electronic database
		Labelling raw materials	Plastics and rubber	Ensuring safety information	Labelling system
Germany	y	GISBAU — an information system for SMEs	Construction/building SMEs	Providing relevant sector information	Product database and risk assessment system
		Electronic risk prevention tool	SME craft trades — painters and varnishers	Practical support for SMEs	Electronic tool and practical support
		Bitumen forum	Road laying	Emissions from bitumen	Cooperation forum and 'reduced temperature' asphalt laying
Greece		An automatic lubrication system for the extrusion chamber of brass billets	Metal working — extrusion of brass billets	Talcum powder lubricant	Automation and substitution with boron nitride
		Galvanising — modified degreasing process	Galvanising steel constructions	Fumes from degreasing	Substitution, including biological degreasing, technical changes
Ireland	y	Eliminating methylene chloride from bitumen binder testing	Asphalt-coated road materials' manufacture	Use of methylene chloride during product testing	Substitution with a heat-testing system, also fume cupboards, etc.
		Reducing ethylene oxide exposure during sterilisation	Medical device manufacture	Sterilisation with ethylene oxide	Engineering controls
Italy	y	Preventing exposures in vehicle repair	Vehicle bodywork and repair	Paint, engine oil, putty, dust, etc.	Water-based paints, technical and work environment measures
		Elimination of N-N dimethylacetamide	Silicon chip semiconductor manufacture	Washing, rinsing	Substitution with oxalic acid
Netherlands	y	Reducing dermatitis among hairdressers	Hairdressing	Exposure to skin allergens	Voluntary industry agreement, resources and campaign
		Automated management system	Vehicle crash repair	Solvents, welding fumes, sanding dust, etc.	Trade association electronic databank and resources
Portugal		Reducing risks from glue vapours	Production of isothermal boxes	Styrene and acetone vapours	Substitution of styrene by using polyurethane glue, technical changes
Spain	y	Training cleaners to prevent chemical risks	Cleaning services	Cleaning chemicals, wastes, etc.	Training in risk assessment and prevention
		Managing hazardous waste from university laboratories	Education — universities	Laboratory waste handling and disposal	Management system, storage facilities
Sweden		Eliminating isocyanates during hot work on polyurethane	Car bodywork repairs	Air contaminants containing isocyanates	Extraction devices fitted to welding and grinding equipment
UK	y	Hospital equipment sterilising	Healthcare — endoscopy	Eliminating staff exposure, maintaining effective sterilisation	Substitution of glutaraldehyde
		Removing alcohol from lithographic printing	Printing	Use of isopropanol	Substitution and technical changes
		Reducing airborne particules in clay preparation	Brick manufacturing	Airborne clay particules	Equipment modification

Good practice award

Reducing dermatitis among hairdressers
Hairdressing council — the Netherlands



About 30 to 50 % of hairdressers suffer from dermatitis at some stage of their career. The dermatitis often endangers their career in addition to the physical pain and discomfort. In the Netherlands, a voluntary covenant was drawn up to cut down the exposure to skin allergens and consequently reduce the morbidity among hairdressers. The covenant obliges employers to provide safer workplaces, employees to follow the safe working practices and manufacturers of the hairdressing products to modify their products to prevent skin contact with hazardous substances.

The covenant set a list of measures that need to be taken to improve the safety of workers at hairdressers. To enhance the adaptation of these measures at the workplace, the campaign 'Healthy hairdresser: Your health counts' promoted the safety measures through a quarterly magazine, CD-ROMs, and preview tours targeted at hairdressers and trainee hairdressers. This campaign has been backed up with information demonstrating that salons quickly get their money back from the implementation of these measures. This kind of information has also been successful in promoting improvements to small and medium-sized enterprises.

The Agency factsheet 35, *Communicating information about dangerous substances*, introduces principles of effective communication about dangerous substances in workplaces. The factsheet is available at: <http://agency.osha.eu.int/publications/factsheets/35/en/index.htm>

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Good practice award

Chemical products 'Use/sector' matrix
*Caisse Régionale d'Assurance Maladie (CRAM),
Alsace-Moselle, France*

To manage chemical hazards it is essential to find out what chemicals you have in your workplace and the hazards associated with them. The CRAM of Alsace-Moselle assisted the local companies in this task by setting up a reliable database on the use of chemical products by sector. The database depends on a survey of companies using a so-called 'System for evaluating the occupational risk of chemical products in industries and skilled-craft enterprises' (SEPM). The enterprises in the region were asked to submit a table listing all the labelled chemical products with quantities used and the number of workplaces concerned. The database can now be accessed via the CRAM website at: <http://www.cram-alsace-moselle.fr>

Factsheet 33, *An introduction to the dangerous substances in the workplaces*, summarises key facts about the management of dangerous substances in workplaces. The Agency factsheet is available at: <http://agency.osha.eu.int/publications/factsheets/33/en/index.htm>

7. Further information

- The Agency's summary report, *The practical prevention of risk from dangerous substances at work*, concludes the cases awarded or commended in the competition for good practices in 2003. The book is available from: <http://agency.osha.eu.int/publications/reports/106/en/index.htm>
- The Agency's report *How to convey OSH information effectively: the case of dangerous substances* is available at: <http://agency.osha.eu.int/publications/reports/312/en/index.htm>. This report presents 19 examples on how to communicate about risks from dangerous substances at different action levels, starting from the workplace level up to the national and international levels.
- The introductory seminar, 'Hazardous substances in the workplace — Minimising the risks', is summarised in Forum 10 available at: <http://agency.osha.eu.int/publications/forum/10/en/index.htm>
- For further information on the European Week for Safety and Health at Work 2003 closing event, including the full proceedings of the conference, please visit: http://osha.eu.int/ew2003/index_en.htm
- The Agency website has sections devoted both to the good practice solutions and research for occupational safety and health and dangerous substances, available from: <http://europe.osha.eu.int/>



FORUM is published by the European Agency for Safety and Health at Work.

The series addresses selected issues of key concern to the Agency's network and the wider OSH community.

By drawing on the advice and expertise of the Agency's network partners, **FORUM** aims to provide information and to promote discussion.

Further information on European Agency activities is available on our website:

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FORUM is published in English, French, German and Spanish.

ISBN 92-95007-86-7