Beyond limits? — Regulating workplace chemical risks in the EU

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Introduction

This paper is based on a study undertaken for the UK Health and Safety Commission (HSC) to explore the role of occupational exposure limits (OELs) in regulating the management of risks from hazardous substances at the workplace level in several EU countries. The research was stimulated by the requirement to implement the Chemical Agents Directive (CAD) and the Indicative Occupational Exposure Limit Value (IOELV) Directives made under it.

It briefly compares the main features of the systems and processes in place in EU member states to set and review OELs and identifies points of comparison and contrast between these systems. The main purpose of the paper however, is to comment on the workplace application of OELs and in particular to consider their role in the activities of regulatory agency inspectors in seeking compliance with measures to regulate the management of hazardous substances. The results of interviews with key informants from six EU countries are presented. The paper identifies the main strategies used to approach the problem of managing the risks associated with hazardous chemicals in practice in each country and the role played by OELs in such strategies.

An analysis is undertaken of the relationship between national systems for setting exposure limits and the role of the resulting OELs in regulatory strategies in practice at workplaces in each country. It finds a considerable divergence between the detailed theoretical discussion of toxicity and exposure in the process of setting exposure limits, the efforts to separate scientific decisions from those made in the interests of technical and economic feasibility at national levels and the weak knowledge and experience of application of OELs and their limited use at the workplace in the countries studied. It

discusses some reasons for this divergence in the wider context of the process regulation of occupational health and safety management in Europe.

Findings

Compliance with EC requirements is an issue that is under review in all of the countries we studied in detail. The concerns of northern European countries are with the extent to which existing systems need to be adapted and the extent to which the achievement of compatibility with EC requirements can be achieved without reducing the quality of these existing systems. In southern European countries EC requirements are necessitating more fundamental reforms. There is some questioning of compatibility of these changes with national approaches (such as the constitutional debates in Italy) and the possible influence on quality. In addition, in Italy and Greece, there are debates concerning the extent of duties under the legislation introduced to transpose the EC requirements and the possibility of exemptions (especially in relation to small firms) from its coverage.

In the northern European countries systems for setting and reviewing OELs were quite developed and detailed. There was some concern in these countries about delays that occurred in the process of review and the resource intensive nature of the process of evaluating new information and reconsidering OELs in its light.).
Controlling risks to health is the aim of all of the OEL systems. The extent to which they are able to do so is limited in scope, application and user understanding. Effectiveness, of OEL systems, either in terms of health outcomes or in terms of their use in risk assessment have not been evaluated quantitatively in most countries. The qualitative evaluations on which we drew suggested broad agreement about the limitations of OELs but at the same time pointed to a widespread belief in their necessity.

There was widespread agreement that nowhere were OELs either readily understood by the majority of employers, or accessible to them. As far as professional input in their use was concerned, despite the existence of legal requirements on prevention services in most of the countries we investigated, there was shortage of professional input in the application of OELs in workplaces in these countries (Germany may be a possible exception).

There was a widespread belief that such input was least accessible to employers in small and medium sized enterprises and that these were the duty holders that were least aware of the significance and role of OELs. There was also a worrying notion expressed in some countries that there had been a decline in the extent to which prevention services still had the capacity to provide the professional input required.

Regulation is widely perceived as an important driver of improved chemical risk management. However, OELs are regarded as only one aspect of such regulation and their enforcement is not viewed as particularly significant in the regulation of chemical hazards overall. Although OELs were theoretically legally enforceable in all countries, the extent to which they are enforced is not great. Records are hard to locate or understand, (there is some quantitative analysis in the UK) but the strong opinion of observers was that in all countries enforcement is not an option practised widely.

In terms of applications at the workplace level, technological change seemed to be the main driver of improvement in all countries (with regulation also playing an important role). Increased use of specification standards and practice of substitution are important trends in improved chemical risk management in most countries. Linked to these approaches is the practice of addressing other, more accessible measures of OHS management and performance, the use of which imply (rather than directly measure) compliance with OELs. Stakeholder involvement in all these approaches seems to be a key factor in influencing the extent to which the approaches are made operational. Influence along the supply chain is another important factor that is not fully exploited.

Even the most developed systems only deal with a small minority of chemical substances that are in use in industry. There is therefore discussion of the means with which frameworks for OELs could be applied to generic groups of substances.

OEL systems were generally flexible enough to allow for the development of substitution and specification standards. The position in relation to the discretion of inspectors to demand improvement of exposures to below the OEL was less clear. Concerns were expressed about the role of an OEL regulatory framework in which the use of numerical values is not properly understood. This faulty understanding of their meaning (especially the notion that they represent safe limits/limits, beyond

which it is not necessary for employers to further reduce exposures, contributes a barrier to demands for the application of good practice from regulatory inspectors.

Reforms currently under discussion in some countries include addressing:

- means to encourage (or at least not *dis*courage) the development of substitution strategies and the greater use of specification standards within a broader framework for chemical risk regulation
- ways of helping inspectors require improvements that are technically feasible
- reduction of misconceptions around the notion of 'a safe limit'
- allowing the enforcement of good practice and avoiding the necessity of sophisticated monitoring in situations where it is neither economically feasible nor really necessary

However, it is by no means certain that such reforms would alone be sufficient to address the problems of achieving widespread compliance with measures to assess and manage chemical risks. They will not solve the problems of risk perception and risk communication that seem to be inherent all the national systems for setting and using OELs that we have considered. While they may help improve the practice of risk management of hazardous chemicals amongst *some* duty-holders that currently fail to deal adequately with this subject, our analysis of wider European experience suggests there is no 'one size fits all' approach that can be applied successfully to this subject. Such reforms that are currently being canvassed are unlikely to reach all users. In particular, they will not guarantee that the practice of understanding and using OELs would be extended to *substantially* more duty-holders amongst owner managers in small enterprises, since their problems of compliance are considerably more wide ranging than can be addressed by this type of reform alone. They also do not address other concerns that we have raised, such as the question of access to services with the competence and resources to undertake monitoring or the extent to which the regulatory inspectorates are themselves sufficiently resourced and skilled to always deal adequately with OELs.

We conclude therefore, that if substantial improvement is sought in the way in which *all* firms manage the risks of using hazardous chemicals, the kind of revision that is currently under discussion need to be part of a wider reform. It would need especially to address the issue of risk communication in more fundamental ways that are currently proposed. It would require integration within additional reforms that would go some way to ensure the availability and use of professional preventive services that are

sufficiently competent to undertake the monitoring of hazardous chemicals. Means to effect such availability and use would also have to take account of the particular challenges represented by small enterprises, which would additionally require special attention being paid to their education and information needs. Above all, the creation of an ethos of risk awareness for all involved in the use of hazardous chemicals is necessary. Some small steps can be made in this direction by clearer meanings for OELs. But best practice in countries such as the Netherlands and in Sweden indicates that other measures to encourage participation, to make use, for example, of the skills and experience of trade union health and safety representatives and to engage with manufacturers and suppliers are also required.