

Evolution of chemical safety data systems for SMEs

Last year, the Long-range Research Initiative (LRI) research programme of the European Chemical Industry Council (Cefic) commissioned a comparative European study to investigate the effectiveness of different approaches to supporting chemical risk management in hard-to-reach situations, such as in small and medium-sized enterprises (SMEs). The findings of this study were discussed at a workshop for researchers and policymakers held at the Netherlands Organisation for Applied Scientific Research (TNO) in Amsterdam in May¹. This article outlines some of the main points raised by the research at the workshop.

Chemical risk management in small firms

In all of the countries studied, including Austria, Germany, the Netherlands, Spain, Sweden and the UK, there is evidence of poor implementation of regulatory requirements on chemical risk management in small firms. Research studies and reports of inspection campaigns demonstrate only very limited compliance with most regulatory requirements concerning chemical risk assessment and management. This limited compliance is related to the multifaceted lack of resources that owner-managers and employees in small firms have, which limits their capacity to observe requirements to manage chemical risk effectively. Although research shows that suppliers of chemical products are regarded as important sources of information and advice, the quality of the information supplied is found to be inadequate in all countries.

It was largely in recognition of this problem that new approaches to address chemical risk management in such situations – through non-regulatory guidance and support – began to emerge in various countries at the end of the 1990s. These approaches are underpinned by the “control banding” concept and a generic approach to risk assessment. These developments have been welcomed while the level of protection offered by such generic risk/exposure assessments continues to be debated². The Amsterdam workshop explored evidence of the effectiveness of such approaches as adopted in different EU countries.

National strategies and a plethora of tools to implement them

In the UK this new approach to chemical risk management in small firms is reflected in COSHH Essentials, the revision of the exposure limits system and other aspects of recent changes to the COSHH Regulations.

These developments have been associated with a policy debate that has also taken place in Germany where it influenced the recent Hazardous Substances Ordinance 2005 and the production of the so-called “Easy-to-use workplace control scheme for hazardous substances”, modelled on COSHH Essentials, by the German Federal Institute for Occupational Safety and Health.

In other EU countries, while there is less evidence of nationally articulated regulatory strategies specifically addressing the issue of chemical risk management in small firms, there has been considerable development of relevant programmes and tools. For example, the Versterking Arbeidsomstandighedenbeleid Stoffen (VAST) programme in the Netherlands has been specifically aimed at small enterprises, requiring employers in sectors with high risks from hazardous chemicals to prepare action plans at sectoral level for their reduction. Combined with another major Dutch strategy aimed at improving systematic approaches to occupational health and safety in general – the introduction of covenants (Arboconvenanten), agreed between employers and trade unions at sectoral level – the handling of hazardous chemicals in small enterprises has been addressed. By March 2006, 26 VAST plans had been written, with 24 already in progress.

In Sweden, following an inspection campaign undertaken by the Work Environment Authority in 2003, which revealed large-scale lack of compliance with chemical risk management standards, tools such as the KemiGuiden (Chemical Guide) have been especially designed for use by small companies. The Work Environment Authority, along with the social partners, has assisted in marketing these tools to small firms across a range of sectors.

In Austria, in response to lobbying from organisations representing small firms, the main statutory employers’ liability insurance association for the private sector; the Austrian Social Insurance for Occupational Risks (AUVA) established the AUVASafe system in 1999 as a free preventive support service for workplaces with up to 50 employees. While chemical risk management is not the only part the AUVASafe system (it covers a wide range of OHS issues), it is a central one, with sector-specific company visits involving the implementation of detailed measures on sector-characteristic chemical risks.

In Germany, the development of tools to assist chemical risk management in small firms is particularly evident – across both sectors and federal states. The many documented initiatives include:

- the GISBAU and the WINGIS systems for the construction industry;

David Walters describes innovative tools under development in several EU countries to facilitate the management of chemical risks.

References

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■ the Cleantool database and others developed by Kooperationstelle Hamburg to assist with substitution; and

■ internet portals, such as Pragmatic Management of Health and Safety in Small Enterprises (ProMaGuS) developed by the Social Research Institute in Dortmund, and Hazardous Substances under Control (Gefahrstoffe im Griff) developed in North-Rhine Westphalia.

Participants at the workshop discussed the features of the German health and safety system that made this possible. Its most notable aspect – and a particular contrast with the situation in the UK – is the substantial infrastructural support afforded by the sector-based employers' liability insurance organisations. The responsibilities of these organisations, their role in regulation and their resourcing has resulted in extensive development of technical solutions for chemical risk management across a range of sectors in Germany.

It was not only insurance associations that were involved in these developments; federal state inspection authorities, both statutorily required trade organisations and voluntary employer bodies, and organisations for employees were also involved at sectoral and regional levels.

What works?

Evaluation of the new approaches to dealing with chemical risk management in small businesses has been limited. Despite the plethora of tools developed, the researchers found only a limited number of properly conducted studies measuring the success, sustainability and transferability of these approaches. There has apparently been a good take-up of such simple-to-use tools but studies point to the need to refine or target strategies for exposure/risk assessment, to ensure they properly distinguish between risk and hazard. For example, multimedia approaches have been shown to reinforce information use and improve control.

Evaluation, such as it is, of sources of support (information, guidance, advice, etc) has been mostly limited to counts of the extent of uptake by users, such as the records of distribution of paper guidance and CDs, and the number of visits to internet-based guidance (eg the Chemical Guide in Sweden, COSHH Essentials in the UK³, the distribution of inquiries on the KomNet database and the number of visits to the Gefahrstoffe im Griff website in Germany). Sometimes, where such tools are interactive, inferences are drawn about use from the amount of time logged on a site or from multiple visits of a particular user to the same site. However, apart from such quantitative measures of interest, little is known about the quality of use, beyond studies undertaken during the piloting of particular instruments, carried out in conditions that are not representative of those found more widely among small enterprises.

Some relevant work has been undertaken in the UK concerning employers' and employees' capacity to handle suppliers' information and concerning the flow of information between firms and their environment and its affect on the influence of regulatory intervention^{4,5,6}. In addition, attempts have been made in the UK to model

the interface between expert and user information on chemicals, which the researchers claim aids understanding of risk communication⁷. However, the authors point out that risk communication alone will not necessarily overcome strongly embedded practices and that, to be effective, it needs to be integrated with other approaches, including training regimes, regulatory change and technical innovation^{8,9}.

It is recognised in studies on health and safety arrangements for small organisations more generally that actors and processes in the economic, social and regulatory environment of such organisations are significant levers in improving health and safety management. Face-to-face contact with change agents is regarded as the most important influence on the behaviour of employers and workers in small businesses, whether such agents are the conventional actors of the health and safety system, such as inspectors, worker safety representatives, safety and health practitioners and consultants, or less conventional intermediaries, such as supply-chain actors bearing health and safety messages. The sectoral and state-level approaches, such as those in the Netherlands, Germany and Austria, mentioned above, were seen as having considerable potential. National programmes, such as the VAS^t programme and the covenants in place in the Netherlands, were seen as potentially significant in this respect. Interest was also expressed in schemes such as AUVASafe in Austria.

Ways forward

As the study discussed at the workshop demonstrated, various parties involved in the business environment of small firms can support and enhance the traditional roles of regulation, inspection and trade unions; this includes parties involved in the supply chain, and sectoral organisations, financial backers and advisers, education and training providers, and even public interest groups. This is implicit in much of the thinking behind the sectoral and supply-chain focus of the EU Registration, Evaluation and Authorisation of Chemicals (REACH) Regulations in relation to downstream users of chemical substances.

Finally, participants were in agreement that, to be successful, support for chemical risk management in small firms should be relevant to the interests and priorities of the owner-managers and employees. Conventional approaches to support that focus solely on compliance with regulatory requirements are unlikely to succeed because such issues do not hold the attention of dutyholders in small enterprises in the same way as in larger concerns. The view was expressed that other, more indirect, strategies – involving, for example, greater attention to training, innovation, substitution and more sectorally focused approaches – were likely to achieve better results in supporting the safe use of chemical substances in small enterprises. However, while a plausible case can be made for such approaches, evidence of their effectiveness still remains to be demonstrated.

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