UNITED NATIONS CONFERENCE ON ENVIRONMENT AND DEVELOPMENT (UNCED)

AGENDA 21

Chapter 19

ENVIRONMENTALLY SOUND MANAGEMENT OF TOXIC CHEMICALS, INCLUDING PREVENTION OF ILLEGAL INTERNATIONAL TRAFFIC IN TOXIC AND DANGEROUS PRODUCTS

INTRODUCTION

19.1. A substantial use of chemicals is essential to meet the social and economic goals of the world community and today's best practice demonstrates that they can be used widely in a cost-effective manner and with a high degree of safety. However, a great deal remains to be done to ensure the environmentally sound management of toxic chemicals, within the principles of sustainable development and improved quality of life for humankind. Two of the major problems, particularly in developing countries, are (a) lack of sufficient scientific information for the assessment of risks entailed by the use of a great number of chemicals, and (b) lack of resources for assessment of chemicals for which data are at hand.

19.2. Gross chemical contamination, with grave damage to human health, genetic structures and reproductive outcomes, and the environment, has in recent times been continuing within some of the world's most important industrial areas. Restoration will require major investment and development of new techniques. The long-range effects of pollution, extending even to the fundamental chemical and physical processes of the Earth's atmosphere and climate, are becoming understood only recently and the importance of those effects is becoming recognized only recently as well.

19.3. A considerable number of international bodies are involved in work on chemical safety. In many countries work programmes for the promotion of chemical safety are in place. Such work has international implications, as chemical risks do not respect national boundaries. However, a significant strengthening of both national and international efforts is needed to achieve an environmentally sound management of chemicals.

19.4. Six programme areas are proposed:

(a) Expanding and accelerating international assessment of chemical risks;

(b) Harmonization of classification and labelling of chemicals;

(c) Information exchange on toxic chemicals and chemical risks;

(d) Establishment of risk reduction programmes;

(e) Strengthening of national capabilities and capacities for management of chemicals;

(f) Prevention of illegal international traffic in toxic and dangerous products.

In addition, the short final subsection G deals with the enhancement of cooperation related to several

programme areas.

19.5. The six programme areas are together dependent for their successful implementation on intensive international work and improved coordination of current international activities, as well as on the identification and application of technical, scientific, educational and financial means, in particular for developing countries. To varying degrees, the programme areas involve hazard assessment (based on the intrinsic properties of chemicals), risk assessment (including assessment of exposure), risk acceptability and risk management.

19.6. Collaboration on chemical safety between the United Nations Environment Programme (UNEP), the International Labour Organisation (ILO) and the World Health Organization (WHO) in the International Programme on Chemical Safety (IPCS) should be the nucleus for international cooperation on environmentally sound management of toxic chemicals. All efforts should be made to strengthen this programme. Cooperation with other programmes, such as those of the Organisation for Economic Cooperation and Development (OECD) and the European Communities (EC) and other regional and governmental chemical programmes, should be promoted.

19.7. Increased coordination of United Nations bodies and other international organizations involved in chemicals assessment and management should be further promoted. Within the framework of IPCS, an intergovernmental meeting, convened by the Executive Director of UNEP, was held in London in December/1991 to further explore this matter (see paras. 19.75 and 19.76).

19.8. The broadest possible awareness of chemical risks is a prerequisite for achieving chemical safety. The principle of the right of the community and of workers to know those risks should be recognized. However, the right to know the identity of hazardous ingredients should be balanced with industry's right to protect confidential business information. (Industry, as referred to in this chapter, shall be taken to include large industrial enterprises and transnational corporations as well as domestic industries.) The industry initiative on responsible care and product stewardship should be developed and promoted. Industry should apply adequate standards of operation in all countries in order not to damage human health and the environment.

19.9. There is international concern that part of the international movement of toxic and dangerous products is being carried out in contravention of existing national legislation and international instruments, to the detriment of the environment and public health of all countries, particularly developing countries.

19.10. In resolution 44/226 of 22 December 1989, the General Assembly requested each regional commission, within existing resources, to contribute to the prevention of the illegal traffic in toxic and dangerous products and wastes by monitoring and making regional assessments of that illegal traffic and its environmental and health implications. The Assembly also requested the regional commissions to interact among themselves and to cooperate with the United Nations Environment Programme, with a view to maintaining efficient and coordinated monitoring and assessment of the illegal traffic in toxic and dangerous products and wastes.

PROGRAMME AREAS

A. Expanding and accelerating international assessment of chemical risks

19.11. Assessing the risks to human health and the environment hazards that a chemical may cause is a prerequisite to planning for its safe and beneficial use. Among the approximately 100,000 chemical substances in commerce and the thousands of substances of natural origin with which human beings come into contact, many appear as pollutants and contaminants in food, commercial products and the various environmental media. Fortunately, exposure to most chemicals (some 1,500 cover over 95/per/cent of total world production) is rather limited, as most are used in very small amounts. However, a serious problem is that even for a great number of chemicals characterized by high-volume production, crucial data for risk assessment are often lacking. Within the framework of the OECD chemicals programme such data are now being generated for a number of chemicals.

19.12. Risk assessment is resource-intensive. It could be made cost-effective by strengthening international cooperation and better coordination, thereby making the best use of available resources and avoiding unnecessary duplication of effort. However, each nation should have a critical mass of technical staff with experience in toxicity testing and exposure analysis, which are two important components of risk assessment.

Objectives

19.13. The objectives of this programme area are:

(a) To strengthen international risk assessment. Several hundred priority chemicals or groups of chemicals, including major pollutants and contaminants of global significance, should be assessed by the year 2000, using current selection and assessment criteria;

(b) To produce guidelines for acceptable exposure for a greater number of toxic chemicals, based on peer review and scientific consensus distinguishing between health- or environment-based exposure limits and those relating to socio-economic factors.

Activities

(a) Management-related activities

19.14. Governments, through the cooperation of relevant international organizations and industry, where appropriate, should:

(a) Strengthen and expand programmes on chemical risk assessment within the United Nations system IPCS (UNEP, ILO, WHO) and the Food and Agriculture Organization of the United Nations (FAO), together with other organizations, including the Organisation for Economic Cooperation and Development (OECD), based on an agreed approach to data-quality assurance, application of assessment criteria, peer review and linkages to risk management activities, taking into account the precautionary approach;

(b) Promote mechanisms to increase collaboration among Governments, industry, academia and relevant non-governmental organizations involved in the various aspects of risk assessment of chemicals

and related processes, in particular the promoting and coordinating of research activities to improve understanding of the mechanisms of action of toxic chemicals;

(c) Encourage the development of procedures for the exchange by countries of their assessment reports on chemicals with other countries for use in national chemical assessment programmes.

(b) Data and information

19.15. Governments, through the cooperation of relevant international organizations and industry, where appropriate, should:

(a) Give high priority to hazard assessment of chemicals, that is, of their intrinsic properties as the appropriate basis for risk assessment;

(b) Generate data necessary for assessment, building, inter/alia, on programmes of IPCS (UNEP, WHO, ILO), FAO, OECD and EC and on established programmes other regions and Governments. Industry should participate actively.

19.16. Industry should provide data for substances produced that are needed specifically for the assessment of potential risks to human health and the environment. Such data should be made available to relevant national competent authorities and international bodies and other interested parties involved in hazard and risk assessment, and to the greatest possible extent to the public also, taking into account legitimate claims of confidentiality.

(c) International and regional cooperation and coordination

19.17. Governments, through the cooperation of relevant international organizations and industry, where appropriate, should:

(a) Develop criteria for priority-setting for chemicals of global concern with respect to assessment;

(b) Review strategies for exposure assessment and environmental monitoring to allow for the best use of available resources, to ensure compatibility of data and to encourage coherent national and international strategies for that assessment.

Means of implementation

(a) Financial and cost evaluation

19.18. Most of the data and methods for chemical risk assessment are generated in the developed countries and an expansion and acceleration of the assessment work will call for a considerable increase in research and safety testing by industry and research institutions. The cost projections address the needs to strengthen the capacities of relevant United Nations bodies and are based on current experience in IPCS. It should be noted that there are considerable costs, often not possible to quantify, that are not included. These comprise costs to industry and Governments of generating the safety data underlying the assessments and costs to Governments of providing background documents and draft assessment statements to IPCS, the International Register of Potentially Toxic Chemicals (IRPTC) and OECD. They also include the cost of accelerated work in non-United Nations bodies such as OECD and EC.

19.19. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $30/million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter/alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

19.20. Major research efforts should be launched in order to improve methods for assessment of chemicals as work towards a common framework for risk assessment and to improve procedures for using toxicological and epidemiological data to predict the effects of chemicals on human health and the environment, so as to enable decision makers to adopt adequate policies and measures to reduce risks posed by chemicals.

19.21. Activities include:

(a) Strengthening research on safe/safer alternatives to toxic chemicals that pose an unreasonable and otherwise unmanageable risk to the environment or human health and to those that are toxic, persistent and bio-accumulative and that cannot be adequately controlled;

(b) Promotion of research on, and validation of, methods constituting a replacement for those using test animals (thus reducing the use of animals for testing purposes);

(c) Promotion of relevant epidemiological studies with a view to establishing a cause-and-effect relationship between exposure to chemicals and the occurrence of certain diseases;

(d) Promotion of ecotoxicological studies with the aim of assessing the risks of chemicals to the environment.

(c) Human resource development

19.22. International organizations, with the participation of Governments and non-governmental organizations, should launch training and education projects involving women and children, who are at greatest risk, in order to enable countries, and particularly developing countries, to make maximum national use of international assessments of chemical risks.

(d) Capacity-building

19.23. International organizations, building on past, present and future assessment work, should support countries, particularly developing countries, in developing and strengthening risk assessment capabilities at national and regional levels to minimize, and as far as possible control and prevent, risk in the manufacturing and use of toxic and hazardous chemicals. Technical cooperation and financial support or other contributions should be given to activities aimed at expanding and accelerating the national and international assessment and control of chemical risks to enable the best choice of chemicals.

B. Harmonization of classification and labelling of chemicals

Basis for action

19.24. Adequate labelling of chemicals and the dissemination of safety data sheets such as ICSCs (International Chemical Safety Cards) and similarly written materials, based on assessed hazards to health and environment, are the simplest and most efficient way of indicating how to handle and use chemicals safely.

19.25. For the safe transport of dangerous goods, including chemicals, a comprehensive scheme elaborated within the United Nations system is in current use. This scheme mainly takes into account the acute hazards of chemicals.

19.26. Globally harmonized hazard classification and labelling systems are not yet available to promote the safe use of chemicals, inter/alia, at the workplace or in the home. Classification of chemicals can be made for different purposes and is a particularly important tool in establishing labelling systems. There is a need to develop harmonized hazard classification and labelling systems, building on ongoing work.

Objectives

19.27. A globally harmonized hazard classification and compatible labelling system, including material safety data sheets and easily understandable symbols, should be available, if feasible, by the year 2000.

Activities

(a) Management-related activities

19.28. Governments, through the cooperation of relevant international organizations and industry, where appropriate, should launch a project with a view to establishing and elaborating a harmonized classification and compatible labelling system for chemicals for use in all United Nations official languages including adequate pictograms. Such a labelling system should not lead to the imposition of unjustified trade barriers. The new system should draw on current systems to the greatest extent possible; it should be developed in steps and should address the subject of compatibility with labels of various applications.

(b) Data and information

19.29. International bodies including, inter alia, IPCS (UNEP, ILO, WHO), FAO, the International Maritime Organization (IMO), the United Nations Committee of Experts on the Transport of Dangerous Goods and OECD, in cooperation with regional and national authorities having existing classification and labelling and other information-dissemination systems, should establish a coordinating group to:

(a) Evaluate and, if appropriate, undertake studies of existing hazard classification and information systems to establish general principles for a globally harmonized system;

(b) Develop and implement a work plan for the establishment of a globally harmonized hazard classification system. The plan should include a description of the tasks to be completed, deadline for completion and assignment of tasks to the participants in the coordinating group;

(c) Elaborate a harmonized hazard classification system;

(d) Draft proposals for standardization of hazard communication terminology and symbols in order to enhance risk management of chemicals and facilitate both international trade and translation of information into the end-user's language;

(e) Elaborate a harmonized labelling system.

Means of implementation

(a) Financial and cost evaluation

19.30. The Conference secretariat has included the technical assistance costs related to this programme in estimates provided in programme area E. They estimate the average total annual cost (1993-2000) for strengthening international organizations to be about $3/million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter/alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Human resource development

19.31. Governments and institutions and non-governmental organizations, with the collaboration of appropriate organizations and programmes of the United Nations, should launch training courses and information campaigns to facilitate the understanding and use of a new harmonized classification and compatible labelling system for chemicals.

(c) Capacity-building

19.32. In strengthening national capacities for management of chemicals, including development and implementation of, and adaptation to, new classification and labelling systems, the creation of trade barriers should be avoided and the limited capacities and resources of a large number of countries, particularly developing countries, for implementing such systems, should be taken into full account.

C. Information exchange on toxic chemicals and chemical risks

Basis for action

19.33. The following activities, related to information exchange on the benefits as well as the risks associated with the use of chemicals, are aimed at enhancing the sound management of toxic chemicals through the exchange of scientific, technical, economic and legal information.

19.34. The London Guidelines for the Exchange of Information on Chemicals in International Trade are a set of guidelines adopted by Governments with a view to increasing chemical safety through the exchange of information on chemicals. Special provisions have been included in the guidelines with regard to the exchange of information on banned and severely restricted chemicals.

19.35. The export to developing countries of chemicals that have been banned in producing countries

or whose use has been severely restricted in some industrialized countries has been the subject of concern, as some importing countries lack the ability to ensure safe use, owing to inadequate infrastructure for controlling the importation, distribution, storage, formulation and disposal of chemicals.

19.36. In order to address this issue, provisions for Prior Informed Consent/(PIC) procedures were introduced in 1989 in the London Guidelines (UNEP) and in the International Code of Conduct on the Distribution and Use of Pesticides (FAO). In addition a joint FAO/UNEP programme has been launched for the operation of the PIC procedures for chemicals, including the selection of chemicals to be included in the PIC procedure and preparation of PIC decision guidance documents. The ILO chemicals convention calls for communication between exporting and importing countries when hazardous chemicals have been prohibited for reasons of safety and health at work. Within the General Agreement on Tariffs and Trade (GATT) framework, negotiations have been pursued with a view to creating a binding instrument on products banned or severely restricted in the domestic market. Further, the GATT Council has agreed, as stated in its decision contained in C/M/251, to extend the mandate of the working group for a period of three months, to begin from the date of the group's next meeting, and has authorized the Chairman to hold consultations on timing with respect to convening this meeting.

19.37. Notwithstanding the importance of the PIC procedure, information exchange on all chemicals is necessary.

Objectives

19.38. The objectives of this programme area are:

(a) To promote intensified exchange of information on chemical safety, use and emissions among all involved parties;

(b) To achieve by the year 2000, as feasible, full participation in and implementation of the PIC procedure, including possible mandatory applications through legally binding instruments contained in the Amended London Guidelines and in the FAO International Code of Conduct, taking into account the experience gained within the PIC procedure.

Activities

(a) Management-related activities

19.39. Governments and relevant international organizations with the cooperation of industry should:

(a) Strengthen national institutions responsible for information exchange on toxic chemicals and promote the creation of national centres where these centres do not exist;

(b) Strengthen international institutions and networks, such as IRPTC, responsible for information exchange on toxic chemicals;

(c) Establish technical cooperation with, and provide information to, other countries, especially those with shortages of technical expertise, including training in the interpretation of relevant technical data, such as Environmental Health Criteria Documents, Health and Safety Guides and International Chemical Safety Cards (published by IPCS); monographs on the Evaluation of Carcinogenic Risks of

Chemicals to Humans (published by the International Agency for Research on Cancer (IARC)); and decision guidance documents (provided through the FAO/UNEP joint programme on PIC), as well as those submitted by industry and other sources;

(d) Implement the PIC procedures as soon as possible and, in the light of experience gained, invite relevant international organizations, such as UNEP, GATT, FAO, WHO and others, in their respective area of competence to consider working expeditiously towards the conclusion of legally binding instruments.

(b) Data and information

19.40. Governments and relevant international organizations with the cooperation of industry should:

(a) Assist in the creation of national chemical information systems in developing countries and improve access to existing international systems;

(b) Improve databases and information systems on toxic chemicals, such as emission inventory programmes, through provision of training in the use of those systems as well as software, hardware and other facilities;

(c) Provide knowledge and information on severely restricted or banned chemicals to importing countries to enable them to judge and take decisions on whether to import, and how to handle, those chemicals and establish joint responsibilities in trade of chemicals between importing and exporting countries;

(d) Provide data necessary to assess risks to human health and the environment of possible alternatives to banned or severely restricted chemicals.

19.41. United Nations organizations should provide, as far as possible, all international information material on toxic chemicals in all United Nations official languages.

(c) International and regional cooperation and coordination

19.42. Governments and relevant international organizations with the cooperation of industry should cooperate in establishing, strengthening and expanding, as appropriate, the network of designated national authorities for exchange of information on chemicals and establish a technical exchange programme to produce a core of trained personnel within each participating country.

Means of implementation

Financing and cost evaluation

19.43. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme to be about $10/million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter/alia, the specific strategies and programmes Governments decide upon for implementation.

D. Establishment of risk reduction programmes

Basis for action

19.44. There are often alternatives to toxic chemicals currently in use. Thus, risk reduction can sometimes be achieved by using other chemicals or even non-chemical technologies. The classic example of risk reduction is the substitution of harmless or less harmful substances for harmful ones. Establishment of pollution prevention procedures and setting standards for chemicals in each environmental medium, including food and water, and in consumer goods, constitute another example of risk reduction. In a wider context, risk reduction involves broad-based approaches to reducing the risks of toxic chemicals, taking into account the entire life cycle of the chemicals. Such approaches could encompass both regulatory and non-regulatory measures, such as promotion of the use of cleaner products and technologies, pollution prevention procedures and programmes, emission inventories, product labelling, use limitations, economic incentives, procedures for safe handling and exposure regulations, and the phasing out or banning of chemicals that pose unreasonable and otherwise unmanageable risks to human health and the environment and of those that are toxic, persistent and bio-accumulative and whose use cannot be adequately controlled.

19.45. In the agricultural area, integrated pest management, including the use of biological control agents as alternatives to toxic pesticides, is one approach to risk reduction.

19.46. Other areas of risk reduction encompass the prevention of chemical accidents, prevention of poisoning by chemicals and the undertaking of toxicovigilance and coordination of clean-up and rehabilitation of areas damaged by toxic chemicals.

19.47. The OECD Council has decided that OECD member countries should establish or strengthen national risk reduction programmes. The International Council of Chemical Associations (ICCA) has introduced initiatives regarding responsible care and product stewardship aimed at reduction of chemical risks. The Awareness and Preparedness for Emergencies at Local Level (APELL) programme of UNEP is designed to assist decision makers and technical personnel in improving community awareness of hazardous installations and in preparing response plans. ILO has published a Code of Practice on the prevention of major industrial accidents and is preparing an international instrument on the prevention of industrial disasters for eventual adoption in 1993.

Objectives

19.48. The objective of the programme area is to eliminate unacceptable or unreasonable risks and, to the extent economically feasible, to reduce risks posed by toxic chemicals, by employing a broad-based approach involving a wide range of risk reduction options and by taking precautionary measures derived from a broad-based life-cycle analysis.

Activities

(a) Management-related activities

19.49. Governments, through the cooperation of relevant international organizations and industry, where appropriate, should:

(a) Consider adopting policies based on accepted producer liability principles, where appropriate,

as well as precautionary, anticipatory and life-cycle approaches to chemical management, covering manufacturing, trade, transport, use and disposal;

(b) Undertake concerted activities to reduce risks for toxic chemicals, taking into account the entire life cycle of the chemicals. These activities could encompass both regulatory and non-regulatory measures, such as promotion of the use of cleaner products and technologies; emission inventories; product labelling; use limitations; economic incentives; and the phasing out or banning of toxic chemicals that pose an unreasonable and otherwise unmanageable risk to the environment or human health and those that are toxic, persistent and bio-accumulative and whose use cannot be adequately controlled;

(c) Adopt policies and regulatory and non-regulatory measures to identify, and minimize exposure to, toxic chemicals by replacing them with less toxic substitutes and ultimately phasing out the chemicals that pose unreasonable and otherwise unmanageable risk to human health and the environment and those that are toxic, persistent and bio-accumulative and whose use cannot be adequately controlled;

(d) Increase efforts to identify national needs for standard setting and implementation in the context of the FAO/WHO Codex Alimentarius in order to minimize adverse effects of chemicals in food;

(e) Develop national policies and adopt the necessary regulatory framework for prevention of accidents, preparedness and response, inter/alia, through land-use planning, permit systems and reporting requirements on accidents, and work with the OECD/UNEP international directory of regional response centres and the APELL programme;

(f) Promote establishment and strengthening, as appropriate, of national poison control centres to ensure prompt and adequate diagnosis and treatment of poisonings;

(g) Reduce overdependence on the use of agricultural chemicals through alternative farming practices, integrated pest management and other appropriate means;

(h) Require manufacturers, importers and others handling toxic chemicals to develop, with the cooperation of producers of such chemicals, where applicable, emergency response procedures and preparation of on-site and off-site emergency response plans;

(i) Identify, assess, reduce and minimize, or eliminate as far as feasible by environmentally sound disposal practices, risks from storage of outdated chemicals.

19.50. Industry should be encouraged to:

(a) Develop an internationally agreed upon code of principles for the management of trade in chemicals, recognizing in particular the responsibility for making available information on potential risks and environmentally sound disposal practices if those chemicals become wastes, in cooperation with Governments and relevant international organizations and appropriate agencies of the United Nations system;

(b) Develop application of a "responsible care" approach by producers and manufacturers towards chemical products, taking into account the total life cycle of such products;

(c) Adopt, on a voluntary basis, community right-to-know programmes based on international guidelines, including sharing of information on causes of accidental and potential releases and means of

preventing them, and reporting on annual routine emissions of toxic chemicals to the environment in the absence of host country requirements.

(b) Data and information

19.51. Governments, through the cooperation of relevant international organizations and industry, where appropriate, should:

(a) Promote exchange of information on national and regional activities to reduce the risks of toxic chemicals;

(b) Cooperate in the development of communication guidelines on chemical risks at the national level to promote information exchange with the public and the understanding of risks.

(c) International and regional cooperation and coordination

19.52. Governments, through the cooperation of relevant international organizations and industry, where appropriate, should:

(a) Collaborate to develop common criteria to determine which chemicals are suitable candidates for concerted risk reduction activities;

(b) Coordinate concerted risk reduction activities;

(c) Develop guidelines and policies for the disclosure by manufacturers, importers and others using toxic chemicals of toxicity information declaring risks and emergency response arrangements;

(d) Encourage large industrial enterprises including transnational corporations and other enterprises wherever they operate to introduce policies demonstrating the commitment, with reference to the environmentally sound management of toxic chemicals, to adopt standards of operation equivalent to or not less stringent than those existing in the country of origin;

(e) Encourage and support the development and adoption by small- and medium-sized industries of relevant procedures for risk reduction in their activities;

(f) Develop regulatory and non-regulatory measures and procedures aimed at preventing the export of chemicals that are banned, severely restricted, withdrawn or not approved for health or environmental reasons, except when such export has received prior written consent from the importing country or is otherwise in accordance with the PIC procedure;

(g) Encourage national and regional work to harmonize evaluation of pesticides;

(h) Promote and develop mechanisms for the safe production, management and use of dangerous materials, formulating programmes to substitute for them safer alternatives, where appropriate;

(i) Formalize networks of emergency response centres;

(j) Encourage industry, with the help of multilateral cooperation, to phase out as appropriate, and dispose of, any banned chemicals that are still in stock or in use in an environmentally sound manner,

including safe reuse, where approved and appropriate.

Means of implementation

(a) Financial and cost evaluation

19.53. The Conference secretariat has included most costs related to this programme in estimates provided for programme areas A and E. They estimate other requirements for training and strengthening the emergency and poison control centres to be about $4/million annually from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual costs and financial terms, including any that are non-concessional, will depend upon, inter/alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

19.54. Governments, in cooperation with relevant international organizations and programmes, should:

(a) Promote technology that would minimize release of, and exposure to, toxic chemicals in all countries;

(b) Carry out national reviews, as appropriate, of previously accepted pesticides whose acceptance was based on criteria now recognized as insufficient or outdated and of their possible replacement with other pest control methods, particularly in the case of pesticides that are toxic, persistent and/or bio-accumulative.

E. Strengthening of national capabilities and capacities for management of chemicals

Basis for action

19.55. Many countries lack national systems to cope with chemical risks. Most countries lack scientific means of collecting evidence of misuse and of judging the impact of toxic chemicals on the environment, because of the difficulties involved in the detection of many problematic chemicals and systematically tracking their flow. Significant new uses are among the potential hazards to human health and the environment in developing countries. In several countries with systems in place there is an urgent need to make those systems more efficient.

19.56. Basic elements for sound management of chemicals are: (a)/adequate legislation, (b)/information gathering and dissemination, (c)/capacity for risk assessment and interpretation, (d)/establishment of risk management policy, (e)/capacity for implementation and enforcement, (f) capacity for rehabilitation of contaminated sites and poisoned persons, (g)/effective education programmes and (h)/capacity to respond to emergencies.

19.57. As management of chemicals takes place within a number of sectors related to various national ministries, experience suggests that a coordinating mechanism is essential.

Objective

19.58. By the year 2000, national systems for environmentally sound management of chemicals, including legislation and provisions for implementation and enforcement, should be in place in all countries to the extent possible.

Activities

(a) Management-related activities

19.59. Governments, where appropriate and with the collaboration of relevant intergovernmental organizations, agencies and programmes of the United Nations system, should:

(a) Promote and support multidisciplinary approaches to chemical safety problems;

(b) Consider the need to establish and strengthen, where appropriate, a national coordinating mechanism to provide a liaison for all parties involved in chemical safety activities (for example, agriculture, environment, education, industry, labour, health, transportation, police, civil defence, economic affairs, research institutions, and poison control centres);

(c) Develop institutional mechanisms for the management of chemicals, including effective means of enforcement;

(d) Establish and develop or strengthen, where appropriate, networks of emergency response centres, including poison control centres;

(e) Develop national and local capabilities to prepare for and respond to accidents by taking into account the UNEP APELL programme and similar programmes on accident prevention, preparedness and response, where appropriate, including regularly tested and updated emergency plans;

(f) Develop, in cooperation with industry, emergency response procedures, identifying means and equipment in industries and plants necessary to reduce impacts of accidents.

(b) Data and information

19.60. Governments should:

(a) Direct information campaigns such as programmes providing information about chemical stockpiles, environmentally safer alternatives and emission inventories that could also be a tool for risk reduction to the general public to increase the awareness of problems of chemical safety;

(b) Establish, in conjunction with IRPTC, national registers and databases, including safety information, for chemicals;

(c) Generate field monitoring data for toxic chemicals of high environmental importance;

(d) Cooperate with international organizations, where appropriate, to effectively monitor and control the generation, manufacturing, distribution, transportation and disposal activities relating to toxic chemicals, to foster preventive and precautionary approaches and ensure compliance with safety

management rules, and provide accurate reporting of relevant data.

(c) International and regional cooperation and coordination

19.61. Governments, with the cooperation of international organizations, where appropriate, should:

(a) Prepare guidelines, where not already available, with advice and check-lists for enacting legislation in the chemical safety field;

(b) Support countries, particularly developing countries, in developing and further strengthening national legislation and its implementation;

(c) Consider adoption of community right-to-know or other public information-dissemination programmes, when appropriate, as possible risk reduction tools. Appropriate international organizations, in particular UNEP, OECD, the Economic Commission for Europe (ECE) and other interested parties, should consider the possibility of developing a guidance document on the establishment of such programmes for use by interested Governments. The document should build on existing work on accidents and include new guidance on toxic emission inventories and risk communication. Such guidance should include harmonization of requirements, definitions and data elements to promote uniformity and allow sharing of data internationally;

(d) Build on past, present and future risk assessment work at an international level, to support countries, particularly developing countries, in developing and strengthening risk assessment capabilities at national and regional levels to minimize risk in the manufacturing and use of toxic chemicals;

(e) Promote implementation of UNEP's APELL programme and, in particular, use of an OECD/UNEP international directory of emergency response centres;

(f) Cooperate with all countries, particularly developing countries, in the setting up of an institutional mechanism at the national level and the development of appropriate tools for management of chemicals;

(g) Arrange information courses at all levels of production and use, aimed at staff working on chemical safety issues;

(h) Develop mechanisms to make maximum use in countries of internationally available information;

(i) Invite UNEP to promote principles for accident prevention, preparedness and response for Governments, industry and the public, building on ILO, OECD and ECE work in this area.

Means of implementation

(a) Financing and cost evaluation

19.62. The Conference secretariat has estimated the average total annual cost (1993-2000) of implementing the activities of this programme in developing countries to be about $600/million, including $150/million from the international community on grant or concessional terms. These are indicative and order-of-magnitude estimates only and have not been reviewed by Governments. Actual

costs and financial terms, including any that are non-concessional, will depend upon, inter/alia, the specific strategies and programmes Governments decide upon for implementation.

(b) Scientific and technological means

19.63. International organizations should:

(a) Promote the establishment and strengthening of national laboratories to ensure the availability of adequate national control in all countries regarding the importation, manufacture and use of chemicals;

(b) Promote translation, where feasible, of internationally prepared documents on chemical safety into local languages and support various levels of regional activities related to technology transfer and information exchange.

(c) Human resource development

19.64. International organizations should:

(a) Enhance technical training for developing countries in relation to risk management of chemicals;

(b) Promote and increase support for research activities at the local level by providing grants and fellowships for studies at recognized research institutions active in disciplines of importance for chemical safety programmes.

19.65. Governments should organize, in collaboration with industry and trade unions, training programmes in the management of chemicals, including emergency response, targeted at all levels. In all countries basic elements of chemical safety principles should be included in the primary education curricula.

F. Prevention of illegal international traffic in toxic and dangerous products

19.66. There is currently no global international agreement on traffic in toxic and dangerous products (toxic and dangerous products are those that are banned, severely restricted, withdrawn or not approved for use or sale by Governments in order to protect public health and the environment). However, there is international concern that illegal international traffic in these products is detrimental to public health and the environment, particularly in developing countries, as acknowledged by the General Assembly in resolutions 42/183 and 44/226. Illegal traffic refers to traffic that is carried out in contravention of a country's laws or relevant international legal instruments. The concern also relates to transboundary movements of those products that are not carried out in accordance with applicable internationally adopted guidelines and principles. Activities under this programme area are intended to improve detection and prevention of the traffic concerned.

19.67. Further strengthening of international and regional cooperation is needed to prevent illegal transboundary movement of toxic and dangerous products. Furthermore, capacity-building at the national level is needed to improve monitoring and enforcement capabilities involving recognition of the fact that appropriate penalties may need to be imposed under an effective enforcement programme. Other activities envisaged in the present chapter (for example, under paragraph 19.39 (d)) will also

contribute to achieving these objectives.

Objectives

19.68. The objectives of the programme are:

(a) To reinforce national capacities to detect and halt any illegal attempt to introduce toxic and dangerous products into the territory of any State, in contravention of national legislation and relevant international legal instruments;

(b) To assist all countries, particularly developing countries, in obtaining all appropriate information concerning illegal traffic in toxic and dangerous products.

Activities

(a) Management-related activities

19.69. Governments, according to their capacities and available resources and with the cooperation of the United Nations and other relevant organizations, as appropriate, should:

(a) Adopt, where necessary, and implement legislation to prevent the illegal import and export of toxic and dangerous products;

(b) Develop appropriate national enforcement programmes to monitor compliance with such legislation, and detect and deter violations through appropriate penalties.

(b) Data and information

19.70. Governments should develop, as appropriate, national alert systems to assist in detecting illegal traffic in toxic and dangerous products; local communities, and others could be involved in the operation of such a system.

19.71. Governments should cooperate in the exchange of information on illegal transboundary movements of toxic and dangerous products and should make such information available to appropriate United Nations bodies, such as UNEP and the regional commissions.

(c) International and regional cooperation and coordination

19.72. Further strengthening of international and regional cooperation is needed to prevent illegal transboundary movement of toxic and dangerous products.

19.73. The regional commissions, in cooperation with and relying upon expert support and advice from UNEP and other relevant bodies of the United Nations, should monitor, on the basis of data and information provided by Governments, and on a continuous basis make regional assessments of, the illegal traffic in toxic and dangerous products and its environmental, economic and health implications, in each region, drawing upon the results and experience gained in the joint UNEP/ESCAP preliminary assessment of illegal traffic, expected to be completed in August 1992.

19.74. Governments and international organizations, as appropriate, should cooperate with developing countries in strengthening their institutional and regulatory capacities in order to prevent illegal import and export of toxic and dangerous products.

G. Enhancement of international cooperation relating to several of the programme areas

19.75. A meeting of government-designated experts, held in London in December/1991, made recommendations for increased coordination among United Nations bodies and other international organizations involved in chemical risk assessment and management. That meeting called for the taking of appropriate measures to enhance the role of IPCS and establish an intergovernmental forum on chemical risk assessment and management.

19.76. To further consider the recommendations of the London meeting and initiate action on them, as appropriate, the Executive Heads of WHO, ILO and UNEP are invited to convene an intergovernmental meeting within one year, which could constitute the first meeting of the intergovernmental forum.