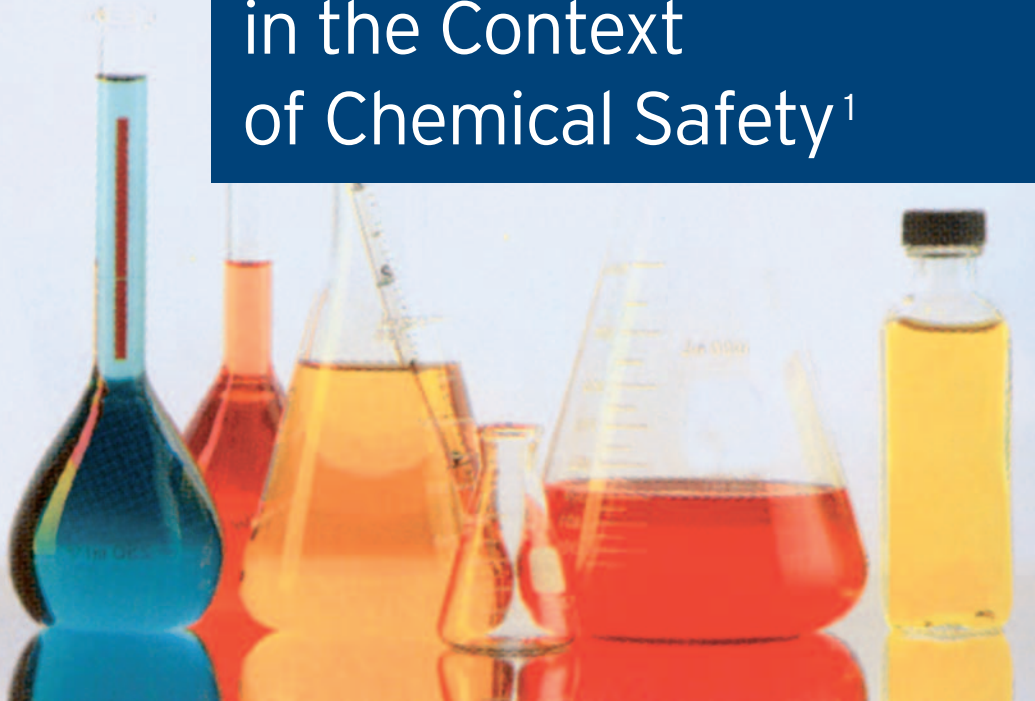


Applying Precaution in the Context of Chemical Safety¹



Mr. Joel Tickner
Assistant Professor
Department of
Community Health
and Sustainability
Lowell Center
for Sustainable
Production, University
of Massachusetts

Dr. Judy A. Stober
Executive Secretary
Intergovernmental
Forum on Chemical
Safety

**Ms. Elizabeth
Chesler**
Intern
Intergovernmental
Forum on
Chemical Safety

Since the 1992 Rio Declaration, a number of countries and forums have sought to provide guidance on the application of the precautionary principle in chemicals management. Some of these efforts have raised questions as to how best to make decisions aimed at protecting health and ecosystems under conditions of uncertainty, while stimulating innovation in science, technology and policy.

Governments and other stakeholders must work towards an understanding of precaution and how it can be implemented more clearly and effectively in the context of domestic chemicals management. This article presents the results of a series of research and dialogue activities undertaken by the Intergovernmental Forum on Chemical Safety to examine tools and approaches for applying precaution in the context of chemicals safety.

Key words: precautionary principle, chemical safety, Rio Declaration, management, policy.

¹ This article is based on the material and documents prepared for the Fifth Session of the Intergovernmental Forum on Chemical Safety (FORUM V) held 24-29 September 2006 hosted by the Government of Hungary. <http://www.who.int/ifcs/forums/five/en/index.html>.



Application du principe de précaution dans le cadre de la sécurité chimique

Depuis la déclaration de Rio de 1992, un certain nombre de pays et de forums s'efforcent de proposer leur assistance dans le cadre de l'application du principe de précaution dans la gestion des substances chimiques. Les efforts mis en place ont soulevé des questions quant aux prises de décisions en matière de protection de la santé et des écosystèmes, ont stimulé les innovations scientifiques, technologiques et politiques.

Les gouvernements et les autres acteurs concernés doivent s'employer à introduire le principe de précaution dans le cadre des activités de gestion des substances chimiques ménagères. Les conclusions d'une série d'activités de recherche et de dialogue menée par le forum intergouvernemental sur la sécurité chimique permettent de passer en revue les outils et les méthodes d'application du principe de précaution dans le contexte de la sécurité chimique.

Mots-clés : principe de précaution, sécurité chimique, déclaration de Rio, gestion, politique.

Aplicar la precaución en el contexto de la seguridad química

Desde la Declaración de Río de 1992, un gran número de países y foros han intentado proporcionar directrices sobre la aplicación del principio de precaución en la gestión de los productos químicos. Algunos de estos esfuerzos han planteado cuestiones sobre cómo tomar decisiones destinadas a la protección de la salud y los ecosistemas, al tiempo que se estimula la innovación en ciencia, tecnología y políticas.

Los gobiernos y otros organismos deben trabajar para introducir el principio de precaución en el contexto de la gestión de los productos químicos domésticos. Los resultados de una serie de actividades de investigación y de diálogo emprendidas por el Foro Intergubernamental sobre Seguridad Química permiten examinar herramientas y perspectivas para aplicar la precaución en el contexto de la seguridad con productos químicos.

Palabras clave: principio de precaución, seguridad química, Declaración de Río, gestión, política.

Introduction

In some countries, precaution – or taking preventive action in the face of uncertain risks – is well known and applied domestically in various approaches to chemicals management decision making. In other countries, particularly in the developing world, precaution is a relatively new concept.

forts at all levels. If we begin with the notion that precaution can be used as a tool to promote health and ecosystem protective decisions, which is a forward-looking, solutions-oriented view of precaution, then we can begin to discuss elements of approaches for addressing uncertain chemical risks. To this end, the fifth session of the Intergov-

ernmental Forum on Chemical Safety (Forum V⁴) held in Budapest from 24 to 29 September 2006 included on its agenda a plenary session on applying precaution in the context of chemical safety. The aim was to understand experiences in applying precaution in chemical safety across stakeholder groups and to identify tools and approaches that may be useful and applicable to decision-makers across nations to effect more health- and ecosystem-protective decisions with regard to chemicals management.

governments and a range of stakeholders. The goal was to understand similarities and differences in how precautionary decisions are made across countries; what tools and approaches countries use to apply precaution in chemicals management; how policy, regulatory and scientific processes support precautionary decision making in the context of chemicals management; the challenges and needs for applying precaution in the context of chemicals management; and various perceptions of its application.

Principle 15 of the Rio Declaration² defines precaution as “[i]n order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

This article provides an overview of the results of research undertaken for IFCS Forum V on tools and approaches for applying precaution and some of the outcomes of discussions at the meeting itself.

Since the 1992 Rio Declaration, a number of countries and forums have sought to provide guidance on approaches to decision making in the face of scientific uncertainty and application of precaution in chemicals management.³ Some of these efforts have raised questions as to how best to make decisions aimed at protecting health and ecosystems under conditions of uncertainty, while stimulating innovation in science, technology and policy.

An open discussion about how countries and other actors approach decision making in the face of uncertainty to protect health and ecosystems – in other words, how precaution is applied implicitly or explicitly in practice – and sharing of experiences can enhance chemicals management ef-

As a scoping exercise to provide background information to facilitate the discussions at Forum V, examples of tools, approaches and frameworks for applying precaution with regard to national chemical safety efforts were solicited from

Similarities and Differences across Nations and Stakeholders in Tools and Approaches

From the information collected, it is evident that there is a wide range of proce-

² United Nations Conference on Environment and Development, 1992 <http://www.unep.org/Documents.multilingual/Default.asp?DocumentID=78&ArticleID=1163>.

³ Tools and Approaches for Applying Precaution in the context of Chemical Safety: An Introduction, Franz Xaver Perrez (IFCS/FORUM-V/ 7 INF) http://www.who.int/ifcs/documents/forums/forum5/mee_docs/en/index.html.

⁴ http://www.who.int/ifcs/documents/forums/forum5/precaution_plenary/en/index.html.

sses used for applying precaution within and across countries, and regions and there is some difference between developing and developed countries as to what they consider precaution. In many developed countries, precaution is often applied to prevention of risks with chronic and highly uncertain health implications. In developing countries, precaution is frequently applied to prevention of acute events and end-of-life chemicals concerns, such as pesticide poisonings, transport accidents, and chemical stockpiles. Some activities that developing countries noted as applying precaution were what some developed countries would say are routine chemicals management activities.

While most countries noted the importance of precaution in their domestic chemicals legislation, few have established legislation or policies that explicitly call for applying precaution in chemicals management. Many countries – both developed and developing – implicitly refer to precautionary approaches in their national environmental and sustainable development policies, or in their constitutions (e.g. the right to a healthy environment). A few developed countries have established processes for applying precaution in their decision making, in part to support decisions that might be subjected to trade challenges (a concern that some devel-

It is evident that there is a wide range of processes used for applying precaution within and across countries

oped countries noted). In general, the responses indicated that precaution is currently applied on a relatively *ad hoc* and inconsistent basis, even among countries with policies which explicitly incorporate precaution. This *ad hoc* application exists even where there are established procedures for undertaking the scientific assessment process, such as in developed countries.



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The responses showed a wide range of tools and approaches used by countries and other stakeholders for implementing precaution either implicitly or explicitly in chemical safety activities. Some of the most widely mentioned tools are listed in Box 1.

While some countries noted that precaution is relevant only at the risk-management stage of decisions,

Box 1

Some of the most widely mentioned tools for applying precaution include:

1. Issuance of regulations to restrict an activity – such as transport of hazardous materials, waste controls, and import restrictions;
2. Development of labelling and safety data sheets, including implementation of the Globally Harmonised System of Classification and Labelling;
3. Chemical (particularly pesticide) registration processes;
4. Application of safety factors and consideration of worst case impacts, particularly on vulnerable populations. Protection of children as a vulnerable population was mentioned in many cases;
5. Restrictions/bans on chemical use (and, in some cases, on structurally similar chemicals) and marketing, including planning for chemical substitution and alternatives;
6. Placing the onus on manufacturers to provide safety data;
7. Chemical prioritisation processes;
8. Chemical monitoring and research on chemical effects;
9. Environmental impact assessments;
10. Consultation with government multi-stakeholder advisory panels and with international agencies and other countries;
11. Public education/training campaigns in schools and for particular sectors of society (e.g. workers, small businesses);
12. Chemical modelling and prediction used in risk assessment as well as development of guidance documents; and
13. Outreach to industry on chemicals of concern.

others noted that there is a need for applying precaution in the risk assessment and technology assessment phases as well. Tools used in developed countries tended to be more detailed and technical (such as detailed risk assessments, modelling, and safety factors) than those used in developing countries, which focused more on impact assessment (to the degree that resources permitted), hazard identification, and communication (often through labelling). In both developed and developing countries, stakeholder engagement on national chemicals committees or in particular decision-making processes was seen as an essential part of applying precaution. Most countries, both developed and developing, noted the importance of basic scientific

Few have established legislation or policies that explicitly call for applying precaution in chemicals management

information and understanding of risks as a prerequisite for taking precautionary action. Some developing countries noted that taking precaution is of particular importance in their countries because they do not have sufficient financial and technical resources to undertake detailed risk assessments, and thus an ability to act on the basis of uncertain information is critical.

There was also a difference between industry and public interest and labour NGO stakeholders in tools and approaches used. Industry stakeholders saw precaution as being implemented through conservative risk assessment assumptions, research on chemical effects, information to consumers on safe use of products (including responding to demands for safe products), and avoidance of liability problems as key elements of implementing precaution. NGOs viewed chemical restrictions, implementation of alternatives to dangerous chemicals through consultation with downstream chemical users, and the right to know, including the presumption that the environment should be free of dangerous chemicals, as key elements of implementing precaution.

Challenges

Both developed and developing countries noted numerous challenges with

Box 2

Some of the key challenges facing developing countries in their capacity to apply precaution include:

14. Lack of coordination nationally (for example between environment ministries and customs officers);
15. Lack of scientific and socioeconomic analysis tools;
16. Lack of support for small and medium-sized enterprises to understand chemical risks and undertake preventive actions;
17. Lack of information/scientific resources (even in universities), including training of human resources, capacity building in toxicology, and development of laboratories and research programs;
18. Lack of resources for implementation and enforcement of precautionary policies over the short and longer terms;
19. Lack of capacity of government officials and local authorities in chemicals assessment and management;
20. Lack of legal infrastructure and authority to undertake precautionary decisions or oblige those creating risks to undertake preventive actions;
21. Lack of financial resources to conduct research, provide technical support, and invest in safer technologies. This lack of financial resources means that addressing one issue may result in short changing another;
22. Lack of public awareness and public leadership.

respect to application of precaution in their chemical safety policies. These challenges differ considerably between developed and developing countries, though there are some overlaps, particularly in terms of information gaps and challenges of intra-governmental coordination. A common set of challenges was consistently noted across developing countries (Box 2). While the challenges generally affect all chemicals management activities in these countries, they are accentuated when there is scientific uncertainty. Further, they limit the ability of developing countries to characterise risks, identify preventive options, and ultimately support decision making. For developed countries, issues with respect to regional or international trade appear to be important challenges to implementation of precaution. Several developed and developing countries noted the importance of economic tensions (concerns about adverse economic impacts from precautionary actions) as a challenge to implementation. However, most respondents noted the importance of considering the socio-economic implications of precautionary decisions, in particular, their proportionality.

Many of these challenges were also reported by countries in transition, particularly those challenges related to capacity, public awareness, and resources.

Several of these challenges were noted by developed countries, particularly those related to national coordination, scientific tools and capacity (particularly for prioritisation of limited resources across activities), access to information, financial resources, public awareness, and lack of local government capacity.

While challenges to applying precaution differed somewhat between developed and developing countries, there were some common needs. In particular, information on chemical toxicity and risks, tools for decision making under uncertainty (including socio-economic assessment and assessment of alternative technologies), and case examples of applying precaution in practice were common needs across countries. Technical support for implementation of alternative technologies was also noted by developed and developing countries. Further, technical support to businesses (particularly small and medium-sized companies) and local capacity were noted across countries.

Way Forward/Next Steps

At Forum V, participants were provided with an overview of the background and issues surrounding the application of precaution in chemicals management efforts and presentations by governments and other stakeholders on tools and ap-

proaches. The participants recognised the importance of mechanisms for sharing information and lessons learned from case examples, both positive and negative; enhancing multi-sectoral dialogue; and capacity building for the application of tools and approaches for making decisions in the face of uncertainty and/or applying precaution in the domestic context. To address identified challenges, Forum V identified a series of potential next steps to support countries that wish to utilise tools and approaches in applying precaution in domestic chemicals management activities. The steps can be categorised into two general areas: provision of information on tools and approaches for making decisions in the face of uncertainty and/or applying precaution in the domestic context, and capacity-building/skill-sharing initiatives to support application of tools and approaches for making decisions in the face of uncertainty and/or applying precaution in the domestic context. These can be supported by all working in the area of chemicals management by utilising existing mechanisms to share information on experiences and tools. ■