United Nations Environment Programme
Environmental Law and Institutions
Programme Activity Center
International Register of Potentially
Toxic Chemicals

GUIDANCE ON CHEMICALS LEGISLATION: OVERVIEW

Final Draft

One of a series of publications which provides guidance on chemicals legislation.

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EXECUTIVE SUMMARY

1. Agricultural productivity and industrial development have been made possible by an increase in the quantity and variety of chemicals. The enhanced availability of chemicals, however, has led to thoughtless, excessive chemical use resulting in human poisonings and global contamination. Every day more pollutants are released into the environment through the use of chemicals at home or at work and as a result of accidents. Human beings are exposed to chemicals through the air they breathe, the water they drink, the food they eat and countless other acts of daily life.

2. To maximize the benefits and minimize the costs of using chemicals, countries have tried to control them by establishing policies, creating ministries, enacting laws, training personnel and distributing information. Their efforts, however, have not been entirely effective due to an absence of political commitment, insufficient resources, legislative gaps, a lack of inter-sectoral coordination, inadequate enforcement, poor training/education or other constraints.

3. The human health and environmental price of inadequate chemicals control has become unacceptably high. In recognition of this fact, countries participating in the 1992 United Nations Environment and Development Conference (UNCED) approved an environmental action plan which includes a chapter on the environmentally sound management of toxic chemicals. In Chapter 19 of Agenda 21, countries agreed they should take concrete steps to increase awareness of chemical dangers and reduce harmful exposure to chemicals. Specifically, they concurred on the need to improve the evaluation and communication of chemical risks. They also acknowledged the importance of identifying safe or safer alternatives to toxic chemicals and otherwise preventing additional chemical poisoning or pollution.

4. In Chapter 19, countries noted that achievement of such chemical management goals requires increased collaboration among different sectors at the national and international levels. Intersectoral coordination is necessary because environmentally sound chemicals management is integrated and comprehensive in nature, *i.e.*, it links all sectors involved in any kind of chemical activity. Important sectors involved with chemicals management include different government ministries, industry, academia and non-governmental organizations. Strengthened intersectoral cooperation permits the "lifecycle" management of chemicals from their production to their disposal. This lifecycle approach recognizes that a chemical can cause harm and needs to be monitored during all stages of its "life". Through lifecycle management, countries can track and then limit human and environmental exposure to harmful chemicals.

5. Implementation of lifecycle management demands that people modify the way they now think about and handle chemicals. Strong national legislation can help bring about these changes in human attitudes and behavior. For this and other reasons, countries have acknowledged the need to enact better chemical laws as well as to improve the implementation and enforcement of those laws. Such legislative efforts are fundamental to the establishment of national systems for environmentally sound chemicals management. Moreover, a domestic regulatory program for chemicals is crucial to the accomplishment of another Chapter 19 objective; full implementation of the Prior Informed Consent (PIC) procedure.

6. The PIC procedure helps countries without adequate chemicals control learn more about the characteristics of harmful chemicals being shipped to them. It is based on the principle that chemicals which are banned or severely restricted for health or environmental reasons should not be exported to countries without their prior, informed consent. Under the procedure, countries can make decisions about the future import of certain chemicals and can disseminate these decisions to others. Both the PIC principle and the procedure are described in two voluntary international agreements known as the Amended London Guidelines for the Exchange of Information on Chemicals in International Trade (1987, amended 1989) and the International Code of Conduct on the Distribution and Use of Pesticides (1985, amended 1989). The United Nations Environment Programme (UNEP) oversees implementation of the amended London Guidelines and the Food and Agriculture Organization of the United Nations (FAO) supervises implementation of the Code of Conduct. Although UNEP has primary responsibility for industrial and consumer chemicals and FAO has primary reponsibility for pesticides, the two organizations jointly implement the PIC procedure.

7. International chemicals control, under programs like PIC, depends on adequate national chemicals control. Accordingly, UNEP has prepared this Overview to assist countries in the development and strengthening of their chemicals legislation, especially for unregulated chemicals or chemical activities. UNEP views the Overview as a tool which can help countries diagnose their overall situation regarding chemicals legislation. Within this diagnostic process, countries can identify legislative needs/priorities and formulate solutions to identified problems. The Overview is intended to complement the work of other international organizations and to provide simple, realistic and flexible guidance for countries interested in improving their national chemicals legislation.

8. The Overview is subdivided into seven parts. Part 1 introduces the general subject of chemicals management and defines some relevant terms. It explains the role of legislation in managing chemicals, how chemicals legislation has evolved and common problems which have been encountered in the development of chemicals laws.. It also identifies a wide range of legislative provisions related to chemicals.

9. In essence, chemicals legislation states national policy regarding why and how chemicals need to be controlled. It creates an administrative framework and procedures for managing chemicals. It authorizes the gathering/evaluation of chemicals information and the making of chemical decisions. It places obligations or restrictions on chemical handlers and also provides positive incentives. It encourages proper chemical use, monitors compliance and punishes illegal practices.

10. Each of these major legislative components, *e.g.*, organizational structure, knowledge base, risk reduction measures and compliance, is discussed in more detail within Parts 2-5 of the Overview. Part 2 focuses on legislative provisions related to policy, authority and coordination. Part 3 outlines the legislative basis for collecting, interpreting and disseminating chemicals information. Part 4 describes the legal obligations or restrictions which are be placed on chemical production, transport, storage, distribution, use and disposal. It also mentions government efforts to use economic instruments to achieve better chemical management. Part 5 addresses means for promoting, monitoring and compelling compliance with chemicals legislation. Within Parts 2-5, UNEP has attempted to address concrete problems such as inter-ministerial competitiveness, inadequate access to and assessment of chemicals information, insufficient measures for controlling how chemicals are handled and the inability to detect or stop improper chemical practices.

11. Part 6 of the Overview shows how chemicals legislation might be developed in stages from a simple scheme to one increasingly more complex. Part 7 contains a list of selected references for additional information. To maximize its usability, the Overview also provides practical suggestions and useful resources throughout its substantive parts.

12. Although the Overview follows the format of a typical law, it is not intended to serve as a model law which must be implemented in its entirety. The Overview also is not a manual which gives detailed advice on how to draft a chemicals law. Instead, the Overview is a broad survey of legislative provisions used to manage chemicals. For countries with little or no chemicals legislation, the Overview is intended to: (1) describe the major components of chemicals legislation, (2) discuss various legislative options and (3) generally show how chemicals legislation can be developed. For countries which already have some form of chemicals legislation, this Overview offers ideas for: (4) updating or upgrading existing legislation, (5) better coordinating, implementing and enforcing legislation and (6) ensuring coverage of currently unregulated chemicals or chemical activities. As with any legislative guidance material, countries are encouraged to consider the information and ideas presented in light of their own experience, national priorities and available resources.

13. With this Overview, UNEP begins a series of publications designed to provide guidance on chemicals legislation. The second document in the series will discuss in more detail a specific topic of chemicals legislation, *i.e.*, implementation of the PIC procedure for international trade in banned or severely restricted chemicals. Other supplemental publications on different aspects of chemicals legislation will follow as they are developed. UNEP welcomes any suggestions for improving or expanding the series.

INTRODUCTION

What is chemicals management?

14. Chemicals management is the continuous process of assessing and reducing chemical "risk"--the likelihood that chemicals will cause harm to human health or the environment. Because chemical risk varies according to the circumstances, chemicals management is a complex task. To manage chemicals successfully requires a sense of priorities and a spirit of cooperation. It also requires a desire to anticipate and prevent chemical problems rather than to simply react to them.

15. Chemicals subject to management take many forms. They include single elements like lead, compounds like sulfur dioxide and mixtures like DDT. Together, elements and compounds are referred to as chemical substances. A combination of two or more chemical substances, without a chemical reaction, is called a chemical mixture or chemical preparation. Some chemicals occur naturally, while others are manufactured. Once produced, the same chemical might be used as an agricultural pesticide ingredient, a consumer food additive or an industrial raw material.

16. Chemicals management involves supervising activities related to chemicals, *e.g.*, the production, transport, storage, distribution, use and disposal of chemicals, so as to prevent any harm to human health or the environment. Together, these activities make up a chemical's "lifecycle" and mark its existence from "cradle to grave". Chemicals can cause harm and need to be monitored during each phase of their "life". Lifecycle management strives for the sensible handling of chemicals by everyone who comes into contact with them. In addition to ensuring the safe use of chemicals, lifecycle management promotes the development of safer chemicals and "clean" technology which can help minimize exposure to harmful chemicals and prevent pollution. It also can assist the integration or coordination of different chemicals management efforts.

Who manages chemicals?

<u>Nationally</u>

17. Chemical producers, chemical distributors and government bear the primary responsibility for proper chemicals management. Specifically, industry has the to duty produce and distribute quality chemicals which can be used safely. It should test chemicals for any adverse effects and inform users of necessary safety precautions. Government, on the other hand, must decide which chemical uses are unacceptable because of the risk they present to health and environment. Government further should supervise industry and educate the public about its rights and obligations regarding chemicals management. In countries where government functions as industry, it must fulfill both sets of obligations.

18. National governments can never fully control all chemicals because of their sheer number and the diverse ways in which they are used. Countries, therefore, have begun to place more and more responsibility on the industries which produce and distribute chemicals. They also have started to encourage greater public participation in the chemical management process.

19. Important sectors involved with chemicals management include: (1) various government ministries (primarily Agriculture, Environment, Health, Industry, Labor, Trade/Customs and Transportation), (2) chemical manufacturing, trade and other industry associations, (3) scientific agencies, universities and research institutes, (4) trade unions, environmental organizations and consumer groups (5) legislators and judicial officers, (6) individual producers, distributors and handlers of chemicals and (7) regional or international organizations. Cooperation among these different sectors is crucial to the lifecycle management of chemicals. Without inter-sectoral coordination, chemicals management can be neither comprehensive nor effective.

<u>Regionally/Internationally</u>

20. The European Community (EC), a political body involving 12 countries, has developed a fairly comprehensive approach to chemicals management. The Nordic countries also have well-developed programs. Countries in transition from one economic system to another are actively strengthening their national chemical

control schemes. Other regions show growing interest in chemicals management as well, from the control of radioactive materials in the Pacific, to the control of hazardous waste in Africa, to the prevention of illegal traffic in Asia and the Americas. The Organisation for Economic Co-operation and Development (OECD), an intergovernmental body with members from 24 developed countries in several regions, has prepared many useful policies and procedures for better managing chemcials.

21. Activities of intergovernmental bodies, international industry associations and international public interest groups contribute much to chemicals management efforts. As at the national level, no single organization deals with the entirety of chemicals management. The United Nations Environment Programme (UNEP) primarily is concerned with industrial chemicals and environmental effects, the Food and Agriculture Organization of the United Nations (FAO) with agricultural and domestic pesticides, the World Health Organization (WHO) with pharmaceuticals and human health effects, the International Labour Organisation (ILO) with the safe use of chemicals at work, the United Nations Industrial Development Organization (UNIDO) with matters affecting the chemical industry, the International Maritime Organization (IMO) and the United Nations Economic Commission for Europe with issues related to transport and the International Agency for Research on Cancer (IARC) with the carcinogenic effects of chemicals. To facilitate coordination of their different chemical safety activities, three of the organizations (ILO, UNEP and WHO) collaborate in the International Programme on Chemical Safety (IPCS). This programme now is being expanded to include other organizations.

How are chemicals managed?

Nationally

22. Government, industry, academia, workers, consumers and the public are all involved in the management of chemicals through a mixture of legal, economic, scientific, technical and social means. For example, chemicals are managed by:

* regulations requiring government approval for chemical manufacture or import
* subsidies for the installation of clean technology
* taxes to discourage chemical use
* voluntary industry programs to reduce chemical emissions
* studies which evaluate chemical exposure or identify chemical alternatives
* the use of personal protective equipment
* the monitoring of chemical injuries and accidents
* consumer selection of environmentally friendly products

23. Despite some progress in chemicals management, many problems still remain. Depending on a country's level of economic development, they could include: lack of serious political commitment; inadequate or uncoordinated legislation; agencies working in isolation; insufficient scientific/economic information on chemicals in use; lack of health or environmental monitoring; lack of trained staff, equipment and other resources; absence of labelling or foreign labelling; faulty packaging or repackaging; lack of poison centers or accident preparedness; inappropriate transport; unsafe storage; easy accessibility to toxic chemicals; high risk methods of use; excessive use or misuse; lack of or failure to use protective equipment or clothing; and lack of disposal facilities for obsolete or waste chemicals.

24. Every country has the capacity to improve the management of chemicals within its borders. Actual improvement of chemicals management, however, requires commitment and action. Typical chemicals management resources include: legislative authority (power to collect information, decide on regulatory measures, compel compliance), adequate funding (national budget, bilateral aid or multilateral assistance), organizational procedures (coordination networks, decisionmaking criteria, enforcement scheme), information systems (national databases, libraries, research institutes, universities, access to international publications or databases, exchange with other countries or organizations), scientific assessment expertise (chemistry, environmental chemistry, toxicology, occupational health, biology, eco-toxicology, law), technical skills (trained scientists, laboratory technicians, computer technicians, information specialists, administrative personnel, inspectors and other enforcement staff) and equipment (facilities, communication tools like fascimile or telex machines, computers, computer links to other systems, monitoring devices, sampling tools, laboratory instruments, vehicles, protective

gear, environmentally sound technology). By listing these resources, it is not implied that all of them must be in place before chemicals management can begin. Available or accessible resources must be identified, however, before a country can consider making use of them.

Regionally/Internationally

25. The EC sets legislative standards and issues binding regulations for its member states. Legislation and programs of the EC offer useful ideas regarding many aspects of chemicals management, *e.g.*, classification, packaging, labelling, new chemical notification, implementation of Prior Informed Consent and freedom of environmental information. Countries in various regions of the world have entered into regional agreements on different environmental issues, e.g., European Convention on Transboundary Air Pollution (1979), Bamako Convention on Hazardous Wastes (19__), South Pacific Nuclear Free Zone Treaty (__) and regional seas conventions. Countries in the Pacific region have formed a South Pacific Regional Environment Programme (SPREP). For a number of years, the OECD has been active in the preparation of uniform chemical testing guidelines, standards for good laboratory practices, procedures for sharing chemicals information, guidelines for the prevention of chemical accidents, summaries of national risk reduction programs and other helpful projects. The United Nations has several regional economic and social commissions now engaged in chemical management activities.

26. International organizations like UNEP, FAO, ILO, WHO, IMO, UNIDO and IARC promote the safe use of chemicals through: the adoption of legally binding international agreements, the approval of voluntary international codes or standards or guidelines, the promotion of research, the maintenance of chemical information databases, the publication and distribution of scientific and educational materials, and the provision of direct technical or financial assistance to countries. For example, UNEP has adopted the Basel Convention and the amended London Guidelines. UNEP's International Register on Potentially Toxic Chemicals maintains a chemical database for countries' use, operates a query response service and publishes a scientific bulletin. Together with WHO and ILO, UNEP regularly distributes Environmental Health Critera documents and Health and Safety Guides. Other UNEP programmes deal with the link between industry and environment as well as global environmental monitoring.

27. As mentioned in the Executive Summary, the environmental action plan for the future (Agenda 21) approved at UNCED makes a substantial international contribution to environmentally sound chemicals management. Chapter 19 of Agenda 21 provides much useful information on improving the international assessment of chemical risk, the harmonization of chemical classification and labelling, the exchange of information on toxic chemicals and chemical risk, the establishment of risk reduction programs, the strengthening of national chemical management capabilities and the prevention of illegal traffic in toxic and dangerous products.

Role and Evolution of Chemicals Legislation

Generally

28. Legislation provides the impetus and framework for chemicals management efforts. Chemicals